EUROPEAN COMMISSION
EUROSTAT

Directorate E: Sectoral and regional statistics
Unit E.5: Energy

SHARES Tool Manual

Version 2022.181023

Note: The SHARES tool and the SHARES Tool Manual support the calculation of the share of energy from renewable sources. The current version of the tool and Manual apply to the calculation from 2021 onwards (under Directive (EU) 2018/2001).

Version	Description of change
V2017.171218	Correction of the formula “from biogas blended in the grid” in OVERALL TARGET. Only year 2004 was accurate. Correct formula dragged for all future years.
V2017.171218	Clarification of the explanations concerning the calculation of the numerator and denominator of the share of renewables in transport
V2018.041019	Elimination of double counting in the formula for biogas injected in the grid.
	Modification of the default calorific values for biodiesel (use of Annex III calorific values when countries do not report these values).
V2018.121119	Correction of the default value of full load hours of operation for electrically driven exhaust air-water heat pumps in average climate from 600 to 660 h.
V2018.151119	Clarification in the template tables of the SHARES tool that wind sub-categories are not yet normalised and correction in the calculation of the new hydro sub-categories
V2018.281119	Extension to all years of the formula eliminating double counting for biogas injected in the grid (introduced on 01/09/2019, but accidentally not dragged to all years).
V2018.031219	Correction of the formula for electricity generation from bioliquids in the template tables (row 66) for 2004 to 2010
V2019.021020	Questionnaire made SDMX-compatible. Questionnaire offering more details per fuel. Possibility to allocate statistical transfers to transport sub-target.
V2021.300522	Adaptation of the SHARES tool to Directive (EU) 2018/2001
V2021.050822	Modifications included after several discussions with energy statistics Task Force on methodology and future reporting, Energy Statistics Working Group and DG Energy of the European Commission. Database codes included.
V2021.031022	First public release of the SHARES tool 2021
V2021.071122	Second release of SHARES 2021: correction of prefilling, displaying the full time series to facilitate data checks by countries and adding a disclaimer
V2021.081122	Unhiding the time series for ELE sheet (overlooked in the previous version)
V2021.091122	Some references to RED I which were outdated I have been updated to RED II. No calculations modified.
V2021.101122	More references to RED I which were outdated I have been updated to RED II. No calculations modified.
V2021.221122	Correction to the format of RES-H&C with waste heat and cold and new row for compliant pure biogas under final energy consumption in industry and other sectors
V2021.081222	Correcting error in biofuel/bioliquid calculations in OVERALL TARGET and TRANSPORT sheets. Clarification in RENEWABLE COOLING sheet. Including geothermal heat pumps in total gross final energy consumption. Removing some double-counting of biogas. Adding condition for taking into account country (Malta, Cyprus) in transport calculations
V2022.210723	Several corrections, adding electricity direct connection line in road transport
V2022.111023	Testing in IT system, correction of some SDMX codes. Introduction of new interpretation of starting date (01/07/2021) for application of RED II sustainability and GHG-saving criteria for biofuels and biomass fuels
V2022.181023	Correction of a bug in the formula “All other renewables” in OVERALL SUMMARY and hiding reporting lines for RFNBOs and H2 in TRANSPORT

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1. INTRODUCTION

The SHARES tool focuses on the harmonised calculation of the share of energy from renewable sources among EU Member States. The legal basis for the implementation of all calculations and methodologies is based on Directive[1] (EU) 2018/2001 (subsequently also referred to as the Renewable Energy Directive or RED II) and on Regulation[2] (EC) No 1099/2008, to which the Directive refers.

The acronym **SHARES** stands for **SH**ort **A**ssessment of **R**enewable **E**nergy **S**ources.

The SHARES tool is designed to collect and present the information — the energy data — that are needed to monitor the share of energy from renewable sources according to RED II.

Please note that the SHARES tool does not replace the reporting obligations stated in the Regulation (EU) 2001/1999 on the governance of the energy union and climate action — it only assists in reporting.

The main benefit from using the SHARES tool is that Member States go through the exact same method during the calculation of the share of energy from renewable sources. Its application prevents any irregularities from varying parameters and rules used in different methods and ensures harmonised and comparable results for all reporting countries. For this reason, using the SHARES tool is more efficient than individual estimations/calculations carried out by each EU Member State.

In 2021, Eurostat developed the SHARES tool version that takes into account the specific calculation provisions in RED II, in agreement with DG Energy and reporting countries.

The SHARES tool is based on the methodological framework of annual energy statistics as collected under Regulation (EC) No 1099/2008. Five annual energy questionnaires are the necessary pre-requisite for the use of the SHARES tool:

1. Coal (covers solid fossil fuels and manufactured gases)
2. Oil (covers crude oil and derived oil products)
3. Natural gas
4. Electricity & Heat
5. Renewables (also includes renewable and non-renewable wastes).

Energy data from the above-mentioned questionnaires are linked with formulas to calculate the various shares. Countries have to provide some additional information that is not covered by Regulation (EC) No 1099/2008 (in other words: additional information that cannot be derived from the five annual energy questionnaires referred to above).

Acknowledgements: Eurostat would like to thank all those who provided comments and contributed to improve the SHARES tool and the Manual. This refers to colleagues working in energy statistics in Member States (either for the relevant Ministry or Agency, or for the National Statistical Office), as well as other experts who have contributed to the detection and correction of errors in the tool. Of particular help were the comments/feedback received from Italy, Netherlands and Belgium, as well as from Denmark, France, Germany, Austria, Spain, Malta, Hungary, Portugal, Slovenia and Sweden.

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018L2001
[2] http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32008R1099

1.1. Data publishing

In order to increase the transparency of the calculation process, results from the SHARES tool are published on Eurostat's website: SHARES (Renewables) - Energy - Eurostat (europa.eu) and in Eurostat's database: Database - Energy - Eurostat (europa.eu) (under Energy quantities – annual data – energy indicators - nrg_ind_share)

2. PREREQUISITES

2.1. Software Requirements

Eurostat has developed the SHARES tool in the Microsoft Excel file format, the same format that has been used for the annual energy questionnaires. Both use built-in Visual Basic macros. Therefore, users have to enable the use of Visual Basic macros. The security configuration to enable the execution of macros might vary, depending on the version of Microsoft Excel installed.

The SHARES tool was developed using MS Excel 2016 (32-bit version). While there has not been exhaustive testing in different environments, compatibility with MS Excel 2007 and MS Excel 2013 is expected. The SHARES tool might not work properly with MS Excel 2003 or earlier versions.

2.2. Annual Energy Questionnaires

Countries submit annual energy questionnaires to Eurostat in MS Excel file format. These are joint questionnaires with the OECD/IEA and UNECE. The methodology for filling in the data is based on internationally agreed standards, methodologies[3] and conventions for energy statistics. From the legal perspective, Regulation (EC) No 1099/2008 on energy statistics covers these energy data.

The SHARES tool does not check the correctness of the annual energy questionnaires. This is done during the validation cycle of annual data. This guarantees that the annual energy questionnaires are filled in completely with no significant errors — the internal consistencies within each questionnaire as well as the cross questionnaire consistencies need to be respected.

This version of the SHARES tool only works with the 'latest' available annual energy questionnaires. These questionnaires, as well as the SHARES tool, are available on Eurostat's website:

- http://ec.europa.eu/eurostat/web/energy/methodology/annual
- http://ec.europa.eu/eurostat/web/energy/data/shares

Energy data from the annual energy questionnaires must be exported to CSV format using the export function (built-in macro in the questionnaires). The data must be exported with IEA codes (option **No** has to be selected during exporting).

[3] http://www.iea.org/publications/freepublications/publication/energy-statistics-manual.html

Subsequently, data needs to be imported into the SHARES tool using the in-built procedures (Visual Basic macros accessible from the sheet 'MAIN').

The SHARES tool also allows importing data from Eurostat's database, in which case data will cover only until the latest publicly available year.

2.3. Additional data for calculations based on Directive (EU) 2018/2001 (RED II)

The calculations require the input of additional data as defined in RED II, which are not covered by Regulation (EC) No 1099/2008. Detailed data from the following domains are needed:

- Compliant (sustainable) biogas, biofuels and bioliquids
- Renewable hydrogen, e-fuels and recycled carbon fuels
- Renewable heating (heat pumps) and renewable cooling
- Waste heat and cold
- Generation without pumping from mixed hydro plants
- Cooperation mechanisms (statistical transfers)
- Biomethane injected in the grid to be accounted towards transport, electricity or heating and cooling on the basis of the mass-balance system
- Information on cross-border trade of biomethane
- Electricity and heat for transport fuel production

These additional data have to be entered into the SHARES tool. The details are described in the following chapters of this manual for the respective shares (RES-T, RES-E, RES-H&C).

Eurostat recommends that Member States put in place (preferably in advance) provisions to ensure the availability of reliable data from these areas.

3. DEFINITIONS & METHODOLOGY

This chapter includes some general definitions and methodologies on topics that are crosscutting across several domains.

3.1. Calorific values and conversions

Because of their diverse forms, the energy commodities included in the joint annual questionnaires are measured in a variety of units. For instance, heat is reported in TJ (terajoules), electricity in GWh (gigawatt-hours) and fossil fuels in 10^3 tonnes. In general, the SHARES tool converts the units of all products into ktoe to allow for homogenous calculations at every step. The acronym 'ktoe' stands for 'one thousand tonnes of oil equivalent'. It is not a unit of mass but a unit of energy; it expresses the amount of energy that would be released by burning one thousand tonnes of crude oil. For electricity, MW and GWh are used in some places, as those are the most common units for expressing electricity data.

The decision to use ktoe as the main calculation unit was taken from the first developments of the tool under the previous RED I (Directive 2009/28/EC) and follows the choice of reporting units in the *Template for Member State progress reports*[4].

To convert a fuel quantity from its initial energy units into ktoe one needs to apply the relevant conversion factors. The conversion factors are:

1 ktoe = 41.868 TJ 1 GWh = 3.6 TJ

The formulas above are equivalent to the following equations:

1 ktoe = 41.868 TJ = 11.63 GWh

1 GWh = 3.6 TJ = 0.086 ktoe

1 TJ = 0.02388 ktoe = 0.2778 GWh

For reasons of consistency and in order to respect the unit definitions, as well as to prevent any unnecessary rounding errors, in the SHARES tool only the figures 41.868 and 3.6 are used for conversion as either multiplication or division (depending on the nature of the conversion).

The SHARES tool converts all values for all products to their **net** calorific value basis.

For 'natural gas', 'coke oven gas' and 'gas works gas' the implemented relationship between gross and net calorific value is: 1 NCV = 0.9 × GCV

For 'Blast furnace gas' and 'Other recovered gases' it is assumed that net and gross calorific values are the same.

To convert mass or volume units into ktoe one must apply average calorific values to form the appropriate conversion factors.

To transform a certain mass or volume of a fuel used in the transport sector into its energy quantity of fuels, Annex III to RED II defines the calorific values to be used.

To calculate the amounts of energy in fuels in all other sectors, calorific values as reported in the annual energy questionnaires are used. In cases where those are missing, default values for each fuel are automatically used for the calculations. Countries are encouraged to report updated calorific values in all joint annual energy questionnaires that are transmitted to Eurostat in the framework of Regulation (EC) No 1099/2008 on energy statistics.

[4] http://ec.europa.eu/energy/en/topics/renewable-energy/progress-reports

Table 1: Default net calorific values from energy balances used in the SHARES tool for comparison purposes for products reported in the renewables questionnaire (these are not RED Annex III values)

Product	Default Net Calorific Value [MJ/t]
Charcoal	29 500
Biogasoline (bio motor gasoline)	27 000
Bioethanol	27 000
Bio jet kerosene (bio kerosene-type jet fuel)	44 000
Biodiesels (bio road diesel)	37 000
Other liquid biofuels	27 400

Table 2: Default net calorific values from energy balances used in the SHARES tool for comparison purposes for products reported in the oil questionnaire (these are not RED Annex III values)

Product	Default Net Calorific Value [MJ/t]
Crude oil	42 300
Natural gas liquids	44 200
Refinery gas	49 500
Ethane	46 400
LPG	47 300
Naphtha	44 500
- Biogasoline	27 000
- Non-biogasoline	44 300
Aviation gasoline	44 300
Gasoline type jet fuel	44 300
- Bio jet kerosene	44 000
- Non-bio jet kerosene	44 100
Other kerosene	43 800
- Biodiesels	37 000
- Non-bio gas/diesel oil	43 000
Fuel oil	40 400
White spirit & SBP	40 200
Lubricants	40 200
Bitumen	40 200
Paraffin waxes	40 200
Petroleum coke	32 500
Other oil products	40 200

Table 3: Default net calorific values from energy balances used in the SHARES tool for comparison purposes for products reported in the coal questionnaire (these are not RED Annex III values)

Product	Default Net Calorific Value [MJ/t]
Anthracite	26 700
Coking coal	28 200
Other bituminous coal	25 800
Sub-bituminous coal	18 900
Lignite	11 900
Patent fuel	20 700
Coke Oven Coke	28 200
Gas Coke	28 200

Coal tar	28 000
BKB	19 000
Peat	9 760
Peat products	16 000
Oil shale and oil sands	8 900

These values are used only in the SHARES tool. While these values are consistent with the methodology for energy balances, some small discrepancies occur due to general approach of conservatism in order to avoid any overestimation for various shares of energy from renewable sources.

3.2. Sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels

According to Article 29 of the Directive, biofuels, bioliquids and biomass fuels must fulfil the sustainability and the greenhouse gas emissions saving criteria in order to be counted towards a Member State's renewables share. This section describes how these aspects are applied in the calculations in the SHARES tool.

For data for 2021 and onwards: Compliance with Article 29 ('Sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels') has to be judged also with respect to Article 30 ('Verification of compliance with the sustainability and greenhouse gas emissions saving criteria'). As of data from 2021, countries should report as compliant only those biofuels, bioliquids and biomass fuels for which compliance with Articles 29 and 30 can be fully demonstrated. Otherwise (even when compliance cannot be demonstrated because there is not a national legal basis in place), biofuels, bioliquids and biomass fuels should not be reported as compliant and will not count towards the numerator of the share of energy from renewable sources in the SHARES tool.

In detail, this approach in time series applies specifically to the following categories:

- biofuels and biomass fuels in transport (liquid and gaseous)
- heat and electricity produced from bioliquids (liquid biofuels)
- final energy consumption of bioliquids (liquid biofuels used for energy purposes in industry, households, services, etc.).

The SHARES tool takes into account all specific calculation provisions in the Directive, including the updated Annex IX, which includes a new detailed list of feedstocks and fuels which are to be counted double towards the transport target (in particular, 3 categories have been removed). The complete list in Annex IX of the Directive includes the following feedstocks and fuels:
" Part A. Feedstocks and fuels, the contribution of which towards the target referred to in the first subparagraph of Article 25(1) shall be considered to be twice their energy content:

(a) Algae if cultivated on land in ponds or photobioreactors.
(b) Biomass fraction of mixed municipal waste, but not separated household waste subject to recycling targets under point (a) of Article 11(2) of Directive 2008/98/EC.
(c) Bio-waste as defined in Article 3(4) of Directive 2008/98/EC from private households subject to separate collection as defined in Article 3(11) of that Directive.
(d) Biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry, and excluding feedstocks listed in part B of this Annex.
(e) Straw.
(f) Animal manure and sewage sludge.
(g) Palm oil mill effluent and empty palm fruit bunches.
(h) Tall oil pitch.
(i) Crude glycerine.
(j) Bagasse.
(k) Grape marcs and wine lees.
(l) Nut shells.
(m) Husks.
(n) Cobs cleaned of kernels of corn.
(o) Biomass fraction of wastes and residues from forestry and forest-based industries, i.e. bark, branches, pre-commercial thinnings, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, fibre sludge, lignin and tall oil.

(p) Other non-food cellulosic material as defined in point (s) of the second paragraph of Article 2.
(q) Other ligno-cellulosic material as defined in point (r) of the second paragraph of Article 2 except saw logs and veneer logs.

Part B. Feedstocks, the contribution of which towards the target referred to in the first subparagraph of Article 25(1) shall be considered to be twice their energy content:
(a) Used cooking oil.
(b) Animal fats classified as categories 1 and 2 in accordance with Regulation (EC) No 1069/2009 of the European Parliament and of the Council. "

Other categories under compliant biofuels include those corresponding to Article 26(1) (from food and feed crops[5]) and other compliant biofuels. The latter is to report other compliant biofuels not contained in any of the categories above: not food or feed crops, not in Annex IX, etc. Please note that quantities of compliant biofuels whose category is not known should be reported Other compliant biofuels.

Article 26(1) states "*The share of biofuels and bioliquids, as well as of biomass fuels consumed in transport, where produced from food and feed crops, shall be no more than one percentage point higher than the share of such fuels in the final consumption of energy in the road and rail transport sectors in 2020 in that Member State, with a maximum of 7 % of final consumption of energy in the road and rail transport sectors in that Member State*".
Therefore, countries can report the amount of biofuels and bioliquids which do not come from food sources. These quantities will not be considered for the 7% limit indicated in Article 26(1). Results of the 7% calculation limit can be seen in the TRANSPORT and OVERALL TARGET sheets.
In addition to the 7% cap, the share of such fuels in 2020 needs to be considered. Cell AM126 in TRANSPORT sheet and cell AM130 in OVERALL TARGET should be used to report such 2020 levels. If countries do not report, level in 2021 will be taken by default to allow for the calculations. However, a message will indicate that 2021 share is used for that purpose.

Article 26(2) states: "*For the calculation of a Member State's gross final consumption of energy from renewable sources referred to in Article 7 and the minimum share referred to in the first subparagraph of Article 25(1), the share of high indirect land-use change-risk biofuels, bioliquids or biomass fuels produced from food and feed crops for which a significant expansion of the production area into land with high-carbon stock is observed shall not exceed the level of consumption of such fuels in that Member State in 2019, unless they are certified to be low indirect land-use change-risk biofuels, bioliquids or biomass fuels pursuant to this paragraph*".
Therefore, countries can report the amount of biofuels and bioliquids which are not high-ILUC risk. These quantities will not be considered for the limit indicated in Article 26(2). To establish the cap, the share of such fuels in 2019 needs to be considered. Cell AM127 in TRANSPORT sheet and cell AM131 in OVERALL TARGET should be used to report such 2019 levels. If countries do not report, level in 2021 will be taken by default to allow for the calculations. However, a message will indicate that country did not report and 2021 share is used for that purpose.

[5] Food and feed crops means starch-rich crops, sugar crops or oil crops produced on agricultural land as a main crop excluding residues, waste or ligno-cellulosic material and intermediate crops, such as catch crops and cover crops, provided that the use of such intermediate crops does not trigger demand for additional land

3.3. Allocation of biomethane injected in the gas grid

The Directive promotes sustainable biomethane through several provisions, among others the following:

- a clarification of the rules to be applied for tracing biogas that is injected into the natural gas grid by mentioning explicitly that the mass balance system can be applied to fuels supplied via distribution infrastructures, such as the natural gas grid;
- a traceability requirement for trade operators who have to record into national databases the fuels counted to fulfil the low carbon fuels

The traceability measures from above allows for the allocation of the entire amount of biomethane injected into the natural gas grid towards the transport sector (or any other consumption sector, i.e. electricity or heating and cooling).

As a result, the **SHARES** tool allows for cross-border trade of biomethane, as well as the allocation of biogas injected in the natural gas grid to transport, electricity or heating and cooling (based on sustainability certificates / mass-balance system and GHG-saving criteria). In particular, these quantities are to be reported in the GAS sheet in the respective row *Biomethane injected in the grid to be accounted towards either transport, electricity or heating and cooling*. Furthermore, if allocated to transport, the quantities should be included in sheet TRANSPORT, under the respective category of sustainable renewable fuel. This is in addition to the already reported quantities of non-blended biogas consumed in road transport (biogas directly consumed through dedicated distribution system without injection in the natural gas grid). Member States shall take measures to avoid double counting of the contribution of biogas. In this regard, it is important to ensure that the quantity of biogas consumed through dedicated distribution system without injection in the natural gas grid is not included in the quantity of biogas injected in the natural gas grid. In the same way, the quantity of electricity, heat or final consumption from/of biogas claimed to be consumed in the electricity or heating and cooling sector need to be reported in the proper row in the OVERALL TARGET sheet.
The quantity of biogas injected in the natural gas grid claimed to be consumed in a given consumption sector on the basis of the mass-balance system (with sustainability and traceability requirements/measures) cannot exceed the total quantity of biogas injected in the natural gas grid (as reported in the natural gas questionnaire under "Memo: Receipts from other sources – Renewables) plus the quantity of biomethane imported through the grid minus the quantity of biomethane exported through the grid (both based on mass-balance and sustainability/GHG saving criteria). Furthermore, this quantity cannot exceed the total quantity of methane (of all forms) consumed in the respective consumption sector where the quantities are allocated (e.g. for transport this means as reported in the natural gas questionnaire under "Total final consumption – Transport sector – Road"). The trade of biomethane through the gas grid based on certificates is possible only if both countries report consistent figures (same export from A than import to B reported by both countries A and B). This trade has to be registered in the Union database according to Article 28(2) of RED II. Trade of biomethane through the grid can only be done based on certificates and has to be reported in SHARES (not in the annual energy questionnaire).

When mentioning sustainability certificates (e.g. in the case of biomethane injected in the grid) these certificates are not ‘biomethane guarantees of origins’. These are used solely to prove the origin of the biomethane and represent only contractual (not physical) flows of biomethane. In addition, according to the Renewable Energy Directive, they cannot be counted towards the renewable energy targets. For that reason, sustainability certificates, issued by officially recognised voluntary schemes, demonstrating compliance with the RED’s sustainability and GHG saving criteria as well as its system of compliance – the mass balance system – are necessary. The mass balance, unlike the book and claim system of guarantees of origins, requires physical delivery and subsequent consumption (physical withdrawal from the grid in the country of consumption).

How to report a situation where a renewable feedstock (e.g. biomethane) is fed into the grid to produce another fuel (e.g. methanol from natural gas/biomethane from the grid), subsequently blended with fossil gasoline and then allocated to transport?

The SHARES tool allows, when using biomethane as a feedstock to produce other biofuels, to simply withdraw biomethane from the grid and directly allocate the new fuel into the consumption sector. For the example, mentioned above, the SHARES tool does the following:

1. When importing from annual energy questionnaires (in particular, from the gas questionnaire), in the GAS sheet of the SHARES tool a certain quantity of biomethane is included in the gas grid. This is the quantity of biomethane that the country produced and injected into the grid and comes from the annual questionnaires.
2. A country can remove a certain quantity of energy (biomethane) from the gas grid using the sheet GAS when allocating it to other sectors or when exporting it (through the grid). This quantity is then removed from the composition of the grid (so that the grid does not contain this biomethane anymore). But this quantity is not added automatically anywhere in the SHARES tool (obviously not when being exported, but neither when allocated to other sectors).
3. A country needs to report a quantity of energy (sustainable biofuels –this would include biomethanol in the current example-) used in transport in the sheet TRANSPORT of the SHARES tool. If biomethane is simply accounted in transport, the country would simply add the same quantity of biomethane that was removed from the grid specifically to the appropriate line in the TRANSPORT sheet. But there might be something happening with the biomethane that was withdrawn from the grid, e.g. transformed into another fuel before it is used in transport. In this case, this is not a problem for SHARES, the country just needs to add the final fuel that was used in transport in its appropriate line in the TRANSPORT sheet. In the case of biomethanol for road transport, it is in line 32 (liquid biofuels in road transport) and also reflected in the feedstock used as reported below line 47.
4. In summary, what the tool did with these steps was to remove first biomethane from the grid (in the GAS sheet) and then to allocate fuels used in transport in the TRANSPORT sheet. This should accurately reflect the situation explained in the example.
5. This quantity of biomethanol/bio-LNG would count towards the RES-T and also to the overall RES in the SHARES tool.

4. ELECTRICITY (RES-E)

4.1. Definition of RES-E share

The ratio determining a Member State's RES-E share is defined in Article 7(2) of the Directive. The numerator is defined as:

- The quantity of electricity produced in a Member State from renewable sources, including the production of electricity from renewables self-consumers and renewable energy communities and excluding the production of electricity in pumped storage units from water that has previously been pumped uphill.

In multi-fuel plants using renewable and non-renewable sources, only the part of electricity produced from renewable sources must be taken into account. For the purposes of that calculation, the contribution of each energy source shall be calculated on the basis of its energy content.

The electricity generated by hydropower and wind power shall be accounted for in accordance with the normalisation rules set out in Annex II.

For the purpose of the calculations in the SHARES tool, the numerator is defined as the sum of the following elements:

- Gross electricity production by hydropower in accordance with the normalisation rules set out in Annex II, excluding the production of electricity in pumped storage units from water that has previously been pumped uphill. Gross electricity production in mixed hydro plants[6] is included without its electricity production due to pumped storage.
- Gross electricity production by wind power, in accordance with the normalisation rules set out in Annex II.
- Gross electricity production from sustainable pure bioliquids.
- Gross electricity production from sustainable blended bioliquids (only the renewable portion).
- Gross electricity production from biogases. For electricity produced from biogas in installations with a total rated thermal input equal to or exceeding 2 MW, biogas fuels can only be accounted if they fulfil the sustainability and greenhouse gas emissions saving criteria laid down in Article 29, paragraphs 2 to 7 and 10 of the Directive. Three cases are possible:
    - Gross electricity production from sustainable biogases (direct connection).
    - Gross electricity production from biogases blended in the natural gas grid — only the proportion corresponding to the ratio of blended biogases into natural gas.
    - Gross electricity production from biogases injected in the grid and accounted towards the electricity sector (on the basis of the mass balance system, complying with sustainability and GHG emissions saving criteria)
- Gross electricity production of other renewable sources reported in the annual questionnaires: geothermal; solar (photovoltaic and thermal); tide, wave and ocean; renewable municipal waste;

[6] Mixed hydro plants are those plants which can be used for two purposes: for pumped storage as well as to generate genuine additional electricity from hydro power.

- Gross electricity production from solid biofuels (solid biomass). For electricity produced from biomass in installations with a total rated thermal input equal to or exceeding 20 MW, biomass fuels can only be accounted if they fulfil the sustainability and greenhouse gas emissions saving criteria laid down in Article 29, paragraphs 2 to 7 and 10 of the Directive.

In multi-fuel plants using renewable and conventional sources, only the part of electricity produced from renewable energy sources is taken into account — this principle is respected by default due to the reporting methodology in the annual energy questionnaires.

Given that the transposition deadline of Directive (EU) 2018/2001 (the recast Renewable Energy Directive, "RED II") was 30 June 2021, the sustainability criteria from RED II apply only from the second half of 2021 onwards. For the first half of 2021, the sustainability criteria of RED I still apply.

The denominator 'gross final consumption of electricity' is, for the purpose of the calculations in the SHARES tool, defined as:

- Gross electricity production from all energy sources (actual production, no normalisation for hydro and wind), excluding the production of electricity in pumped storage units from water that has previously been pumped uphill
- plus total imports of electricity
- minus total exports of electricity.

If any statistical transfers, joint projects or joint support schemes for renewable electricity are put in place and reported (as defined in Articles 8–13 of the Directive), only the overall RES share numerator is correspondingly adjusted; RES-E is not influenced.

4.2. Reporting instructions

- **Normalisation rule: hydro**

The renewables and electricity questionnaire collect data on the capacities and production of pure hydro, mixed plants and pure pumped storage plants.

Definitions related to hydro power for annual energy questionnaires

• Pure hydro plants: hydro plants that only use direct natural water inflow and have no capacity for hydro pump storage (pumping water uphill).

− Run of river plant is a type of plant that the natural flow and elevation drop of a river are used to generate electricity.

• Mixed hydro plants: hydro plants with natural water inflow into an upper reservoir where part or all equipment can be used for pumping water uphill; the electricity generated is a consequence of both natural water inflow and water previously pumped uphill.

− of which: pumping – report portion of electricity generated in the pumped hydro mode

• Pure pumped storage plants: hydro plants with no natural water inflow into the upper reservoir; the vast majority of water that generates electricity was previously pumped uphill; abstracting from the rainfall and snowfall.

Countries that do not operate mixed plants have to do nothing. Hydro normalisation is now automatically calculated on the sheet 'REN' in rows 231–243.

Countries that operate mixed plants have to report the actual electricity generation, without pumping, of these mixed plants on row 239 on the sheet 'REN' for all time periods (starting in 1990). Data for capacities of mixed plants are automatically taken from questionnaires.

The reported data should be consistent with other data in the annual energy questionnaires and a simple check is shown on row 246 on the sheet 'REN' to provide help.

Row 246: The reported total electricity generation without pumping in the electricity questionnaire is compared with electricity generated based on the data from the renewable questionnaire and the data for mixed plants. If the value is zero or very close to zero, there is a perfect match or small rounding error. If value is high, it indicates a discrepancy between electricity and renewable questionnaire.

- **Gross electricity production from compliant (sustainable) bioliquids**

Countries should report the gross electricity generation from compliant bioliquids (pure or blended) in sheet 'OVERALL TARGET', rows 12 to 15.

- **Normalisation rule: wind**

The normalisation of onshore and offshore wind takes place separately. For each of these categories, the use of n in the formula for wind normalisation is, from a mathematical perspective, inadequate and actually a value of 4 can be used without any effect on the actual result.

$$Q_N = \frac{C_N + C_{N-1}}{2} \times \frac{\sum_{i=N-n}^{N} Q_i}{\sum_{j=N-n}^{N} \left(\frac{C_j + C_{j-1}}{2} \right)} = \frac{C_N + C_{N-1}}{2} \times \frac{\sum_{i=N-4}^{N} Q_i}{\frac{C_{N-5}}{2} + C_{N-4} + C_{N-3} + C_{N-2} + C_{N-1} + \frac{C_N}{2}}$$

While the form on the left side is exactly as in the Annex II of the RES Directive, the form on the right side of the equation is implemented in the SHARES tool (as they are equivalent).

4.3. Maximum rule for RES-E

If calculation results lead to figures above 100 %, for any subsequent calculation using RES-E share as input (for example for RES-T), 100 % is used instead of the calculated value.

5. TRANSPORT (RES-T)

5.1. RES-E share for electricity in transport

To calculate the amount of renewable electricity used in transport, the amount of electricity used in transport is multiplied with the RES-E share in the country of year n-2.

As mentioned in the chapter for RES-E, if the RES-E value is above 100 %, the SHARES tool will use 100 % instead of the real value for RES-T calculation.

5.2. Definition of RES-T share

The ratio determining a Member State's RES-T share is defined in Article 27 of the Directive, as this Article defines both the numerator and the denominator.

(a) for the calculation of the denominator, that is the energy content of road- and rail-transport fuels supplied for consumption or use on the market, petrol, diesel, natural gas, biofuels, biogas, renewable liquid and gaseous transport fuels of non-biological origin, recycled carbon fuels and electricity supplied to the road and rail transport sectors, shall be taken into account;

(b) for the calculation of the numerator, that is the amount of energy from renewable sources consumed in the transport sector for the purposes of the first subparagraph of Article 25(1), the energy content of all types of energy from renewable sources supplied to all transport sectors, including renewable electricity supplied to the road and rail transport sectors, shall be taken into account. Member States may also take into account recycled carbon fuels.

For the denominator (and following a similar logic for the interpretation that was done before), the following items must be included:

- Consumption of petrol for transport (all modes of transport, e.g. also aviation gasoline)
- Consumption of diesel for transport (all modes of transport, e.g. also rail or inland waterways consumption of diesel)
- Solid, liquid and gasous biofuels used in transport
- Electricity used in rail and road transport
- Natural gas for transport
- Renewable liquid and gaseous transport fuels of non-biological origin used in transport
- Recycled carbon fuels used in transport

LPG is not included in the denominator for the transport target, nor is aviation kerosene or any type of fuel used for international shipping. '

Transport modes, as defined in Regulation (EC) No 1099/2008, include: international aviation, domestic aviation, road, rail, domestic navigation, pipeline transport, and a category for transport not specified elsewhere. International marine bunkers (international shipping) are excluded and not considered in the transport sector.

The numerator 'energy from renewable sources consumed in the transport sector' is, for the purpose of the calculations in the SHARES tool, defined as the sum of the following elements:

- Compliant biofuels (liquid and gaseous) in all modes of transport and, where applicable, the respective multiplier (2×) is used (for categories indicated in annex IX).

- Renewable electricity, by applying the national RES-E share two years before to the total electricity consumption in transport (following the principle of proportionality of renewable electricity in the grid) with the respective multiplier for road transport (4x) and for rail transport (1.5x), as defined in Article 27(2). The RES-E share of year n-2 is applied ('… two-year period before the year in which the electricity is supplied in their territory …'), with the exception of the years 2004 and 2005, which use the ratio of the year 2004, as it is not possible to calculate ratios for years prior to 2004. For the purpose of the RES-T calculation, the value of RES-E will be capped at a maximum of 100 % (in which case it means that all electricity is renewable).
- Hydrogen of renewable origin in all modes of transport.
- Synthetic fuels of renewable origin in all modes of transport.
- Other forms of renewable energy with reported consumption in the transport sectors in the annual renewable questionnaire (geothermal, solar thermal, renewable municipal waste, solid biofuels).[7]

With respect to the multipliers, the Directive states that, for the purposes of demonstrating compliance with the minimum shares referred to in Article 25(1):

(a) the share of biofuels and biogas for transport produced from the feedstock listed in Annex IX may be considered to be twice its energy content;

(b) the share of renewable electricity shall be considered to be four times its energy content when supplied to road vehicles and may be considered to be 1,5 times its energy content when supplied to rail transport;

(c) with the exception of fuels produced from food and feed crops, the share of fuels supplied in the aviation and maritime sectors shall be considered to be 1,2 times their energy content.

No indication is made whether these multipliers should apply only to the numerator or both numerator and denominator. Therefore, the Commission legal interpretation is that they apply to both[8].

The SHARES tool incorporates the categories to be reported under compliant biofuels in the TRANSPORT sheet. More specifically, this refers to the integration of the categories indicated in Annex IX of the Directive, together with the rest of possible categories that can be reported under compliant biofuels. Each category displayed under Annex IX is classified according to the criteria of the Directive, in part A or B and with the same letter. The name of the category is displayed in a comment attached to each cell.

Eurostat, as well as other data users highly appreciate historic data and earlier transmission of these detailed categories.

In order to allow for monitoring the national sub-targets, limits and caps established as regards different types of biofuels, some lines have been added at the bottom of the TRANSPORT sheet of the SHARES tool. They help monitor:

- The status of a country as regards the share of biofuels and bioliquids, as well as of biomass fuels consumed in transport, produced from food and feed crops, calculated for the purpose of the 7% limit for the transport sub-target (Article 26).

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7 This category is included only to ensure full coverage of possible reporting in the annual renewable questionnaire. The real contribution of these categories to consumption of renewables in transport is expected to be zero or, in very exceptional circumstances, negligible.

8 This interpretation might change depending on the clarifications that might be issued by the Commission in the respective implementing legislation.

- Within the transport sub-target, the calculation for a country of the share of advanced biofuels and biogas from feedstocks from part A of Annex IX to follow up the obligation of 0.2% in 2022, 1% in 2025 and 3.5% in 2030, according to Article 25(1).
- The percentage of biofuels and biogas from Annex IX Part B in FEC in transport in a country to assess the situation as regards the 1.7% limit defined in Article 27(1)b.

5.3. Reporting instructions

- **Calorific values**

When calculating the quantity of transport fuels to be reported in the SHARES tool, the Directive defines in Annex III which calorific values are to be used for transport fuels. Therefore, Annex III values (43 MJ/kg) are used for petrol and diesel consumption in the transport sector when calculating the RES-T numerator and denominator. When reporting quantities of biofuels used in transport, the calorific values in Annex III of the Directive must be used to report from row 35 downwards in sheet 'TRANSPORT'. If certain biofuels are not listed in Annex III and unless otherwise specified, the country should use the best available calorific value at national level. In these cases, the country should include a small comment in the remarks sheet with a very short description of the biofuel and the method that has been used to obtain the calorific value.

- **Reporting of all biofuels in transport**

All biofuels (compliant and non-compliant) should be reported on the sheet 'TRANSPORT' in rows 35–37 (liquid biofuels) and 39–41 (gaseous biofuels).

- **Reporting of renewable fuels of non-biological origin in transport**

Renewable fuels of non-biological origin (RFNBOs) used in transport can be reported in sheet 'TRANSPORT' in row 49-51 (currently, this reportijng has been hidden until the application of RED III, where the approach changes from considering the electricty used to produce the RFNBO to consider the final use of the RFNBO). These are renewable liquid and gaseous transport fuels of non-biological origin, other than biofuels, whose energy content comes from renewable energy sources other than biomass and which are used in transport. RFNBOs include hydrogen.

In Regulation (EC) No 1099/2008 on energy statistics, renewable fuels of non-biological origin (RFNBOs) is not yet accounted due to its statistical insignificance. This approach will change in the future and these fuels will start to be reported as transport fuel or energy carrier. In any case, as these fues are not included in the denominator for the RES-T calculation, RES-T is not influenced by this approach. For the overall RES share the impact is negligible as the overall use of these fuels in European energy economy is currently insignificant when compared to fossil fuels.

- **Reporting of hydrogen in transport**

Hydrogen of renewable origin used in transport should be reported in sheet 'TRANSPORT' in row 46-48.

In Regulation (EC) No 1099/2008 on energy statistics, hydrogen (of renewable origin) is not yet accounted due to its statistical insignificance. This approach will change in the future and hydrogen will start to be reported as transport fuel or energy carrier. In any case, as hydrogen is not included in the denominator for the RES-T calculation, RES-T is not influenced by this approach. For the overall RES share the impact is negligible as the overall

use of hydrogen in European energy economy is currently insignificant when compared to fossil fuels.The approach in RED II considers that only the electricity used to produce hydrogen is counted for RES-E. For more information on hydrogen or RFNBOs, please consult 2023_07_26_Document_Certification_questions.pdf (europa.eu)

- **Reporting of compliant (sustainable) biofuels in transport**

Compliance with Article 29 (Sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels) has to be judged also with respect to Article 30 (Verification of compliance with the sustainability and greenhouse gas emissions saving criteria). Countries can report as compliant only those biofuels and bioliquids for which compliance with Articles 29 and 30 can be demonstrated.

Regardless of the circumstances, if compliance with the requirements of both Articles cannot be demonstrated, the quantities of such biofuels should **not** be reported as compliant. Please note that demonstrating this compliance is not part of the SHARES tool.

Compliant biofuels should be reported in rows 56–94 on the sheet TRANSPORT.

Calorific values in Annex III of the Directive should be used for all calculations for transport fuels, including for all types of biofuels. In case the biofuels used are not listed in Annex III, real world calorific values should be used for all calculations for biofuels and renewable fuels of non-biological origin.

Definitions related to transport for annual energy questionnaires

Transport sector **excludes** certain situations:

- All transport in the energy sector (for example: surface and underground mines) for the carrying and transporting material within the energy production sites and/or energy transformation sites (aka not on the publically accessible transport network) is to be reported in the respective categories of the energy sector (coal mines, oil and gas extraction, oil refinery).
- Transport that takes places in areas that are not publicly accessible (in general off-road areas, regardless if paved or unpaved) in the following sectors are to be reported in the respective end-use sectors of final consumption and not in transport: agriculture, forestry, fishing, construction.
- Military vehicles (wheeled or crawler/tracked type vehicles) are to be reported in the "other sectors — not elsewhere specified".
- International Marine Bunkers are not considered as a part of the final consumption (transport sector) in the joint annual energy questionnaires.
- Energy consumption of elevators, lifts and moving stairs are to be reported in the residential, commercial/public services and/or industrial sectors.
- Stationary engines are excluded from reporting in the transport sector (including mobile generators).
- Energy used for heating and lighting at railway, bus stations, shipping piers and airports (NACE 49-53) should be reported in the category commercial/public services

Transport Sector – Rail includes all transport on the rail tracks. This includes all form of trains: high speed trains, maglev, express trains, inter-city trains, local trains, suburban trains, monorail, metro, trams, cable cars (funiculars) on rail tracks (aka cable railway) and industrial railways. This includes all passenger transport and freight transport as well as all surface transport and underground transport on rail tracks. All transport on rail tracks is included, regardless if in urban areas or not.

Transport Sector – Road includes all transport on publically accessible roads, highways, motorways and unpaved roads, regardless if infrastructure is privately or publically owned. This includes all forms of road vehicles: powered bicycles and tricycles (e.g. electric bicycles), scooters, mopeds, motorcycles, three-wheelers, quads, cars, vans, SUVs, mini-buses, buses (including trolley buses), coaches, trucks, road tractors and all types of mobile utility vehicles (for example: fire trucks, snow plows, garbage truck). Use of fuel of utility vehicles (industrial, agricultural, forestry and construction sector vehicles) on publically accessible roads, highways and motorways should be also reported here. However, the "off-road" consumption of energy of utility vehicles (industrial, agricultural, forestry and construction sector vehicles) is not to be reported here. Energy consumption in the non-wheeled vehicles (crawlers/tracked vehicles) is not to be reported in the road transport but in the respective sectors of energy sector or final energy consumption sectors - industry. All transport is included, regardless if in urban areas or not.

Transport sector — International aviation includes quantities of aviation fuels delivered to aircrafts (planes, helicopters and drones) for international aviation. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. Excludes fuels used by airlines for their road vehicles (to be reported in the transport sector — not elsewhere specified) and military use of aviation fuels (to be reported in the other sectors — not elsewhere specified).

Transport sector — Domestic aviation includes quantities of aviation fuels delivered to aircraft (planes, helicopters and drones) for domestic aviation — commercial, private, agricultural, etc. Note that this may include journeys of considerable length between two airports in a country (see geographical definitions of countries). Includes fuel used for purposes other than flying, e.g. bench testing of engines. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. Excludes fuels used by airlines for their road vehicles (to be reported in the transport sector — not elsewhere specified) and military use of aviation fuels (to be reported in the other sector — not elsewhere specified).

Transport sector — Domestic navigation includes quantities delivered to vessels of all flags not engaged in international. The domestic/international split should be determined on the basis of port of departure and port of arrival and not by the flag or nationality of the ship. Note that this may include journeys of considerable length between two ports in a country (see geographical definitions of countries). Fuel used by fishing boats should not be reported in transport sector, but in the final energy consumption category fishing (in other sectors).

Transport sector — Pipeline transport includes quantities used as energy in the support and operation of pipelines transporting gases, liquids, slurries and other commodities. Includes energy used for pump stations and maintenance of the pipeline. Excludes energy used for the pipeline distribution of natural or manufactured gas, hot water or steam from the distributor to final users (to be reported in the energy sector), energy used for the final distribution of water to household, industrial, commercial and other users (to be included in commercial and public services) and losses occurring during this transport between distributor and final users (to be reported as distribution losses).

Transport sector — not elsewhere specified includes quantities used for transport activities not included elsewhere. By the way of example:

- fuels used in the airports for the surface transport;
- fuels used in ports for ships' unloaders;
- various types of cranes;
- consumption in cable cars not on rail tracks (hanging cable cars, aerial lifts, gondolas, ski lifts)
- recreational use of powered vehicles (ski-jets, snowmobiles, golf carts), use in racing vehicles, fuel used during competitions and shows (including recreational use of ex-military vehicles and ex-industrial vehicles);
- fuel used in space shuttles and spacecrafts.

6. HEATING & COOLING (RES-H&C)

6.1. Definition of RES-H&C share

This ratio determining a Member State's RES-H&C share is defined in Article 7 of the Directive. In this article, gross final consumption of energy from renewable sources in the heating and cooling sector is defined as the quantity of district heating and cooling produced in a Member State from renewable sources, plus the consumption of other energy from renewable sources in industry, households, services, agriculture, forestry and fisheries, for heating, cooling and processing purposes.

In multi-fuel plants using renewable and non-renewable sources, only the part of heating and cooling produced from renewable sources must be taken into account.

In addition, ambient and geothermal energy used for heating and cooling by means of heat pumps and district cooling systems can be taken into account, provided that the final energy output significantly exceeds the primary energy input required to drive the heat pumps (e.g. in the form of minimum seasonal performance factors for heat pumps). The quantity of heat or cold to be considered to be energy from renewable sources for the purposes of this Directive shall be calculated in accordance with the methodology set out in Annex VII defines the basic formula for accounting energy from heat pumps. Commission Delegated Regulation (C/2021/9392 final), adopted in accordance with Article 35, establishes a methodology for calculating the quantity of renewable energy used for cooling and district cooling and to amend Annex VII.

The numerator 'gross final consumption of energy from renewable sources for heating and cooling' is, for the purpose of the calculations in the SHARES tool, defined as the sum of the following elements:

- Final energy consumption of renewable energies other than electricity, heat and bioliquids in sectors other than transport. Using the terminology and definitions of joint annual energy questionnaires, this covers:
    - all consumption reported under 'Industry sector' and 'Other sectors' on the renewables questionnaire;
    - all consumption reported under 'Transformation sector — Blast furnaces' on the renewables questionnaire.
- Compliant bioliquids consumed in the 'Transformation sector — Blast furnaces', 'Industry sector' and 'Other sectors':
    - pure bioliquids reported in the renewables questionnaire
    - the corresponding part of blended bioliquids (biogasoline, bio jet kerosenes, biodiesels) reported in the oil questionnaire.
- Derived heat produced from geothermal, solar thermal, renewable municipal waste, solid biofuels and biogas as reported in the renewables questionnaire. However, for solid biomass and biogases, new rows allow countries to report only quantities that are eligible for accounting according to Article 29. Only the quantities reported in these rows are taken into account for the calculations.
- Derived heat produced from compliant bioliquids:
    - heat produced form compliant pure bioliquids reported in the renewables questionnaire
    - the corresponding part of heat produced from compliant blended bioliquids (biogasoline, bio jet kerosenes, biodiesels) reported in the oil questionnaire.
- The share of biogas blended in the natural gas network applied to natural gas consumption in the 'Transformation sector — Blast furnaces', 'Industry sector' and 'Other sectors'.

- The share of biogas blended in the natural gas network applied to derived heat produced from natural gas.
- The contribution of renewable energy from heat pumps calculated based on Commission Decision 2013/114/EU[9] (notified under document C(2013) 1082).
- The contribution of renewable cooling.
- In addition, the SHARES tool includes the possibility for countries to report waste heat and cold, in line with Article 23. Countries can decide whether to report using these rows or not and a new row has been created to display the RES-H&C with waste heat and cold. For concrete methodology to report waste heat and cold, please consult the Commission report JRC Publications Repository - Defining and accounting for waste heat and cold (europa.eu).

The denominator 'gross final consumption of energy for heating and cooling' is, for the purpose of the calculations in the SHARES tool, defined as the sum of the following elements:

- Final energy consumption of all energies other than electricity in sectors other than transport. Using the terminology and definitions of joint annual energy questionnaires, this covers:
    - all consumption reported under 'Industry sector' and 'Other sectors' on the renewables, coal, oil and natural gas questionnaires;
    - all consumption reported under 'Transformation sector — Blast furnaces' on the renewables, coal, oil and natural questionnaires minus the production of 'Blast furnace gas' reported on the coal questionnaire.
- All derived heat consumed in the 'Transformation sector — Blast furnaces', 'Industry sector' and 'Other sectors'.
- The contribution of renewable energy from heat pumps calculated based on Commission Decision 2013/114/EU (notified under document C(2013) 1082).
- The contribution of renewable cooling.
- If countries report waste heat and cold, these quantities would be included in the denominator for the RES-H&C with waste heat and cold.

The tool also presents the possibility to calculate the share of energy from renewable sources and from waste heat and cold in districit heating and cooling.

For reporting items related to district heating and cooling, methodology and instructions in Reporting instructions for district heating and cooling need to be respected.

Article 23(1) states: *In order to promote the use of renewable energy in the heating and cooling sector, each Member State shall endeavour to increase the share of renewable energy in that sector by an indicative 1,3 percentage points as an annual average calculated for the periods 2021 to 2025 and 2026 to 2030, starting from the share of renewable energy in the heating and cooling sector in 2020, expressed in terms of national share of final energy consumption and calculated in accordance with the methodology set out in Article 7, without prejudice to paragraph 2 of this Article. That increase shall be limited to an indicative 1,1 percentage points for Member States where waste heat and cold is not used. Member States shall, where appropriate, prioritise the best available technologies*.

Therefore, countries need to provide the share of renewables in heating and cooling (with and/or without waste heat and cold) in 2020 to be used as a baseline. To establish this

[9] http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013D0114

baseline, cells AM86 and AM87 in OVERALL TARGET should be used to report such 2020 levels. If countries do not report, level in 2021 will be taken by default to allow for the calculations. However, a message will indicate that country did not report and 2021 share is used for that purpose.

6.2. Reporting instructions

- **Reporting of final consumption of compliant bioliquids**

  Final energy consumption of compliant bioliquids should be reported in rows 50 and 51 on the sheet 'OVERALL TARGET'. Report here only consumption in 'Industry sector', 'Other sectors' and 'Transformation sector — Blast furnaces'. Consumption in transport is **not** to be reported here.

- **Reporting of heat from compliant bioliquids**

  Derived heat (heat sold[10]) produced from compliant bioliquids should be reported in rows 65 - 73 on the sheet 'OVERALL TARGET'.

6.3. Reporting instructions for heat pumps (ambient heat)

This section will be updated when reporting on heat pumps takes place in the annual renewables questionnaire.

All reporting of renewable energy captured by heat pumps should be based on Commission Decision 2013/114/EU (notified under document C(2013) 1082). Please note that there were some typographical errors in the first version of this Decision and therefore the corrected version should be used.

All information about heat pumps is to be reported on the sheet 'HEAT PUMPS'.

Countries can report in row 7 on the sheet 'HEAT PUMPS' renewable energy captured by heat pumps in the following cases:

- For historic time periods where a lack of data does not allow to use the approach established in Commission Decision 2013/114/EU.
- If national methodology with improved accuracy is used and the conditions described in 2013/114/EU — Annex — section 3.12 are fulfilled.
- On a temporary basis, if only partial coverage of all heat pumps is reported according to Commission Decision 2013/114/EU in other rows on the sheet 'HEAT PUMPS'.

Countries have to ensure that there is no double counting of renewable energy reported in row 8 on sheet 'HEAT PUMPS' with other renewable energy data reported elsewhere. Also, countries are asked to provide a written explanation of what exactly is reported in this row, in case they decide to use it (please use sheet REMARKS)

Please report **Capacity of heat pump installed** in the respective rows for your country's climate condition areas (cold, average, warm) — reporting units are gigawatts (GW) and all heat pumps should be included. If this information is not available, please provide an estimate. This element complements the elements needed for calculation and is not actually entered into any calculations; it serves only for checking purposes.

As only renewable energy from heat pumps with an SPF greater than 2.5 should be considered towards the target, it is necessary to also report capacities in GW '**of which SPF is above the minimum threshold**' in the respective rows for your country's climate zone (cold, average, warm).[11]

[10] Please see harmonised IEA-Eurostat methodology for reporting in annual energy questionnaires.
[11] SPF stands for 'Seasonal Performance Factor'.

Clarification note for the minimum SPF threshold: Electrically driven heat pumps with an SPF of 2.5 and above, as well as thermally driven heat pumps with an SPF of 1.15 and above, should be included. Electrically driven heat pumps with an SPF below 2.5, as well as thermally driven heat pumps with an SPF below 1.15, must be excluded. It is not sufficient to judge if the national average is above this threshold — even if the national average is above this threshold the total capacity should be estimated based on the assessment of this threshold on the level of individual heat pump units.

Default values for 'Equivalent full load hours of operation' as well as 'Estimated average SPF' have been pre-entered. If based on scientific evidence and/or statistical data collections and more precise national values are available, such figures can be entered instead of the default values (please see Commission Decision 2013/114/EU — Annex — section 3.12).

The level of detail is significant (in total nearly 400 rows long). However, many Member States have only one climate condition area, several Member States have two areas, and only very few Member States might have all three climate condition areas to report.

Note: in the SHARES tool (MS Excel file) click on the '+' sign on the left side to expand the section you wish to see.

Until the map defined in Figure 2 of Commission Decision 2013/114/EU is defined in a more precise way in the legally binding documents referred to in this Decision or elsewhere, Eurostat defines on a **provisional basis** the climate condition areas based on the Heating Degree Days (HDD) dataset. This **provisional** definition is necessary to make reporting in the SHARES tool practical and operational. By no means is this provisional definition to prejudge any subsequent decision of the Commission on this matter.

Basic HDD and CDD data are available from Eurostat database[12] for the period 2010–2019, which allows the creation of long-term averages for nearly all NUTS 2 regions in the EU (and also country-level attribution, in case regional data are not available).

One of the main principles used when preparing heat pump guidelines was **conservatism** regarding heat pump performance. In line with this principle of conservatism, cold, average and warm climate areas were defined. This approach also has one additional advantage: countries are further encouraged to do some research in order to have better estimates for the default values in their territory.

A detailed table showing average values of HDD and CDD of available NUTS regions as in the Eurostat's database is provided in Annex I at the end of this document. On the next page, there is a provisional European map showing climate condition areas. Thresholds for defining cold/average/warm climates were set up as 2 000 and 3 000 annual heating degree days and 50 and 100 annual cooling degree days (for cooling purposes).

Please note the following aspects of this provisional definition of climate condition areas:

- This definition only defines how cold it is in winter for heating purposes (heating degree days) and how hot it is in summer for cooling purposes (cooling degree days).
- It is used only to apply default values when specific national values are not available.

For information: please also see other scientific work on climate classification[13].

[12] Dataset: Heating and cooling degree days by NUTS 2 regions — annual data (nrg_chddr2_a)
[13] http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf

6.4. Reporting instructions for renewable cooling

Calculations on renewable cooling follow the methodology laid out in Commission Delegated Regulation (EU) 2022/759 of 14 December 2021 amending Annex VII to Directive (EU) 2018/2001 of the European Parliament and of the Council as regards a methodology for calculating the amount of renewable energy used for cooling and district cooling (C/2021/9392 final).

All information about renewable cooling is to be reported on the sheet 'RENEWABLE COOLING'.

Countries should report active cooling, including district cooling, regardless of whether it is free cooling or a cooling generator is used.

The following cases are excluded:

a. passive cooling, although where ventilation air is used as a heat transport medium for cooling, the corresponding cooling supply, which can be supplied either by a cooling generator or by free cooling is part of renewable cooling calculation. This refers to air handling units and also rooftop units (which are in a single envelope an air handling unit and an air to air heat pump). Air handling units are mostly used for ventilation in buildings. But they can also be designed to allow cold air distribution inside the building and in that case can supply cooling (free or from cooling generator). Air handling units used for cooling would require larger air flow than needed for ventilation. They would also require an economizer to allow the use of recycled air in the summer when outdoor air is very hot. This economizer can then be used in mid-season to increase the rate of outdoor air to allow free cooling.
b. the following technologies or processes of cooling:
    i. cooling in means of transportation;
    ii. cooling systems whose primary function is to produce or store perishable materials at specified temperatures (refrigeration and freezing);
    iii. cooling systems with space or process cooling temperature set points lower than 2°C;
    iv. cooling systems with space or process cooling temperature set points above 30°C;
    v. cooling of waste heat resulting from energy generation, industrial processes and the tertiary sector (waste heat)
c. energy used for cooling in power generation plants; cement, iron and steel manufacturing; wastewater treatment plants; information technology facilities (such as data centres); power transmission and distribution facilities; and transportation infrastructures.

According to the Commission Delegated Regulation, the "RENEWABLE COOLING" sheet facilitates the calculation of the renewable energy quantity for cooling. Different sections allow for this calculation in:

- Individual cooling systems above 1.5 MW capacity
- Individual cooling systems below 1.5 MW capacity (simplified method)
    - Space cooling in residential sector
    - Space cooling in the tertiary sector

    - Process cooling
- Other individual cooling systems
- District cooling

Countries can report in row 7 on the sheet ‘RENEWABLE COOLING’ in the following cases:

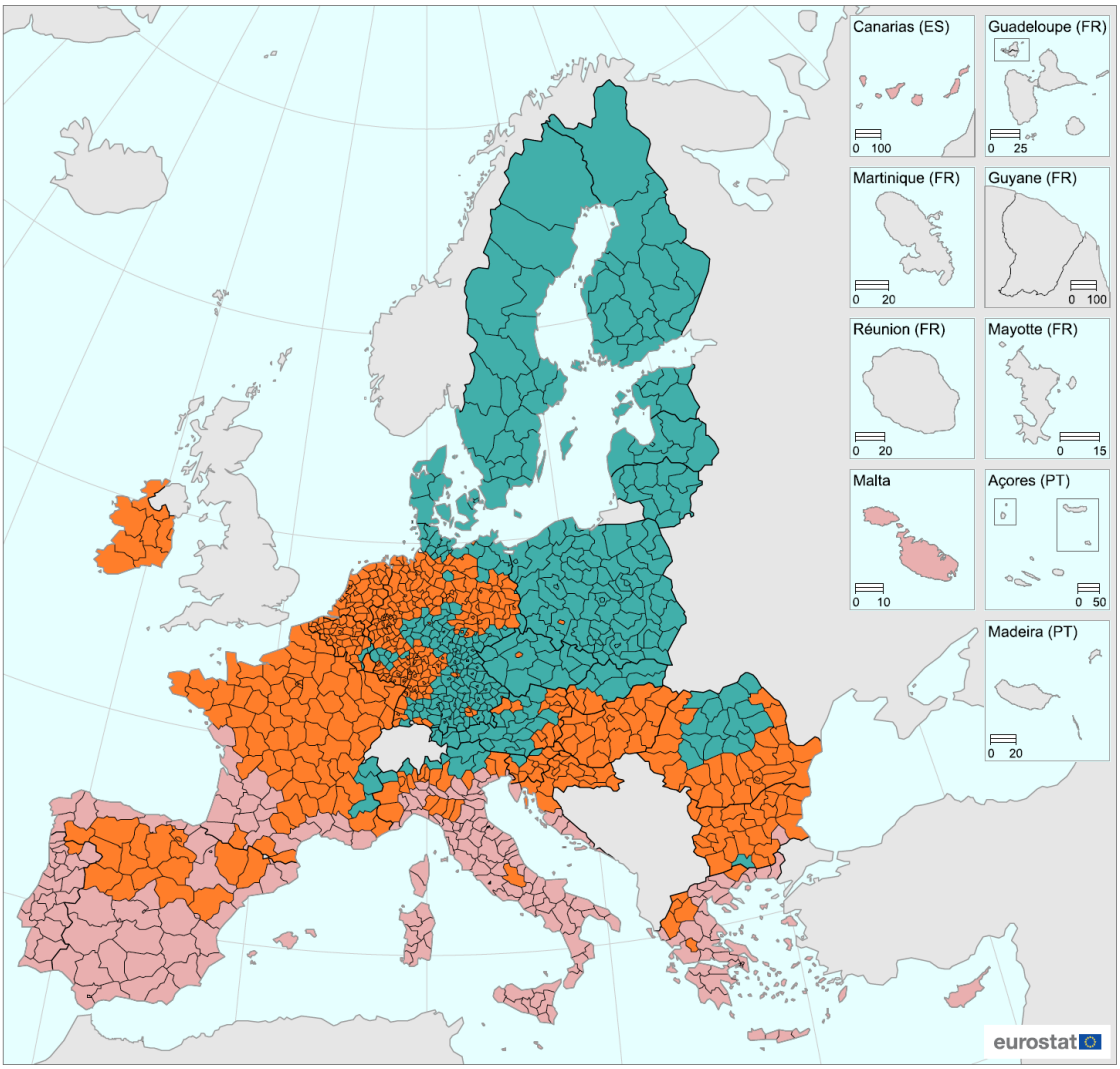
- For historic time periods where a lack of data does not allow to use the approach established in Commission document C/2021/9392 final.
- If national methodology with improved accuracy is used and the conditions described in section 3.6 to the Annex of C/2021/9392 are fulfilled.
- On a temporary basis, if only partial coverage of all renewable cooling is reported according to C/2021/9392 in other rows on the sheet ‘RENEWABLE COOLING’.

Detailed data on Cooling Degree Days is available in Annex I.

Provisional approach for reporting in the SHARES tool:

Heating Degree Days

2010-2019 data (arithmetic average)



unit: absolute number

Administrative boundaries: © EuroGeographics © UN–FAO © Turkstat

Cartography: Eurostat – IMAGE, 01/2021

Heating Degree Days

- **< 2000**
- **2000 - 3000**
- **> 3000**
- **Data not available**

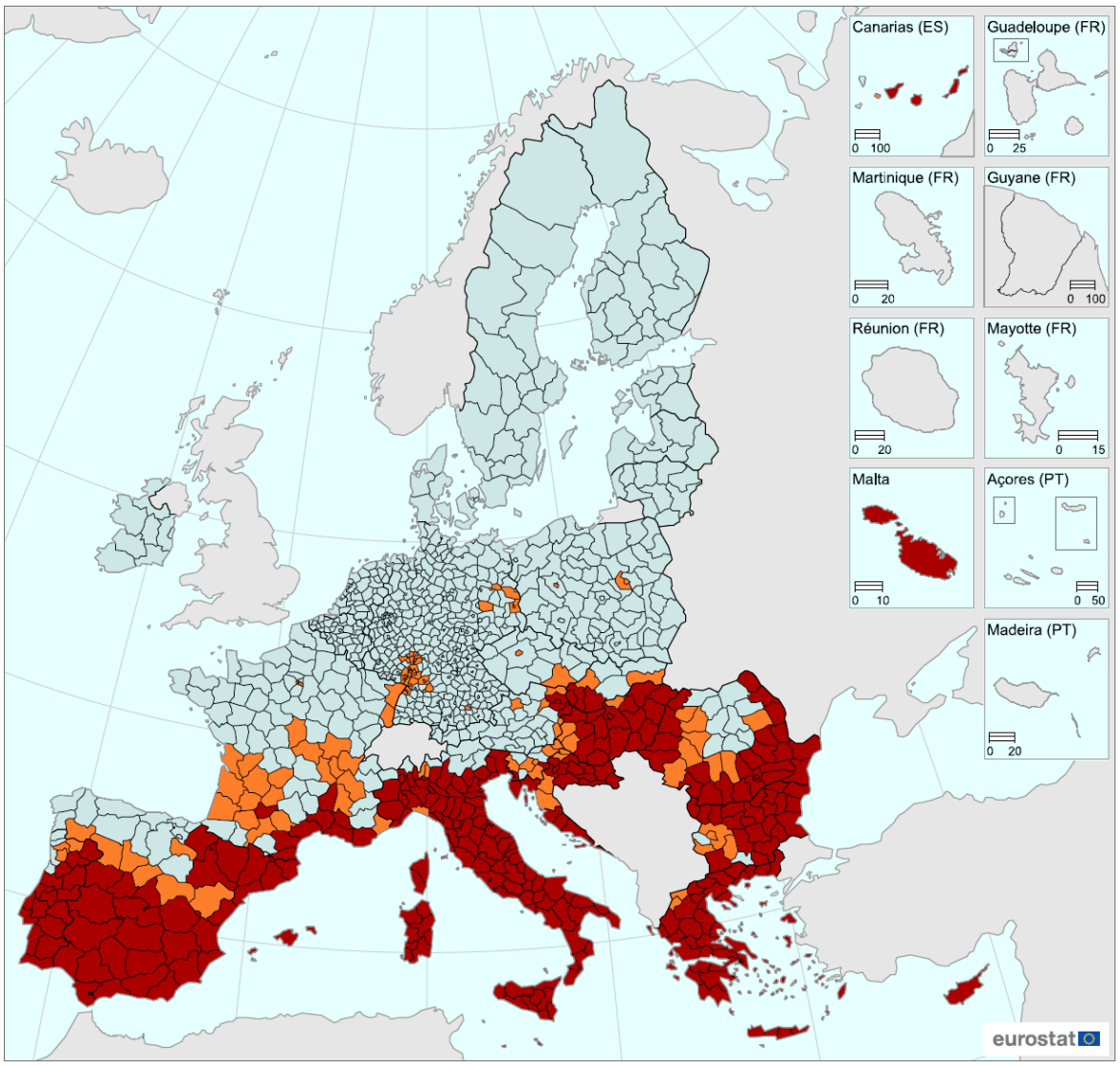
0 200 400 600 800 km

Source:

Eurobase, Cooling and heating degree days by NUTS 2 regions - annual data (nrg_chddr2_a)

Cooling Degree Days

2010-2019 data (arithmetic average)



unit: absolute number

Administrative boundaries: © EuroGeographics © UN–FAO © Turkstat
Cartography: Eurostat – IMAGE, 01/2021

Cooling Degree Days

- **< 50**
- **50 - 100**
- **> 100**
- **Data not available**

0 200 400 600 800 km

Source:
Eurobase, Cooling and heating degree days by NUTS 2 regions - annual data (nrg_chddr2_a)

7. OVERALL RES SHARE

The RES ratio is defined in Article 7 of the Directive. The following specificities and similarities with RES-E, RES-T and RES-H&C for overall RES share calculation are worth highlighting:

- While RES-T is calculated with a denominator as defined in Article 27, the overall RES share denominator is calculated with all fuels used in all transport modes (for example LPG and CNG consumption, as well as aviation consumption).
- While the RES-T numerator and denominator have multiplier for renewable electricity in road transport and certain compliant (sustainable) biofuels, in the overall RES share numerator and denominator these multipliers are not applied.
- Additional renewable energy captured by heat pumps is included in the numerator and the denominator of RES-H&C as well as in the numerator and the denominator of the overall RES share.
- The calorific values for transport in Annex III are used in the numerator and the denominator of RES-T as well as the overall RES share; however, for the use of fuels outside the transport sector and fuels not defined in Annex III, calorific values as reported in the annual energy questionnaires are used.

'Gross final consumption of energy' (GFCoE) is calculated for each fuel on respective fuel sheets and is presented on the sheet 'OVERALL TARGET' in rows 71–75. Please note that the calculation of GFCoE has several particularities due to the linking of certain elements to RES-E and RES-T and in order to facilitate calculation in the SHARES tool:

- All transport fuels from the renewables questionnaire are included together with the 'OIL questionnaire' and values with the calorific values of Annex III are taken into account.
- The final energy consumption of renewable electricity and renewable derived heat is included together with other consumption of electricity and derived heat, and consumption quantities for GFCoE calculation are attributed to the "ELECTRICITY" questionnaire.

As a consequence, values under the heading 'RENEWABLE questionnaire' are much lower; however, as all values are summed together, this does not affect the total calculation. For individual calculations of RES-E, RES-T and RES-H&C, the correct amount of renewables in full are taken into account.

Overall RES share is presented in row 102 on the sheet 'OVERALL TARGET'. Data in this row are adjusted as described in sections 7.1 (Cooperation Mechanisms — Statistical Transfers) and 7.2 (Aviation adjustment) and also includes the 7% limit explained in sections 3.2 and 5.2.

7.1. Cooperation Mechanisms — Statistical Transfers

If any statistical transfers, joint projects or joint supports schemes for renewables are put in place and reported (as defined in Articles 8–13 of the Directive), both the numerator and the denominator are correspondingly adjusted. Only the total RES share is adjusted for any 'Cooperation Mechanisms — Statistical Transfers', unless there is a clear indication that a transfer should go from the transport sub-target to the transport sub-target, in which case it is adjusted in both countries, both for transport and for the overall target. This follows a recent interpretation of the legal service of DG ENER, stating that statistical transfers can be

allocated directly to the transport sub-target, as long as the partner country deducts this quantity also from its transport sub-target.

All values are to be reported in ktoe in the cells highlighted in yellow on the sheet ‘STAT. TRANSFERS’. Only positive values should be entered here (no negative values for amounts of energy to be deducted).

The first notification was sent to the Commission for the year 2012 and therefore reporting for previous years is not possible.

Reporting countries are strongly encouraged to double check with their counterparts in other countries and report exactly the same values in order to avoid any possible discrepancies from unit conversions and rounding to certain number of decimal places.

Reporting units are ktoe.

7.2. Aviation adjustment

If bioliquids are used in aviation, the calorific values in Annex III should be used for conversion. As these are not reported in annual energy questionnaires, countries can provide adjusted values for aviation fuel consumption. If no fuels of renewable origin are used, no intervention by reporting countries is needed — there is a predefined formula with this respect included in the relevant cells.

Aviation consumption values are to be reported in ktoe in the cells highlighted in yellow on the sheet ‘OVERALL TARGET’ in row 98. Actual consumption without aviation cap adjustments should be reported there. The aviation cap adjustment with respect to Article 7(5) is performed subsequently.

8. REMARKS SHEET

The sheet ‘REMARKS’ should include all important notes related to the elements in the SHARES tool. Such notes might include explanations for breaks in series and outliers.

9. OVERALL SUMMARY SHEET

The sheet ‘OVERALL SUMMARY’ in the SHARES tool presents key information that can be easily printed in landscape format. The sole purpose of this sheet is presentational. There is no new information calculated here, nor there are any additional data to be entered.

Several energy units can be chosen using the drop-down list.

10. TECHNICAL NOTES

- Many elements of the SHARES tool are password protected in order to prevent any possible distortion in calculations. While the password will not be shared, an unprotected version will be provided upon request.
- Data are loaded from CSV files to the sheets 'COAL', 'OIL', 'GAS', 'ELE' and 'REN'. There is a one-to-one relationship between a data point in the CSV file and the loading place in the SHARES tool.
- Data loading is based on short name codes located in columns A–F on the sheets 'COAL', 'OIL', 'GAS', 'ELE' and 'REN'. These columns are hidden, as end-users of the SHARES tool do not need access to it.
- Loaded data are in areas with a table border, supporting calculations are in cells with no special formatting. Data are loaded for time periods starting in the year 1990. Due to normalisation for hydro, the first year that calculations are possible for is 2004 (1990 plus 15 years of data for normalisation).
- Data to be entered by reporting countries are in the cells highlighted in yellow.
- The structure of the sheets 'COAL', 'OIL', 'GAS', 'ELE' and 'REN' is the same:
    - The first part is the calculation of 'Gross Final Consumption of Energy' in ktoe.
    - The second part is the section on calorific values:
        - reported in the annual questionnaires
        - default values
        - conversion factors to GJ with no gaps for missing values.
    - The third part is data from annual energy questionnaires needed for the calculations; some other support calculations are included there as well.
- Completed SHARES tool shall be transmitted or uploaded by electronic means to the Single Entry Point for data at Eurostat. Therefore we kindly ask you to transmit your data to Eurostat following the **eDAMIS** implementing procedures (https://webgate.ec.europa.eu/edamis). Dataset name in eDAMIS for SHARES tool is **ENERGY_SHARES_A**. If SHARES tool contains confidential data, please mention it in the "Remarks" sheet as well as include a comment with your data transmission in eDAMIS.
- In case of any questions or comments, please contact Eurostat via email at: ESTAT-ENERGY@ec.europa.eu, Fernando.Diaz-Alonso@ec.europa.eu or Marek.Sturc@ec.europa.eu.

11. ANNEX I — ANNUAL HDD AND CDD AVERAGE 2010–2019

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
BE - Belgium	2,666.52	AVERAGE
BE1 - Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	2,517.78	AVERAGE
BE10 - Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	2,517.78	AVERAGE
BE100 - Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad	2,517.78	AVERAGE
BE2 - Vlaams Gewest	2,496.98	AVERAGE
BE21 - Prov. Antwerpen	2,501.35	AVERAGE
BE211 - Arr. Antwerpen	2,491.35	AVERAGE
BE212 - Arr. Mechelen	2,453.55	AVERAGE
BE213 - Arr. Turnhout	2,526.73	AVERAGE
BE22 - Prov. Limburg (BE)	2,553.44	AVERAGE
BE221 - Arr. Hasselt (NUTS 2016)	2,534.84	AVERAGE
BE222 - Arr. Maaseik (NUTS 2016)	2,559.52	AVERAGE
BE223 - Arr. Tongeren	2,571.59	AVERAGE
BE23 - Prov. Oost-Vlaanderen	2,437.45	AVERAGE
BE231 - Arr. Aalst	2,506.44	AVERAGE
BE232 - Arr. Dendermonde	2,417.69	AVERAGE
BE233 - Arr. Eeklo	2,399.07	AVERAGE
BE234 - Arr. Gent	2,405.49	AVERAGE
BE235 - Arr. Oudenaarde	2,487.66	AVERAGE
BE236 - Arr. Sint-Niklaas	2,429.56	AVERAGE
BE24 - Prov. Vlaams-Brabant	2,532.78	AVERAGE
BE241 - Arr. Halle-Vilvoorde	2,517.92	AVERAGE
BE242 - Arr. Leuven	2,544.79	AVERAGE
BE25 - Prov. West-Vlaanderen	2,482.37	AVERAGE
BE251 - Arr. Brugge	2,462.67	AVERAGE
BE252 - Arr. Diksmuide	2,507.94	AVERAGE
BE253 - Arr. Ieper	2,473.83	AVERAGE
BE254 - Arr. Kortrijk	2,478.91	AVERAGE
BE255 - Arr. Oostende	2,513.39	AVERAGE
BE256 - Arr. Roeselare	2,491.43	AVERAGE
BE257 - Arr. Tielt	2,447.12	AVERAGE
BE258 - Arr. Veurne	2,518.18	AVERAGE
BE3 - Région wallonne	2,804.34	AVERAGE
BE31 - Prov. Brabant wallon	2,567.27	AVERAGE
BE310 - Arr. Nivelles	2,567.27	AVERAGE
BE32 - Prov. Hainaut	2,615.80	AVERAGE
BE321 - Arr. Ath (NUTS 2016)	2,556.34	AVERAGE
BE322 - Arr. Charleroi (NUTS 2016)	2,673.30	AVERAGE
BE323 - Arr. Mons	2,593.54	AVERAGE
BE324 - Arr. Mouscron (NUTS 2016)	2,459.72	AVERAGE
BE325 - Arr. Soignies (NUTS 2016)	2,595.07	AVERAGE
BE326 - Arr. Thuin (NUTS 2016)	2,746.29	AVERAGE
BE327 - Arr. Tournai (NUTS 2016)	2,475.70	AVERAGE
BE33 - Prov. Liège	2,844.38	AVERAGE
BE331 - Arr. Huy	2,743.51	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
BE332 - Arr. Liège	2,629.51	AVERAGE
BE334 - Arr. Waremme	2,586.19	AVERAGE
BE335 - Arr. Verviers - communes francophones	2,906.43	AVERAGE
BE336 - Bezirk Verviers - Deutschsprachige Gemeinschaft	3,158.09	COLD
BE34 - Prov. Luxembourg (BE)	3,002.32	COLD
BE341 - Arr. Arlon	3,009.21	COLD
BE342 - Arr. Bastogne	3,087.74	COLD
BE343 - Arr. Marche-en-Famenne	2,956.18	AVERAGE
BE344 - Arr. Neufchâteau	2,996.55	AVERAGE
BE345 - Arr. Virton	2,951.71	AVERAGE
BE35 - Prov. Namur	2,788.09	AVERAGE
BE351 - Arr. Dinant	2,852.14	AVERAGE
BE352 - Arr. Namur	2,701.45	AVERAGE
BE353 - Arr. Philippeville	2,786.66	AVERAGE
BG - Bulgaria	2,450.55	AVERAGE
BG3 - Severna i yugoiztochna Bulgaria	2,369.48	AVERAGE
BG31 - Severozapaden	2,529.66	AVERAGE
BG311 - Vidin	2,616.38	AVERAGE
BG312 - Montana	2,636.50	AVERAGE
BG313 - Vratsa	2,498.04	AVERAGE
BG314 - Pleven	2,418.42	AVERAGE
BG315 - Lovech	2,525.12	AVERAGE
BG32 - Severen tsentralen	2,471.65	AVERAGE
BG321 - Veliko Tarnovo	2,422.28	AVERAGE
BG322 - Gabrovo	2,483.12	AVERAGE
BG323 - Ruse	2,497.73	AVERAGE
BG324 - Razgrad	2,426.29	AVERAGE
BG325 - Silistra	2,556.53	AVERAGE
BG33 - Severoiztochen	2,402.99	AVERAGE
BG331 - Varna	2,302.23	AVERAGE
BG332 - Dobrich	2,470.39	AVERAGE
BG333 - Shumen	2,416.11	AVERAGE
BG334 - Targovishte	2,411.50	AVERAGE
BG34 - Yugoiztochen	2,114.00	AVERAGE
BG341 - Burgas	2,096.59	AVERAGE
BG342 - Sliven	2,154.78	AVERAGE
BG343 - Yambol	1,985.76	WARM
BG344 - Stara Zagora	2,195.60	AVERAGE
BG4 - Yugozapadna i yuzhna tsentralna Bulgaria	2,580.41	AVERAGE
BG41 - Yugozapaden	2,717.73	AVERAGE
BG411 - Sofia (stolitsa)	2,786.15	AVERAGE
BG412 - Sofia	2,798.35	AVERAGE
BG413 - Blagoevgrad	2,602.47	AVERAGE
BG414 - Pernik	2,860.76	AVERAGE
BG415 - Kyustendil	2,632.58	AVERAGE
BG42 - Yuzhen tsentralen	2,455.70	AVERAGE
BG421 - Plovdiv	2,376.63	AVERAGE
BG422 - Haskovo	2,019.45	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
BG423 - Pazardzhik	2,806.76	AVERAGE
BG424 - Smolyan	3,102.66	COLD
BG425 - Kardzhali	2,220.60	AVERAGE
CZ - Czechia	3,254.13	COLD
CZ0 - Cesko	3,254.13	COLD
CZ01 - Praha	2,942.82	AVERAGE
CZ010 - Hlavní mesto Praha	2,942.82	AVERAGE
CZ02 - Strední Cechy	3,127.21	COLD
CZ020 - Stredoceský kraj	3,127.21	COLD
CZ03 - Jihozápad	3,310.14	COLD
CZ031 - Jihocecký kraj	3,295.02	COLD
CZ032 - Plzenský kraj	3,330.28	COLD
CZ04 - Severozápad	3,271.36	COLD
CZ041 - Karlovarský kraj	3,504.25	COLD
CZ042 - Ústecký kraj	3,126.43	COLD
CZ05 - Severovýchod	3,308.45	COLD
CZ051 - Liberecký kraj	3,305.24	COLD
CZ052 - Královéhradecký kraj	3,335.93	COLD
CZ053 - Pardubický kraj	3,281.78	COLD
CZ06 - Jihovýchod	3,216.88	COLD
CZ063 - Kraj Vysocina	3,430.52	COLD
CZ064 - Jihomoravský kraj	3,015.17	COLD
CZ07 - Strední Morava	3,256.41	COLD
CZ071 - Olomoucký kraj	3,314.70	COLD
CZ072 - Zlínský kraj	3,178.93	COLD
CZ08 - Moravskoslezsko	3,298.63	COLD
CZ080 - Moravskoslezský kraj	3,298.63	COLD
DK - Denmark	3,222.91	COLD
DK0 - Danmark	3,222.91	COLD
DK01 - Hovedstaden	3,174.03	COLD
DK011 - Byen København	3,049.91	COLD
DK012 - Københavns omegn	3,132.73	COLD
DK013 - Nordsjælland	3,147.43	COLD
DK014 - Bornholm	3,302.50	COLD
DK02 - Sjælland	3,156.24	COLD
DK021 - Østsjælland	3,236.29	COLD
DK022 - Vest- og Sydsjælland	3,146.25	COLD
DK03 - Syddanmark	3,179.53	COLD
DK031 - Fyn	3,147.82	COLD
DK032 - Sydjylland	3,192.36	COLD
DK04 - Midtjylland	3,281.12	COLD
DK041 - Vestjylland	3,264.93	COLD
DK042 - Østjylland	3,300.89	COLD
DK05 - Nordjylland	3,270.09	COLD
DK050 - Nordjylland	3,270.09	COLD
DE - Germany (until 1990 former territory of the FRG)	3,004.64	COLD
DE1 - Baden-Württemberg	2,976.07	AVERAGE
DE11 - Stuttgart	2,926.17	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE111 - Stuttgart, Stadtkreis	2,565.82	AVERAGE
DE112 - Böblingen	2,923.82	AVERAGE
DE113 - Esslingen	2,806.63	AVERAGE
DE114 - Göppingen	3,065.77	COLD
DE115 - Ludwigsburg	2,702.28	AVERAGE
DE116 - Rems-Murr-Kreis	2,712.61	AVERAGE
DE117 - Heilbronn, Stadtkreis	2,654.95	AVERAGE
DE118 - Heilbronn, Landkreis	2,683.33	AVERAGE
DE119 - Hohenlohekreis	2,793.50	AVERAGE
DE11A - Schwäbisch Hall	3,028.00	COLD
DE11B - Main-Tauber-Kreis	2,916.56	AVERAGE
DE11C - Heidenheim	3,236.60	COLD
DE11D - Ostalbkreis	3,234.62	COLD
DE12 - Karlsruhe	2,772.70	AVERAGE
DE121 - Baden-Baden, Stadtkreis	2,522.42	AVERAGE
DE122 - Karlsruhe, Stadtkreis	2,637.71	AVERAGE
DE123 - Karlsruhe, Landkreis	2,645.00	AVERAGE
DE124 - Rastatt	2,611.93	AVERAGE
DE125 - Heidelberg, Stadtkreis	2,633.39	AVERAGE
DE126 - Mannheim, Stadtkreis	2,458.86	AVERAGE
DE127 - Neckar-Odenwald-Kreis	2,886.80	AVERAGE
DE128 - Rhein-Neckar-Kreis	2,631.63	AVERAGE
DE129 - Pforzheim, Stadtkreis	2,826.80	AVERAGE
DE12A - Calw	2,940.57	AVERAGE
DE12B - Enzkreis	2,806.08	AVERAGE
DE12C - Freudenstadt	3,048.01	COLD
DE13 - Freiburg	2,956.22	AVERAGE
DE131 - Freiburg im Breisgau, Stadtkreis	2,581.96	AVERAGE
DE132 - Breisgau-Hochschwarzwald	2,920.68	AVERAGE
DE133 - Emmendingen	2,745.15	AVERAGE
DE134 - Ortenaukreis	2,685.57	AVERAGE
DE135 - Rottweil	3,237.22	COLD
DE136 - Schwarzwald-Baar-Kreis	3,371.24	COLD
DE137 - Tuttlingen	3,257.00	COLD
DE138 - Konstanz	2,964.86	AVERAGE
DE139 - Lörrach	2,710.42	AVERAGE
DE13A - Waldshut	3,028.49	COLD
DE14 - Tübingen	3,208.07	COLD
DE141 - Reutlingen	3,239.79	COLD
DE142 - Tübingen, Landkreis	3,051.87	COLD
DE143 - Zollernalbkreis	3,235.63	COLD
DE144 - Ulm, Stadtkreis	3,151.13	COLD
DE145 - Alb-Donau-Kreis	3,237.67	COLD
DE146 - Biberach	3,226.54	COLD
DE147 - Bodenseekreis	2,955.78	AVERAGE
DE148 - Ravensburg	3,272.42	COLD
DE149 - Sigmaringen	3,273.65	COLD
DE2 - Bayern	3,192.24	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE21 - Oberbayern	3,188.51	COLD
DE211 - Ingolstadt, Kreisfreie Stadt	3,108.68	COLD
DE212 - München, Kreisfreie Stadt	2,805.05	AVERAGE
DE213 - Rosenheim, Kreisfreie Stadt	3,008.10	COLD
DE214 - Altötting	3,122.96	COLD
DE215 - Berchtesgadener Land	3,267.91	COLD
DE216 - Bad Tölz-Wolfratshausen	3,345.22	COLD
DE217 - Dachau	3,088.60	COLD
DE218 - Ebersberg	2,966.56	AVERAGE
DE219 - Eichstätt	3,153.51	COLD
DE21A - Erding	3,158.76	COLD
DE21B - Freising	3,163.98	COLD
DE21C - Fürstenfeldbruck	3,090.95	COLD
DE21D - Garmisch-Partenkirchen	3,575.08	COLD
DE21E - Landsberg am Lech	3,273.45	COLD
DE21F - Miesbach	3,361.36	COLD
DE21G - Mühldorf am Inn	3,171.64	COLD
DE21H - München, Landkreis	2,952.56	AVERAGE
DE21I - Neuburg-Schrobenhausen	3,161.59	COLD
DE21J - Pfaffenhofen an der Ilm	3,163.24	COLD
DE21K - Rosenheim, Landkreis	3,072.36	COLD
DE21L - Starnberg	3,100.93	COLD
DE21M - Traunstein	3,151.38	COLD
DE21N - Weilheim-Schongau	3,301.94	COLD
DE22 - Niederbayern	3,175.48	COLD
DE221 - Landshut, Kreisfreie Stadt	3,215.21	COLD
DE222 - Passau, Kreisfreie Stadt	2,974.26	AVERAGE
DE223 - Straubing, Kreisfreie Stadt	3,101.15	COLD
DE224 - Deggendorf	3,087.70	COLD
DE225 - Freyung-Grafenau	3,395.33	COLD
DE226 - Kelheim	3,128.02	COLD
DE227 - Landshut, Landkreis	3,190.95	COLD
DE228 - Passau, Landkreis	3,034.61	COLD
DE229 - Regen	3,502.80	COLD
DE22A - Rottal-Inn	3,087.40	COLD
DE22B - Straubing-Bogen	3,129.23	COLD
DE22C - Dingolfing-Landau	3,143.53	COLD
DE23 - Oberpfalz	3,297.12	COLD
DE231 - Amberg, Kreisfreie Stadt	3,257.23	COLD
DE232 - Regensburg, Kreisfreie Stadt	3,050.28	COLD
DE233 - Weiden in der Oberpfalz, Kreisfreie Stadt	3,399.91	COLD
DE234 - Amberg-Sulzbach	3,310.46	COLD
DE235 - Cham	3,298.51	COLD
DE236 - Neumarkt in der Oberpfalz	3,245.20	COLD
DE237 - Neustadt an der Waldnaab	3,387.67	COLD
DE238 - Regensburg, Landkreis	3,100.65	COLD
DE239 - Schwandorf	3,324.07	COLD
DE23A - Tirschenreuth	3,454.37	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE24 - Oberfranken	3,298.82	COLD
DE241 - Bamberg, Kreisfreie Stadt	3,113.40	COLD
DE242 - Bayreuth, Kreisfreie Stadt	3,277.74	COLD
DE243 - Coburg, Kreisfreie Stadt	3,225.66	COLD
DE244 - Hof, Kreisfreie Stadt	3,511.86	COLD
DE245 - Bamberg, Landkreis	3,103.97	COLD
DE246 - Bayreuth, Landkreis	3,328.31	COLD
DE247 - Coburg, Landkreis	3,209.63	COLD
DE248 - Forchheim	3,201.47	COLD
DE249 - Hof, Landkreis	3,539.39	COLD
DE24A - Kronach	3,273.81	COLD
DE24B - Kulmbach	3,364.95	COLD
DE24C - Lichtenfels	3,165.91	COLD
DE24D - Wunsiedel im Fichtelgebirge	3,520.78	COLD
DE25 - Mittelfranken	3,094.26	COLD
DE251 - Ansbach, Kreisfreie Stadt	3,146.07	COLD
DE252 - Erlangen, Kreisfreie Stadt	2,993.97	AVERAGE
DE253 - Fürth, Kreisfreie Stadt	2,989.19	AVERAGE
DE254 - Nürnberg, Kreisfreie Stadt	2,995.12	AVERAGE
DE255 - Schwabach, Kreisfreie Stadt	3,103.48	COLD
DE256 - Ansbach, Landkreis	3,144.64	COLD
DE257 - Erlangen-Höchstadt	3,004.97	COLD
DE258 - Fürth, Landkreis	2,994.80	AVERAGE
DE259 - Nürnberger Land	3,134.82	COLD
DE25A - Neustadt an der Aisch-Bad Windsheim	3,007.26	COLD
DE25B - Roth	3,149.96	COLD
DE25C - Weißenburg-Gunzenhausen	3,132.82	COLD
DE26 - Unterfranken	2,978.67	AVERAGE
DE261 - Aschaffenburg, Kreisfreie Stadt	2,692.31	AVERAGE
DE262 - Schweinfurt, Kreisfreie Stadt	3,014.83	COLD
DE263 - Würzburg, Kreisfreie Stadt	2,827.24	AVERAGE
DE264 - Aschaffenburg, Landkreis	2,761.70	AVERAGE
DE265 - Bad Kissingen	3,138.91	COLD
DE266 - Rhön-Grabfeld	3,175.04	COLD
DE267 - Haßberge	3,065.16	COLD
DE268 - Kitzingen	2,810.74	AVERAGE
DE269 - Miltenberg	2,929.81	AVERAGE
DE26A - Main-Spessart	2,973.03	AVERAGE
DE26B - Schweinfurt, Landkreis	2,977.19	AVERAGE
DE26C - Würzburg, Landkreis	2,848.34	AVERAGE
DE27 - Schwaben	3,290.12	COLD
DE271 - Augsburg, Kreisfreie Stadt	3,251.76	COLD
DE272 - Kaufbeuren, Kreisfreie Stadt	3,308.31	COLD
DE273 - Kempten (Allgäu), Kreisfreie Stadt	3,361.22	COLD
DE274 - Memmingen, Kreisfreie Stadt	3,281.93	COLD
DE275 - Aichach-Friedberg	3,173.69	COLD
DE276 - Augsburg, Landkreis	3,214.65	COLD
DE277 - Dillingen an der Donau	3,139.33	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE278 - Günzburg	3,173.84	COLD
DE279 - Neu-Ulm	3,161.71	COLD
DE27A - Lindau (Bodensee)	3,180.60	COLD
DE27B - Ostallgäu	3,461.48	COLD
DE27C - Unterallgäu	3,261.67	COLD
DE27D - Donau-Ries	3,175.26	COLD
DE27E - Oberallgäu	3,571.44	COLD
DE3 - Berlin	2,866.11	AVERAGE
DE30 - Berlin	2,866.11	AVERAGE
DE300 - Berlin	2,866.11	AVERAGE
DE4 - Brandenburg	2,968.54	AVERAGE
DE40 - Brandenburg	2,968.54	AVERAGE
DE401 - Brandenburg an der Havel, Kreisfreie Stadt	2,956.50	AVERAGE
DE402 - Cottbus, Kreisfreie Stadt	2,899.66	AVERAGE
DE403 - Frankfurt (Oder), Kreisfreie Stadt	3,014.78	COLD
DE404 - Potsdam, Kreisfreie Stadt	2,832.59	AVERAGE
DE405 - Barnim	2,975.02	AVERAGE
DE406 - Dahme-Spreewald	2,931.02	AVERAGE
DE407 - Elbe-Elster	2,952.19	AVERAGE
DE408 - Havelland	2,928.83	AVERAGE
DE409 - Märkisch-Oderland	2,967.70	AVERAGE
DE40A - Oberhavel	2,976.41	AVERAGE
DE40B - Oberspreewald-Lausitz	2,952.33	AVERAGE
DE40C - Oder-Spree	2,935.45	AVERAGE
DE40D - Ostprignitz-Ruppin	3,030.45	COLD
DE40E - Potsdam-Mittelmark	2,891.58	AVERAGE
DE40F - Prignitz	2,998.18	AVERAGE
DE40G - Spree-Neiße	2,927.39	AVERAGE
DE40H - Teltow-Fläming	2,939.23	AVERAGE
DE40I - Uckermark	3,098.52	COLD
DE5 - Bremen	2,857.87	AVERAGE
DE50 - Bremen	2,857.87	AVERAGE
DE501 - Bremen, Kreisfreie Stadt	2,874.76	AVERAGE
DE502 - Bremerhaven, Kreisfreie Stadt	2,797.62	AVERAGE
DE6 - Hamburg	2,993.57	AVERAGE
DE60 - Hamburg	2,993.57	AVERAGE
DE600 - Hamburg	2,993.57	AVERAGE
DE7 - Hessen	2,985.82	AVERAGE
DE71 - Darmstadt	2,804.21	AVERAGE
DE711 - Darmstadt, Kreisfreie Stadt	2,603.60	AVERAGE
DE712 - Frankfurt am Main, Kreisfreie Stadt	2,648.39	AVERAGE
DE713 - Offenbach am Main, Kreisfreie Stadt	2,658.22	AVERAGE
DE714 - Wiesbaden, Kreisfreie Stadt	2,965.48	AVERAGE
DE715 - Bergstraße	2,623.91	AVERAGE
DE716 - Darmstadt-Dieburg	2,656.91	AVERAGE
DE717 - Groß-Gerau	2,524.81	AVERAGE
DE718 - Hochtaunuskreis	2,893.54	AVERAGE
DE719 - Main-Kinzig-Kreis	2,938.00	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE71A - Main-Taunus-Kreis	2,631.40	AVERAGE
DE71B - Odenwaldkreis	2,839.56	AVERAGE
DE71C - Offenbach, Landkreis	2,661.20	AVERAGE
DE71D - Rheingau-Taunus-Kreis	3,016.50	COLD
DE71E - Wetteraukreis	2,854.57	AVERAGE
DE72 - Gießen	3,038.96	COLD
DE721 - Gießen, Landkreis	2,977.51	AVERAGE
DE722 - Lahn-Dill-Kreis	3,027.77	COLD
DE723 - Limburg-Weilburg	2,927.24	AVERAGE
DE724 - Marburg-Biedenkopf	3,068.46	COLD
DE725 - Vogelsbergkreis	3,114.34	COLD
DE73 - Kassel	3,114.43	COLD
DE731 - Kassel, Kreisfreie Stadt	2,997.79	AVERAGE
DE732 - Fulda	3,162.45	COLD
DE733 - Hersfeld-Rotenburg	3,130.67	COLD
DE734 - Kassel, Landkreis	3,059.42	COLD
DE735 - Schwalm-Eder-Kreis	3,062.97	COLD
DE736 - Waldeck-Frankenberg	3,179.19	COLD
DE737 - Werra-Meißner-Kreis	3,074.61	COLD
DE8 - Mecklenburg-Vorpommern	3,062.00	COLD
DE80 - Mecklenburg-Vorpommern	3,062.00	COLD
DE803 - Rostock, Kreisfreie Stadt	2,931.40	AVERAGE
DE804 - Schwerin, Kreisfreie Stadt	2,979.87	AVERAGE
DE80J - Mecklenburgische Seenplatte	3,080.04	COLD
DE80K - Landkreis Rostock	3,071.22	COLD
DE80L - Vorpommern-Rügen	3,135.11	COLD
DE80M - Nordwestmecklenburg	3,025.60	COLD
DE80N - Vorpommern-Greifswald	3,091.39	COLD
DE80O - Ludwigslust-Parchim	2,985.78	AVERAGE
DE9 - Niedersachsen	2,907.44	AVERAGE
DE91 - Braunschweig	2,993.79	AVERAGE
DE911 - Braunschweig, Kreisfreie Stadt	2,876.38	AVERAGE
DE912 - Salzgitter, Kreisfreie Stadt	2,903.44	AVERAGE
DE913 - Wolfsburg, Kreisfreie Stadt	2,892.23	AVERAGE
DE914 - Gifhorn	2,952.11	AVERAGE
DE916 - Goslar	3,124.52	COLD
DE917 - Helmstedt	2,916.27	AVERAGE
DE918 - Northeim	2,993.30	AVERAGE
DE91A - Peine	2,862.65	AVERAGE
DE91B - Wolfenbüttel	2,906.86	AVERAGE
DE91C - Göttingen	3,101.43	COLD
DE92 - Hannover	2,869.49	AVERAGE
DE922 - Diepholz	2,896.80	AVERAGE
DE923 - Hameln-Pyrmont	2,886.18	AVERAGE
DE925 - Hildesheim	2,918.07	AVERAGE
DE926 - Holzminden	2,981.40	AVERAGE
DE927 - Nienburg (Weser)	2,827.76	AVERAGE
DE928 - Schaumburg	2,788.73	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE929 - Region Hannover	2,829.82	AVERAGE
DE93 - Lüneburg	2,962.13	AVERAGE
DE931 - Celle	2,992.80	AVERAGE
DE932 - Cuxhaven	2,881.83	AVERAGE
DE933 - Harburg	2,981.49	AVERAGE
DE934 - Lüchow-Dannenberg	2,972.06	AVERAGE
DE935 - Lüneburg, Landkreis	2,954.14	AVERAGE
DE936 - Osterholz	2,889.89	AVERAGE
DE937 - Rotenburg (Wümme)	2,964.21	AVERAGE
DE938 - Heidekreis	2,991.55	AVERAGE
DE939 - Stade	2,946.22	AVERAGE
DE93A - Uelzen	3,058.78	COLD
DE93B - Verden	2,910.41	AVERAGE
DE94 - Weser-Ems	2,826.89	AVERAGE
DE941 - Delmenhorst, Kreisfreie Stadt	2,876.57	AVERAGE
DE942 - Emden, Kreisfreie Stadt	2,865.78	AVERAGE
DE943 - Oldenburg (Oldenburg), Kreisfreie Stadt	2,864.93	AVERAGE
DE944 - Osnabrück, Kreisfreie Stadt	2,808.29	AVERAGE
DE945 - Wilhelmshaven, Kreisfreie Stadt	2,845.07	AVERAGE
DE946 - Ammerland	2,843.09	AVERAGE
DE947 - Aurich	2,850.32	AVERAGE
DE948 - Cloppenburg	2,845.13	AVERAGE
DE949 - Emsland	2,776.79	AVERAGE
DE94A - Friesland (DE)	2,840.34	AVERAGE
DE94B - Grafschaft Bentheim	2,763.73	AVERAGE
DE94C - Leer	2,854.70	AVERAGE
DE94D - Oldenburg, Landkreis	2,893.24	AVERAGE
DE94E - Osnabrück, Landkreis	2,805.49	AVERAGE
DE94F - Vechta	2,889.99	AVERAGE
DE94G - Wesermarsch	2,821.17	AVERAGE
DE94H - Wittmund	2,853.13	AVERAGE
DEA - Nordrhein-Westfalen	2,793.78	AVERAGE
DEA1 - Düsseldorf	2,589.36	AVERAGE
DEA11 - Düsseldorf, Kreisfreie Stadt	2,567.57	AVERAGE
DEA12 - Duisburg, Kreisfreie Stadt	2,541.76	AVERAGE
DEA13 - Essen, Kreisfreie Stadt	2,610.09	AVERAGE
DEA14 - Krefeld, Kreisfreie Stadt	2,540.92	AVERAGE
DEA15 - Mönchengladbach, Kreisfreie Stadt	2,560.43	AVERAGE
DEA16 - Mülheim an der Ruhr, Kreisfreie Stadt	2,606.83	AVERAGE
DEA17 - Oberhausen, Kreisfreie Stadt	2,602.11	AVERAGE
DEA18 - Remscheid, Kreisfreie Stadt	2,804.05	AVERAGE
DEA19 - Solingen, Kreisfreie Stadt	2,616.69	AVERAGE
DEA1A - Wuppertal, Kreisfreie Stadt	2,719.88	AVERAGE
DEA1B - Kleve	2,602.91	AVERAGE
DEA1C - Mettmann	2,605.49	AVERAGE
DEA1D - Rhein-Kreis Neuss	2,543.04	AVERAGE
DEA1E - Viersen	2,566.73	AVERAGE
DEA1F - Wesel	2,585.66	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DEA2 - Köln	2,713.98	AVERAGE
DEA22 - Bonn, Kreisfreie Stadt	2,551.64	AVERAGE
DEA23 - Köln, Kreisfreie Stadt	2,526.42	AVERAGE
DEA24 - Leverkusen, Kreisfreie Stadt	2,531.65	AVERAGE
DEA26 - Düren	2,637.84	AVERAGE
DEA27 - Rhein-Erft-Kreis	2,570.28	AVERAGE
DEA28 - Euskirchen	2,951.97	AVERAGE
DEA29 - Heinsberg	2,537.00	AVERAGE
DEA2A - Oberbergischer Kreis	2,891.70	AVERAGE
DEA2B - Rheinisch-Bergischer Kreis	2,660.62	AVERAGE
DEA2C - Rhein-Sieg-Kreis	2,626.89	AVERAGE
DEA2D - Städteregion Aachen	2,800.40	AVERAGE
DEA3 - Münster	2,727.11	AVERAGE
DEA31 - Bottrop, Kreisfreie Stadt	2,638.72	AVERAGE
DEA32 - Gelsenkirchen, Kreisfreie Stadt	2,627.20	AVERAGE
DEA33 - Münster, Kreisfreie Stadt	2,727.24	AVERAGE
DEA34 - Borken	2,748.45	AVERAGE
DEA35 - Coesfeld	2,738.95	AVERAGE
DEA36 - Recklinghausen	2,657.33	AVERAGE
DEA37 - Steinfurt	2,756.36	AVERAGE
DEA38 - Warendorf	2,709.25	AVERAGE
DEA4 - Detmold	2,877.37	AVERAGE
DEA41 - Bielefeld, Kreisfreie Stadt	2,764.73	AVERAGE
DEA42 - Gütersloh	2,744.06	AVERAGE
DEA43 - Herford	2,787.74	AVERAGE
DEA44 - Höxter	3,050.51	COLD
DEA45 - Lippe	2,856.56	AVERAGE
DEA46 - Minden-Lübbecke	2,789.46	AVERAGE
DEA47 - Paderborn	2,972.33	AVERAGE
DEA5 - Arnsberg	2,991.62	AVERAGE
DEA51 - Bochum, Kreisfreie Stadt	2,642.41	AVERAGE
DEA52 - Dortmund, Kreisfreie Stadt	2,681.55	AVERAGE
DEA53 - Hagen, Kreisfreie Stadt	2,827.53	AVERAGE
DEA54 - Hamm, Kreisfreie Stadt	2,677.36	AVERAGE
DEA55 - Herne, Kreisfreie Stadt	2,641.24	AVERAGE
DEA56 - Ennepe-Ruhr-Kreis	2,767.22	AVERAGE
DEA57 - Hochsauerlandkreis	3,186.42	COLD
DEA58 - Märkischer Kreis	2,994.51	AVERAGE
DEA59 - Olpe	3,138.69	COLD
DEA5A - Siegen-Wittgenstein	3,183.38	COLD
DEA5B - Soest	2,831.70	AVERAGE
DEA5C - Unna	2,716.73	AVERAGE
DEB - Rheinland-Pfalz	2,899.05	AVERAGE
DEB1 - Koblenz	2,961.11	AVERAGE
DEB11 - Koblenz, Kreisfreie Stadt	2,799.18	AVERAGE
DEB12 - Ahrweiler	2,892.00	AVERAGE
DEB13 - Altenkirchen (Westerwald)	2,888.21	AVERAGE
DEB14 - Bad Kreuznach	2,865.44	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DEB15 - Birkenfeld	3,095.72	COLD
DEB17 - Mayen-Koblenz	2,889.86	AVERAGE
DEB18 - Neuwied	2,791.58	AVERAGE
DEB1A - Rhein-Lahn-Kreis	2,976.39	AVERAGE
DEB1B - Westerwaldkreis	2,975.48	AVERAGE
DEB1C - Cochem-Zell	3,120.34	COLD
DEB1D - Rhein-Hunsrück-Kreis	3,086.53	COLD
DEB2 - Trier	3,036.31	COLD
DEB21 - Trier, Kreisfreie Stadt	2,877.99	AVERAGE
DEB22 - Bernkastel-Wittlich	3,047.22	COLD
DEB23 - Eifelkreis Bitburg-Prüm	3,051.50	COLD
DEB24 - Vulkaneifel	3,187.35	COLD
DEB25 - Trier-Saarburg	2,894.08	AVERAGE
DEB3 - Rheinhessen-Pfalz	2,727.11	AVERAGE
DEB31 - Frankenthal (Pfalz), Kreisfreie Stadt	2,465.30	AVERAGE
DEB32 - Kaiserslautern, Kreisfreie Stadt	2,943.97	AVERAGE
DEB33 - Landau in der Pfalz, Kreisfreie Stadt	2,611.67	AVERAGE
DEB34 - Ludwigshafen am Rhein, Kreisfreie Stadt	2,460.45	AVERAGE
DEB35 - Mainz, Kreisfreie Stadt	2,636.39	AVERAGE
DEB36 - Neustadt an der Weinstraße, Kreisfreie Stadt	2,504.52	AVERAGE
DEB37 - Pirmasens, Kreisfreie Stadt	2,854.69	AVERAGE
DEB38 - Speyer, Kreisfreie Stadt	2,492.15	AVERAGE
DEB39 - Worms, Kreisfreie Stadt	2,616.07	AVERAGE
DEB3A - Zweibrücken, Kreisfreie Stadt	2,851.23	AVERAGE
DEB3B - Alzey-Worms	2,684.03	AVERAGE
DEB3C - Bad Dürkheim	2,586.72	AVERAGE
DEB3D - Donnersbergkreis	2,858.91	AVERAGE
DEB3E - Germersheim	2,508.46	AVERAGE
DEB3F - Kaiserslautern, Landkreis	2,947.76	AVERAGE
DEB3G - Kusel	2,982.34	AVERAGE
DEB3H - Südliche Weinstraße	2,599.17	AVERAGE
DEB3I - Rhein-Pfalz-Kreis	2,487.58	AVERAGE
DEB3J - Mainz-Bingen	2,672.31	AVERAGE
DEB3K - Südwestpfalz	2,808.10	AVERAGE
DEC - Saarland	2,828.15	AVERAGE
DEC0 - Saarland	2,828.15	AVERAGE
DEC01 - Regionalverband Saarbrücken	2,780.26	AVERAGE
DEC02 - Merzig-Wadern	2,766.78	AVERAGE
DEC03 - Neunkirchen	2,904.83	AVERAGE
DEC04 - Saarlouis	2,730.99	AVERAGE
DEC05 - Saarpfalz-Kreis	2,836.56	AVERAGE
DEC06 - St. Wendel	2,987.46	AVERAGE
DED - Sachsen	3,088.48	COLD
DED2 - Dresden	3,046.28	COLD
DED21 - Dresden, Kreisfreie Stadt	3,041.23	COLD
DED2C - Bautzen	2,985.40	AVERAGE
DED2D - Görlitz	3,064.81	COLD
DED2E - Meißen	2,902.84	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DED2F - Sächsische Schweiz-Osterzgebirge	3,238.41	COLD
DED4 - Chemnitz	3,270.45	COLD
DED41 - Chemnitz, Kreisfreie Stadt	3,164.30	COLD
DED42 - Erzgebirgskreis	3,410.77	COLD
DED43 - Mittelsachsen	3,134.63	COLD
DED44 - Vogtlandkreis	3,391.63	COLD
DED45 - Zwickau	3,148.57	COLD
DED5 - Leipzig	2,874.30	AVERAGE
DED51 - Leipzig, Kreisfreie Stadt	2,830.72	AVERAGE
DED52 - Leipzig	2,880.75	AVERAGE
DED53 - Nordsachsen	2,875.51	AVERAGE
DEE - Sachsen-Anhalt	2,913.84	AVERAGE
DEE0 - Sachsen-Anhalt	2,913.84	AVERAGE
DEE01 - Dessau-Roßlau, Kreisfreie Stadt	2,833.76	AVERAGE
DEE02 - Halle (Saale), Kreisfreie Stadt	2,847.86	AVERAGE
DEE03 - Magdeburg, Kreisfreie Stadt	2,754.07	AVERAGE
DEE04 - Altmarkkreis Salzwedel	2,972.60	AVERAGE
DEE05 - Anhalt-Bitterfeld	2,822.06	AVERAGE
DEE06 - Jerichower Land	2,891.18	AVERAGE
DEE07 - Börde	2,910.82	AVERAGE
DEE08 - Burgenlandkreis (DE)	2,891.61	AVERAGE
DEE09 - Harz	3,007.97	COLD
DEE0A - Mansfeld-Südharz	2,954.46	AVERAGE
DEE0B - Saalekreis	2,877.23	AVERAGE
DEE0C - Salzlandkreis	2,810.43	AVERAGE
DEE0D - Stendal	2,951.88	AVERAGE
DEE0E - Wittenberg	2,905.91	AVERAGE
DEF - Schleswig-Holstein	3,043.44	COLD
DEF0 - Schleswig-Holstein	3,043.44	COLD
DEF01 - Flensburg, Kreisfreie Stadt	3,037.58	COLD
DEF02 - Kiel, Kreisfreie Stadt	3,037.34	COLD
DEF03 - Lübeck, Kreisfreie Stadt	3,055.02	COLD
DEF04 - Neumünster, Kreisfreie Stadt	3,074.66	COLD
DEF05 - Dithmarschen	3,005.23	COLD
DEF06 - Herzogtum Lauenburg	2,988.29	AVERAGE
DEF07 - Nordfriesland	3,039.71	COLD
DEF08 - Ostholstein	3,035.91	COLD
DEF09 - Pinneberg	3,023.59	COLD
DEF0A - Plön	3,072.46	COLD
DEF0B - Rendsburg-Eckernförde	3,073.00	COLD
DEF0C - Schleswig-Flensburg	3,074.42	COLD
DEF0D - Segeberg	3,071.77	COLD
DEF0E - Steinburg	3,013.96	COLD
DEF0F - Stormarn	3,028.05	COLD
DEG - Thüringen	3,141.89	COLD
DEG0 - Thüringen	3,141.89	COLD
DEG01 - Erfurt, Kreisfreie Stadt	2,978.89	AVERAGE
DEG02 - Gera, Kreisfreie Stadt	3,061.67	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DEG03 - Jena, Kreisfreie Stadt	2,977.81	AVERAGE
DEG04 - Suhl, Kreisfreie Stadt	3,322.75	COLD
DEG05 - Weimar, Kreisfreie Stadt	2,987.26	AVERAGE
DEG06 - Eichsfeld	3,117.67	COLD
DEG07 - Nordhausen	3,060.65	COLD
DEG09 - Unstrut-Hainich-Kreis	3,108.21	COLD
DEG0A - Kyffhäuserkreis	2,988.50	AVERAGE
DEG0B - Schmalkalden-Meiningen	3,262.00	COLD
DEG0C - Gotha	3,131.31	COLD
DEG0D - Sömmerda	2,944.25	AVERAGE
DEG0E - Hildburghausen	3,243.98	COLD
DEG0F - Ilm-Kreis	3,287.40	COLD
DEG0G - Weimarer Land	3,088.96	COLD
DEG0H - Sonneberg	3,260.52	COLD
DEG0I - Saalfeld-Rudolstadt	3,275.15	COLD
DEG0J - Saale-Holzland-Kreis	2,999.64	AVERAGE
DEG0K - Saale-Orla-Kreis	3,334.06	COLD
DEG0L - Greiz	3,177.68	COLD
DEG0M - Altenburger Land	2,965.64	AVERAGE
DEG0N - Eisenach, Kreisfreie Stadt	3,091.30	COLD
DEG0P - Wartburgkreis	3,120.85	COLD
EE - Estonia	4,200.96	COLD
EE0 - Eesti	4,200.96	COLD
EE00 - Eesti	4,200.96	COLD
EE001 - Põhja-Eesti	4,208.38	COLD
EE004 - Lääne-Eesti	3,996.42	COLD
EE006 - Kesk-Eesti (NUTS 2016)	4,347.47	COLD
EE007 - Kirde-Eesti (NUTS 2016)	4,366.55	COLD
EE008 - Lõuna-Eesti	4,216.57	COLD
IE - Ireland	2,804.46	AVERAGE
IE0 - Éire/Ireland	2,804.46	AVERAGE
IE04 - Northern and Western	2,891.87	AVERAGE
IE041 - Border	2,980.71	AVERAGE
IE042 - West	2,820.28	AVERAGE
IE05 - Southern	2,672.16	AVERAGE
IE051 - Mid-West	2,723.55	AVERAGE
IE052 - South-East (IE)	2,710.87	AVERAGE
IE053 - South-West (IE)	2,606.49	AVERAGE
IE06 - Eastern and Midland	2,920.10	AVERAGE
IE061 - Dublin	2,803.07	AVERAGE
IE062 - Mid-East	2,916.75	AVERAGE
IE063 - Midland	2,939.82	AVERAGE
EL - Greece	1,514.34	WARM
EL3 - Attiki	1,067.56	WARM
EL30 - Attiki	1,067.56	WARM
EL301 - Voreios Tomeas Athinon	1,181.32	WARM
EL302 - Dytikos Tomeas Athinon	1,096.54	WARM
EL303 - Kentrikos Tomeas Athinon	1,086.20	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
EL304 - Notios Tomeas Athinon	1,058.75	WARM
EL305 - Anatoliki Attiki	1,082.57	WARM
EL306 - Dytiki Attiki	1,206.47	WARM
EL307 - Peiraias, Nisoi	874.65	WARM
EL4 - Nisia Aigaiou, Kriti	811.85	WARM
EL41 - Voreio Aigaio	1,072.38	WARM
EL411 - Lesvos, Limnos	1,141.84	WARM
EL412 - Ikaria, Samos	881.77	WARM
EL413 - Chios	1,072.33	WARM
EL42 - Notio Aigaio	589.44	WARM
EL421 - Kalymnos, Karpathos, Kasos, Kos, Rodos	505.39	WARM
EL422 - Andros, Thira, Kea, Milos, Mykonos, Naxos, Paros, Syros, Tinos	676.67	WARM
EL43 - Kriti	833.48	WARM
EL431 - Irakleio	866.43	WARM
EL432 - Lasithi	787.46	WARM
EL433 - Rethymni	841.42	WARM
EL434 - Chania	827.24	WARM
EL5 - Voreia Ellada	1,885.95	WARM
EL51 - Anatoliki Makedonia, Thraki	1,921.24	WARM
EL511 - Evros	1,776.49	WARM
EL512 - Xanthi	1,901.54	WARM
EL513 - Rodopi	1,857.51	WARM
EL514 - Drama	2,305.88	AVERAGE
EL515 - Thasos, Kavala	1,676.06	WARM
EL52 - Kentriki Makedonia	1,732.13	WARM
EL521 - Imathia	1,769.84	WARM
EL522 - Thessaloniki	1,665.91	WARM
EL523 - Kilkis	1,721.18	WARM
EL524 - Pella	1,948.66	WARM
EL525 - Pieria	1,681.17	WARM
EL526 - Serres	1,726.09	WARM
EL527 - Chalkidiki	1,652.22	WARM
EL53 - Dytiki Makedonia	2,317.72	AVERAGE
EL531 - Grevena, Kozani	2,222.71	AVERAGE
EL532 - Kastoria	2,482.37	AVERAGE
EL533 - Florina	2,457.27	AVERAGE
EL54 - Ipeiros	1,701.34	WARM
EL541 - Arta, Preveza	1,346.70	WARM
EL542 - Thesprotia	1,322.32	WARM
EL543 - Ioannina	2,003.90	AVERAGE
EL6 - Kentriki Ellada	1,426.10	WARM
EL61 - Thessalia	1,731.79	WARM
EL611 - Karditsa, Trikala	1,817.89	WARM
EL612 - Larisa	1,787.67	WARM
EL613 - Magnisia	1,421.57	WARM
EL62 - Ionia Nisia	943.87	WARM
EL621 - Zakynthos	942.42	WARM
EL622 - Kerkyra	930.27	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
EL623 - Ithaki, Kefallinia	919.49	WARM
EL624 - Lefkada	1,030.78	WARM
EL63 - Dytiki Ellada	1,248.80	WARM
EL631 - Aitoloakarnania	1,201.29	WARM
EL632 - Achaia	1,472.51	WARM
EL633 - Ileia	1,067.79	WARM
EL64 - Sterea Ellada	1,497.72	WARM
EL641 - Voiotia	1,253.06	WARM
EL642 - Evvoia	1,126.83	WARM
EL643 - Evrytania	2,063.10	AVERAGE
EL644 - Fthiotida	1,667.72	WARM
EL645 - Fokida	1,711.64	WARM
EL65 - Peloponnisos	1,278.10	WARM
EL651 - Argolida, Arkadia	1,484.97	WARM
EL652 - Korinthia	1,373.01	WARM
EL653 - Lakonia, Messinia	1,040.28	WARM
ES - Spain	1,728.39	WARM
ES1 - Noroeste (ES)	1,806.80	WARM
ES11 - Galicia	1,734.77	WARM
ES111 - A Coruña	1,449.01	WARM
ES112 - Lugo	1,869.06	WARM
ES113 - Ourense	2,013.68	AVERAGE
ES114 - Pontevedra	1,493.85	WARM
ES12 - Principado de Asturias	1,922.58	WARM
ES120 - Asturias	1,922.58	WARM
ES13 - Cantabria	1,976.27	WARM
ES130 - Cantabria	1,976.27	WARM
ES2 - Noreste (ES)	2,032.07	AVERAGE
ES21 - País Vasco	1,830.88	WARM
ES211 - Araba/Álava	2,118.61	AVERAGE
ES212 - Gipuzkoa	1,676.15	WARM
ES213 - Bizkaia	1,574.49	WARM
ES22 - Comunidad Foral de Navarra	1,985.43	WARM
ES220 - Navarra	1,985.43	WARM
ES23 - La Rioja	2,233.15	AVERAGE
ES230 - La Rioja	2,233.15	AVERAGE
ES24 - Aragón	2,051.43	AVERAGE
ES241 - Huesca	2,072.66	AVERAGE
ES242 - Teruel	2,299.71	AVERAGE
ES243 - Zaragoza	1,819.46	WARM
ES3 - Comunidad de Madrid	1,836.53	WARM
ES30 - Comunidad de Madrid	1,836.53	WARM
ES300 - Madrid	1,836.53	WARM
ES4 - Centro (ES)	1,979.26	WARM
ES41 - Castilla y León	2,396.65	AVERAGE
ES411 - Ávila	2,134.90	AVERAGE
ES412 - Burgos	2,537.87	AVERAGE
ES413 - León	2,617.85	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ES414 - Palencia	2,637.53	AVERAGE
ES415 - Salamanca	2,070.71	AVERAGE
ES416 - Segovia	2,366.20	AVERAGE
ES417 - Soria	2,470.64	AVERAGE
ES418 - Valladolid	2,302.25	AVERAGE
ES419 - Zamora	2,296.48	AVERAGE
ES42 - Castilla-la Mancha	1,847.56	WARM
ES421 - Albacete	1,779.18	WARM
ES422 - Ciudad Real	1,634.85	WARM
ES423 - Cuenca	1,986.19	WARM
ES424 - Guadalajara	2,385.22	AVERAGE
ES425 - Toledo	1,606.49	WARM
ES43 - Extremadura	1,285.88	WARM
ES431 - Badajoz	1,263.97	WARM
ES432 - Cáceres	1,309.89	WARM
ES5 - Este (ES)	1,540.47	WARM
ES51 - Cataluña	1,840.72	WARM
ES511 - Barcelona	1,778.26	WARM
ES512 - Girona	1,698.51	WARM
ES513 - Lleida	2,220.57	AVERAGE
ES514 - Tarragona	1,317.26	WARM
ES52 - Comunitat Valenciana	1,276.71	WARM
ES521 - Alicante/Alacant	952.90	WARM
ES522 - Castellón/Castelló	1,480.80	WARM
ES523 - Valencia/València	1,325.47	WARM
ES53 - Illes Balears	836.84	WARM
ES531 - Eivissa, Formentera	780.00	WARM
ES532 - Mallorca	844.02	WARM
ES533 - Menorca	852.90	WARM
ES6 - Sur (ES)	1,148.82	WARM
ES61 - Andalucía	1,152.12	WARM
ES611 - Almería	1,034.65	WARM
ES612 - Cádiz	680.64	WARM
ES613 - Córdoba	1,247.25	WARM
ES614 - Granada	1,694.20	WARM
ES615 - Huelva	894.81	WARM
ES616 - Jaén	1,401.47	WARM
ES617 - Málaga	967.57	WARM
ES618 - Sevilla	935.54	WARM
ES62 - Región de Murcia	1,124.96	WARM
ES620 - Murcia	1,124.96	WARM
ES63 - Ciudad de Ceuta	401.77	WARM
ES630 - Ceuta	401.77	WARM
ES64 - Ciudad de Melilla	739.10	WARM
ES640 - Melilla	739.10	WARM
ES7 - Canarias	148.57	WARM
ES70 - Canarias	148.57	WARM
ES704 - Fuerteventura	10.41	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ES705 - Gran Canaria	120.66	WARM
ES706 - La Gomera	18.02	WARM
ES707 - La Palma	141.69	WARM
ES708 - Lanzarote	26.41	WARM
ES709 - Tenerife	359.76	WARM
FR - France	2,338.97	AVERAGE
FR1 - Île de France	2,365.48	AVERAGE
FR10 - Île de France	2,365.48	AVERAGE
FR101 - Paris	2,112.21	AVERAGE
FR102 - Seine-et-Marne	2,392.96	AVERAGE
FR103 - Yvelines	2,372.22	AVERAGE
FR104 - Essonne	2,344.19	AVERAGE
FR105 - Hauts-de-Seine	2,195.40	AVERAGE
FR106 - Seine-Saint-Denis	2,236.24	AVERAGE
FR107 - Val-de-Marne	2,099.88	AVERAGE
FR108 - Val-d'Oise	2,375.65	AVERAGE
FRB - Centre - Val de Loire	2,309.39	AVERAGE
FRB0 - Centre - Val de Loire	2,309.39	AVERAGE
FRB01 - Cher	2,316.55	AVERAGE
FRB02 - Eure-et-Loir	2,422.99	AVERAGE
FRB03 - Indre	2,249.80	AVERAGE
FRB04 - Indre-et-Loire	2,162.64	AVERAGE
FRB05 - Loir-et-Cher	2,326.30	AVERAGE
FRB06 - Loiret	2,379.93	AVERAGE
FRC - Bourgogne - Franche-Comté	2,601.26	AVERAGE
FRC1 - Bourgogne	2,514.77	AVERAGE
FRC11 - Côte-d'Or	2,642.99	AVERAGE
FRC12 - Nièvre	2,509.74	AVERAGE
FRC13 - Saône-et-Loire	2,448.40	AVERAGE
FRC14 - Yonne	2,444.83	AVERAGE
FRC2 - Franche-Comté	2,769.68	AVERAGE
FRC21 - Doubs	2,962.64	AVERAGE
FRC22 - Jura	2,743.72	AVERAGE
FRC23 - Haute-Saône	2,608.78	AVERAGE
FRC24 - Territoire de Belfort	2,744.11	AVERAGE
FRD - Normandie	2,430.40	AVERAGE
FRD1 - Basse-Normandie	2,383.86	AVERAGE
FRD11 - Calvados	2,388.78	AVERAGE
FRD12 - Manche	2,229.90	AVERAGE
FRD13 - Orne	2,529.77	AVERAGE
FRD2 - Haute-Normandie	2,497.41	AVERAGE
FRD21 - Eure	2,502.30	AVERAGE
FRD22 - Seine-Maritime	2,492.74	AVERAGE
FRE - Hauts-de-France	2,552.28	AVERAGE
FRE1 - Nord-Pas-de-Calais	2,529.60	AVERAGE
FRE11 - Nord	2,532.80	AVERAGE
FRE12 - Pas-de-Calais	2,526.85	AVERAGE
FRE2 - Picardie	2,566.76	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
FRE21 - Aisne	2,598.95	AVERAGE
FRE22 - Oise	2,539.57	AVERAGE
FRE23 - Somme	2,554.10	AVERAGE
FRF - Grand Est	2,672.31	AVERAGE
FRF1 - Alsace	2,610.87	AVERAGE
FRF11 - Bas-Rhin	2,604.90	AVERAGE
FRF12 - Haut-Rhin	2,618.98	AVERAGE
FRF2 - Champagne-Ardenne	2,625.17	AVERAGE
FRF21 - Ardennes	2,767.23	AVERAGE
FRF22 - Aube	2,474.64	AVERAGE
FRF23 - Marne	2,561.51	AVERAGE
FRF24 - Haute-Marne	2,734.54	AVERAGE
FRF3 - Lorraine	2,745.16	AVERAGE
FRF31 - Meurthe-et-Moselle	2,695.59	AVERAGE
FRF32 - Meuse	2,724.36	AVERAGE
FRF33 - Moselle	2,731.67	AVERAGE
FRF34 - Vosges	2,825.89	AVERAGE
FRG - Pays-de-la-Loire	2,097.88	AVERAGE
FRG0 - Pays-de-la-Loire	2,097.88	AVERAGE
FRG01 - Loire-Atlantique	2,013.55	AVERAGE
FRG02 - Maine-et-Loire	2,070.84	AVERAGE
FRG03 - Mayenne	2,287.96	AVERAGE
FRG04 - Sarthe	2,235.52	AVERAGE
FRG05 - Vendée	1,939.14	WARM
FRH - Bretagne	2,165.07	AVERAGE
FRH0 - Bretagne	2,165.07	AVERAGE
FRH01 - Côtes-d'Armor	2,258.77	AVERAGE
FRH02 - Finistère	2,103.03	AVERAGE
FRH03 - Ille-et-Vilaine	2,163.63	AVERAGE
FRH04 - Morbihan	2,132.19	AVERAGE
FRI - Nouvelle-Aquitaine	1,986.86	WARM
FRI1 - Aquitaine	1,804.56	WARM
FRI11 - Dordogne	1,978.37	WARM
FRI12 - Gironde	1,700.88	WARM
FRI13 - Landes	1,677.07	WARM
FRI14 - Lot-et-Garonne	1,833.19	WARM
FRI15 - Pyrénées-Atlantiques	1,867.13	WARM
FRI2 - Limousin	2,388.18	AVERAGE
FRI21 - Corrèze	2,383.78	AVERAGE
FRI22 - Creuse	2,502.44	AVERAGE
FRI23 - Haute-Vienne	2,277.70	AVERAGE
FRI3 - Poitou-Charentes	2,016.21	AVERAGE
FRI31 - Charente	2,034.17	AVERAGE
FRI32 - Charente-Maritime	1,806.06	WARM
FRI33 - Deux-Sèvres	2,103.96	AVERAGE
FRI34 - Vienne	2,131.01	AVERAGE
FRJ - Occitanie	2,103.63	AVERAGE
FRJ1 - Languedoc-Roussillon	1,987.84	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
FRJ11 - Aude	1,699.62	WARM
FRJ12 - Gard	1,672.85	WARM
FRJ13 - Hérault	1,699.68	WARM
FRJ14 - Lozère	2,952.15	AVERAGE
FRJ15 - Pyrénées-Orientales	2,104.74	AVERAGE
FRJ2 - Midi-Pyrénées	2,174.13	AVERAGE
FRJ21 - Ariège	2,520.45	AVERAGE
FRJ22 - Aveyron	2,547.54	AVERAGE
FRJ23 - Haute-Garonne	1,977.16	WARM
FRJ24 - Gers	1,808.65	WARM
FRJ25 - Lot	1,994.58	WARM
FRJ26 - Hautes-Pyrénées	2,487.58	AVERAGE
FRJ27 - Tarn	2,051.40	AVERAGE
FRJ28 - Tarn-et-Garonne	1,855.26	WARM
FRK - Auvergne - Rhône-Alpes	2,706.56	AVERAGE
FRK1 - Auvergne	2,730.26	AVERAGE
FRK11 - Allier	2,423.82	AVERAGE
FRK12 - Cantal	2,947.37	AVERAGE
FRK13 - Haute-Loire	2,968.12	AVERAGE
FRK14 - Puy-de-Dôme	2,707.51	AVERAGE
FRK2 - Rhône-Alpes	2,692.76	AVERAGE
FRK21 - Ain	2,415.99	AVERAGE
FRK22 - Ardèche	2,284.82	AVERAGE
FRK23 - Drôme	2,279.27	AVERAGE
FRK24 - Isère	2,751.65	AVERAGE
FRK25 - Loire	2,528.95	AVERAGE
FRK26 - Rhône	2,295.51	AVERAGE
FRK27 - Savoie	3,709.89	COLD
FRK28 - Haute-Savoie	3,069.63	COLD
FRL - Provence-Alpes-Côte d'Azur	2,387.34	AVERAGE
FRL0 - Provence-Alpes-Côte d'Azur	2,387.34	AVERAGE
FRL01 - Alpes-de-Haute-Provence	2,830.82	AVERAGE
FRL02 - Hautes-Alpes	3,722.44	COLD
FRL03 - Alpes-Maritimes	2,493.59	AVERAGE
FRL04 - Bouches-du-Rhône	1,522.20	WARM
FRL05 - Var	1,599.11	WARM
FRL06 - Vaucluse	1,867.45	WARM
FRM - Corse	1,355.19	WARM
FRM0 - Corse	1,355.19	WARM
FRM01 - Corse-du-Sud	1,344.85	WARM
FRM02 - Haute-Corse	1,364.03	WARM
HR - Croatia	2,246.11	AVERAGE
HR0 - Hrvatska	2,246.11	AVERAGE
HR03 - Jadranska Hrvatska	2,005.09	AVERAGE
HR031 - Primorsko-goranska zupanija	2,398.35	AVERAGE
HR032 - Licko-senjska zupanija	2,727.22	AVERAGE
HR033 - Zadarska zupanija	1,852.12	WARM
HR034 - Sibensko-kninska zupanija	1,676.16	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
HR035 - Splitsko-dalmatinska zupanija	1,560.64	WARM
HR036 - Istarska zupanija	1,797.84	WARM
HR037 - Dubrovacko-neretvanska zupanija	1,361.95	WARM
HR04 - Kontinentalna Hrvatska (NUTS 2016)	2,433.20	AVERAGE
HR041 - Grad Zagreb (NUTS 2016)	2,392.48	AVERAGE
HR042 - Zagrebacka zupanija (NUTS 2016)	2,429.45	AVERAGE
HR043 - Krapinsko-zagorska zupanija (NUTS 2016)	2,468.69	AVERAGE
HR044 - Varazdinska zupanija (NUTS 2016)	2,555.40	AVERAGE
HR045 - Koprivnicko-krizevacka zupanija (NUTS 2016)	2,480.87	AVERAGE
HR046 - Medimurska zupanija (NUTS 2016)	2,577.33	AVERAGE
HR047 - Bjelovarsko-bilogorska zupanija (NUTS 2016)	2,383.98	AVERAGE
HR048 - Viroviticko-podravska zupanija (NUTS 2016)	2,401.17	AVERAGE
HR049 - Pozesko-slavonska zupanija (NUTS 2016)	2,442.63	AVERAGE
HR04A - Brodsko-posavska zupanija (NUTS 2016)	2,389.80	AVERAGE
HR04B - Osjecko-baranjska zupanija (NUTS 2016)	2,421.16	AVERAGE
HR04C - Vukovarsko-srijemska zupanija (NUTS 2016)	2,342.81	AVERAGE
HR04D - Karlovacka zupanija (NUTS 2016)	2,550.37	AVERAGE
HR04E - Sisacko-moslavacka zupanija (NUTS 2016)	2,380.04	AVERAGE
IT - Italy	1,846.26	WARM
ITC - Nord-Ovest	2,533.73	AVERAGE
ITC1 - Piemonte	2,505.28	AVERAGE
ITC11 - Torino	2,818.14	AVERAGE
ITC12 - Vercelli	2,480.90	AVERAGE
ITC13 - Biella	2,287.21	AVERAGE
ITC14 - Verbano-Cusio-Ossola	3,205.10	COLD
ITC15 - Novara	2,161.45	AVERAGE
ITC16 - Cuneo	2,480.74	AVERAGE
ITC17 - Asti	1,945.50	WARM
ITC18 - Alessandria	1,944.68	WARM
ITC2 - Valle d'Aosta/Vallée d'Aoste	4,382.36	COLD
ITC20 - Valle d'Aosta/Vallée d'Aoste	4,382.36	COLD
ITC3 - Liguria	1,721.70	WARM
ITC31 - Imperia	1,750.46	WARM
ITC32 - Savona	1,436.67	WARM
ITC33 - Genova	1,988.59	WARM
ITC34 - La Spezia	1,629.86	WARM
ITC4 - Lombardia	2,495.97	AVERAGE
ITC41 - Varese	2,229.77	AVERAGE
ITC42 - Como	2,401.43	AVERAGE
ITC43 - Lecco	2,435.48	AVERAGE
ITC44 - Sondrio	4,254.60	COLD
ITC46 - Bergamo	2,454.14	AVERAGE
ITC47 - Brescia	2,563.89	AVERAGE
ITC48 - Pavia	1,986.24	WARM
ITC49 - Lodi	1,912.34	WARM
ITC4A - Cremona	1,930.11	WARM
ITC4B - Mantova	1,927.71	WARM
ITC4C - Milano	1,963.69	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ITC4D - Monza e della Brianza	2,004.09	AVERAGE
ITH - Nord-Est	2,545.98	AVERAGE
ITH1 - Provincia Autonoma di Bolzano/Bozen	4,195.04	COLD
ITH10 - Bolzano-Bozen	4,195.04	COLD
ITH2 - Provincia Autonoma di Trento	3,349.72	COLD
ITH20 - Trento	3,349.72	COLD
ITH3 - Veneto	2,283.36	AVERAGE
ITH31 - Verona	1,970.51	WARM
ITH32 - Vicenza	2,320.39	AVERAGE
ITH33 - Belluno	3,407.78	COLD
ITH34 - Treviso	1,865.35	WARM
ITH35 - Venezia	1,924.25	WARM
ITH36 - Padova	1,858.10	WARM
ITH37 - Rovigo	1,918.19	WARM
ITH4 - Friuli-Venezia Giulia	2,476.62	AVERAGE
ITH41 - Pordenone	2,374.27	AVERAGE
ITH42 - Udine	2,596.23	AVERAGE
ITH43 - Gorizia	1,925.68	WARM
ITH44 - Trieste	1,895.95	WARM
ITH5 - Emilia-Romagna	2,012.16	AVERAGE
ITH51 - Piacenza	2,117.27	AVERAGE
ITH52 - Parma	2,114.32	AVERAGE
ITH53 - Reggio nell'Emilia	2,042.10	AVERAGE
ITH54 - Modena	2,069.76	AVERAGE
ITH55 - Bologna	1,981.72	WARM
ITH56 - Ferrara	1,922.25	WARM
ITH57 - Ravenna	1,889.04	WARM
ITH58 - Forlì-Cesena	1,953.10	WARM
ITH59 - Rimini	1,862.36	WARM
ITI - Centro (IT)	1,673.73	WARM
ITI1 - Toscana	1,674.36	WARM
ITI11 - Massa-Carrara	1,765.11	WARM
ITI12 - Lucca	1,745.78	WARM
ITI13 - Pistoia	1,831.63	WARM
ITI14 - Firenze	1,741.28	WARM
ITI15 - Prato	1,749.99	WARM
ITI16 - Livorno	1,368.50	WARM
ITI17 - Pisa	1,470.62	WARM
ITI18 - Arezzo	1,919.11	WARM
ITI19 - Siena	1,791.38	WARM
ITI1A - Grosseto	1,449.40	WARM
ITI2 - Umbria	1,928.47	WARM
ITI21 - Perugia	1,971.61	WARM
ITI22 - Terni	1,800.20	WARM
ITI3 - Marche	1,759.31	WARM
ITI31 - Pesaro e Urbino	1,803.13	WARM
ITI32 - Ancona	1,728.48	WARM
ITI33 - Macerata	1,790.12	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ITI34 - Ascoli Piceno	1,716.13	WARM
ITI35 - Fermo	1,661.24	WARM
ITI4 - Lazio	1,501.02	WARM
ITI41 - Viterbo	1,559.45	WARM
ITI42 - Rieti	1,991.45	WARM
ITI43 - Roma	1,374.29	WARM
ITI44 - Latina	1,148.68	WARM
ITI45 - Frosinone	1,473.74	WARM
ITF - Sud	1,391.37	WARM
ITF1 - Abruzzo	1,744.62	WARM
ITF11 - L'Aquila	2,040.78	AVERAGE
ITF12 - Teramo	1,585.23	WARM
ITF13 - Pescara	1,386.67	WARM
ITF14 - Chieti	1,458.70	WARM
ITF2 - Molise	1,620.88	WARM
ITF21 - Isernia	1,842.83	WARM
ITF22 - Campobasso	1,504.29	WARM
ITF3 - Campania	1,232.49	WARM
ITF31 - Caserta	1,218.94	WARM
ITF32 - Benevento	1,409.65	WARM
ITF33 - Napoli	1,018.68	WARM
ITF34 - Avellino	1,453.44	WARM
ITF35 - Salerno	1,090.70	WARM
ITF4 - Puglia	1,290.85	WARM
ITF43 - Taranto	1,296.25	WARM
ITF44 - Brindisi	1,098.89	WARM
ITF45 - Lecce	1,059.96	WARM
ITF46 - Foggia	1,285.26	WARM
ITF47 - Bari	1,480.17	WARM
ITF48 - Barletta-Andria-Trani	1,482.42	WARM
ITF5 - Basilicata	1,561.02	WARM
ITF51 - Potenza	1,676.25	WARM
ITF52 - Matera	1,342.06	WARM
ITF6 - Calabria	1,230.71	WARM
ITF61 - Cosenza	1,396.67	WARM
ITF62 - Crotone	978.68	WARM
ITF63 - Catanzaro	1,236.00	WARM
ITF64 - Vibo Valentia	1,036.97	WARM
ITF65 - Reggio di Calabria	1,084.98	WARM
ITG - Isole	1,051.78	WARM
ITG1 - Sicilia	1,059.41	WARM
ITG11 - Trapani	815.29	WARM
ITG12 - Palermo	1,141.33	WARM
ITG13 - Messina	1,128.88	WARM
ITG14 - Agrigento	975.96	WARM
ITG15 - Caltanissetta	1,024.46	WARM
ITG16 - Enna	1,174.88	WARM
ITG17 - Catania	1,150.57	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ITG18 - Ragusa	960.43	WARM
ITG19 - Siracusa	981.57	WARM
ITG2 - Sardegna	1,043.63	WARM
ITG25 - Sassari (NUTS 2016)	1,088.88	WARM
ITG26 - Nuoro (NUTS 2016)	1,199.62	WARM
ITG27 - Cagliari (NUTS 2016)	921.72	WARM
ITG28 - Oristano (NUTS 2016)	990.20	WARM
ITG29 - Olbia-Tempio (NUTS 2016)	1,105.45	WARM
ITG2A - Ogliastra (NUTS 2016)	1,020.15	WARM
ITG2B - Medio Campidano (NUTS 2016)	960.45	WARM
ITG2C - Carbonia-Iglesias (NUTS 2016)	954.57	WARM
CY - Cyprus	665.24	WARM
CY0 - Kypros	665.24	WARM
CY00 - Kypros	665.24	WARM
CY000 - Kypros	665.24	WARM
LV - Latvia	4,001.53	COLD
LV0 - Latvija	4,001.53	COLD
LV00 - Latvija	4,001.53	COLD
LV003 - Kurzeme	3,803.86	COLD
LV005 - Latgale	4,112.23	COLD
LV006 - Riga	3,786.16	COLD
LV007 - Pieriga	3,951.24	COLD
LV008 - Vidzeme	4,169.52	COLD
LV009 - Zemgale	3,917.20	COLD
LT - Lithuania	3,806.03	COLD
LT0 - Lietuva	3,806.03	COLD
LT01 - Sostines regionas	3,859.99	COLD
LT011 - Vilniaus apskritis	3,859.99	COLD
LT02 - Vidurio ir vakaru Lietuvos regionas	3,796.51	COLD
LT021 - Alytaus apskritis	3,725.98	COLD
LT022 - Kauno apskritis	3,748.38	COLD
LT023 - Klaipedos apskritis	3,627.23	COLD
LT024 - Marijampoles apskritis	3,705.84	COLD
LT025 - Panevezio apskritis	3,871.28	COLD
LT026 - Siauliu apskritis	3,815.97	COLD
LT027 - Taurages apskritis	3,725.41	COLD
LT028 - Telsiu apskritis	3,867.58	COLD
LT029 - Utenos apskritis	3,969.09	COLD
LU - Luxembourg	2,872.48	AVERAGE
LU0 - Luxembourg	2,872.48	AVERAGE
LU00 - Luxembourg	2,872.48	AVERAGE
LU000 - Luxembourg	2,872.48	AVERAGE
HU - Hungary	2,639.90	AVERAGE
HU1 - Közép-Magyarország	2,634.88	AVERAGE
HU11 - Budapest	2,571.88	AVERAGE
HU110 - Budapest	2,571.88	AVERAGE
HU12 - Pest	2,640.07	AVERAGE
HU120 - Pest	2,640.07	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
HU2 - Dunántúl	2,624.48	AVERAGE
HU21 - Közép-Dunántúl	2,685.38	AVERAGE
HU211 - Fejér	2,667.38	AVERAGE
HU212 - Komárom-Esztergom	2,684.10	AVERAGE
HU213 - Veszprém	2,703.60	AVERAGE
HU22 - Nyugat-Dunántúl	2,648.69	AVERAGE
HU221 - Gyor-Moson-Sopron	2,600.53	AVERAGE
HU222 - Vas	2,669.51	AVERAGE
HU223 - Zala	2,683.92	AVERAGE
HU23 - Dél-Dunántúl	2,557.62	AVERAGE
HU231 - Baranya	2,482.87	AVERAGE
HU232 - Somogy	2,584.37	AVERAGE
HU233 - Tolna	2,603.31	AVERAGE
HU3 - Alföld és Észak	2,652.02	AVERAGE
HU31 - Észak-Magyarország	2,773.92	AVERAGE
HU311 - Borsod-Abaúj-Zemplén	2,764.89	AVERAGE
HU312 - Heves	2,732.32	AVERAGE
HU313 - Nógrád	2,859.04	AVERAGE
HU32 - Észak-Alföld	2,651.62	AVERAGE
HU321 - Hajdú-Bihar	2,639.80	AVERAGE
HU322 - Jász-Nagykun-Szolnok	2,612.02	AVERAGE
HU323 - Szabolcs-Szatmár-Bereg	2,701.26	AVERAGE
HU33 - Dél-Alföld	2,563.14	AVERAGE
HU331 - Bács-Kiskun	2,576.62	AVERAGE
HU332 - Békés	2,572.97	AVERAGE
HU333 - Csongrád	2,523.45	AVERAGE
MT - Malta	473.10	WARM
MT0 - Malta	473.10	WARM
MT00 - Malta	473.10	WARM
MT001 - Malta	477.97	WARM
MT002 - Gozo and Comino/Ghawdex u Kemmuna	455.61	WARM
NL - Netherlands	2,682.78	AVERAGE
NL1 - Noord-Nederland	2,804.86	AVERAGE
NL11 - Groningen	2,823.94	AVERAGE
NL111 - Oost-Groningen	2,857.89	AVERAGE
NL112 - Delfzijl en omgeving	2,843.51	AVERAGE
NL113 - Overig Groningen	2,797.19	AVERAGE
NL12 - Friesland (NL)	2,784.77	AVERAGE
NL124 - Noord-Friesland	2,790.09	AVERAGE
NL125 - Zuidwest-Friesland	2,761.17	AVERAGE
NL126 - Zuidoost-Friesland	2,808.73	AVERAGE
NL13 - Drenthe	2,817.73	AVERAGE
NL131 - Noord-Drenthe	2,842.57	AVERAGE
NL132 - Zuidoost-Drenthe	2,805.89	AVERAGE
NL133 - Zuidwest-Drenthe	2,795.50	AVERAGE
NL2 - Oost-Nederland	2,732.62	AVERAGE
NL21 - Overijssel	2,776.46	AVERAGE
NL211 - Noord-Overijssel	2,764.89	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
NL212 - Zuidwest-Overijssel	2,778.06	AVERAGE
NL213 - Twente	2,787.49	AVERAGE
NL22 - Gelderland	2,713.34	AVERAGE
NL221 - Veluwe	2,723.70	AVERAGE
NL224 - Zuidwest-Gelderland	2,680.34	AVERAGE
NL225 - Achterhoek	2,732.15	AVERAGE
NL226 - Arnhem/Nijmegen	2,688.59	AVERAGE
NL23 - Flevoland	2,711.52	AVERAGE
NL230 - Flevoland	2,711.52	AVERAGE
NL3 - West-Nederland	2,584.21	AVERAGE
NL31 - Utrecht	2,632.39	AVERAGE
NL310 - Utrecht	2,632.39	AVERAGE
NL32 - Noord-Holland	2,662.49	AVERAGE
NL321 - Kop van Noord-Holland	2,697.84	AVERAGE
NL323 - IJmond	2,627.72	AVERAGE
NL324 - Agglomeratie Haarlem	2,608.81	AVERAGE
NL325 - Zaanstreek	2,630.38	AVERAGE
NL327 - Het Gooi en Vechtstreek	2,637.68	AVERAGE
NL328 - Alkmaar en omgeving	2,650.34	AVERAGE
NL329 - Groot-Amsterdam	2,633.15	AVERAGE
NL33 - Zuid-Holland	2,569.05	AVERAGE
NL332 - Agglomeratie 's-Gravenhage	2,588.32	AVERAGE
NL333 - Delft en Westland	2,537.30	AVERAGE
NL337 - Agglomeratie Leiden en Bollenstreek	2,605.81	AVERAGE
NL33A - Zuidoost-Zuid-Holland	2,619.15	AVERAGE
NL33B - Oost-Zuid-Holland	2,596.73	AVERAGE
NL33C - Groot-Rijnmond	2,534.82	AVERAGE
NL34 - Zeeland	2,436.10	AVERAGE
NL341 - Zeeuwsch-Vlaanderen	2,437.51	AVERAGE
NL342 - Overig Zeeland	2,435.19	AVERAGE
NL4 - Zuid-Nederland	2,591.57	AVERAGE
NL41 - Noord-Brabant	2,593.27	AVERAGE
NL411 - West-Noord-Brabant	2,556.75	AVERAGE
NL412 - Midden-Noord-Brabant	2,598.40	AVERAGE
NL413 - Noordoost-Noord-Brabant	2,622.34	AVERAGE
NL414 - Zuidoost-Noord-Brabant	2,594.94	AVERAGE
NL42 - Limburg (NL)	2,587.67	AVERAGE
NL421 - Noord-Limburg	2,606.03	AVERAGE
NL422 - Midden-Limburg	2,596.13	AVERAGE
NL423 - Zuid-Limburg	2,555.07	AVERAGE
AT - Austria	3,433.74	COLD
AT1 - Ostösterreich	2,928.68	AVERAGE
AT11 - Burgenland (AT)	2,683.17	AVERAGE
AT111 - Mittelburgenland	2,736.21	AVERAGE
AT112 - Nordburgenland	2,569.25	AVERAGE
AT113 - Südburgenland	2,796.44	AVERAGE
AT12 - Niederösterreich	2,990.47	AVERAGE
AT121 - Mostviertel-Eisenwurzen	3,019.89	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
AT122 - Niederösterreich-Süd	3,090.74	COLD
AT123 - Sankt Pölten	2,828.55	AVERAGE
AT124 - Waldviertel	3,335.83	COLD
AT125 - Weinviertel	2,834.99	AVERAGE
AT126 - Wiener Umland/Nordteil	2,685.62	AVERAGE
AT127 - Wiener Umland/Südteil	2,567.40	AVERAGE
AT13 - Wien	2,410.48	AVERAGE
AT130 - Wien	2,410.48	AVERAGE
AT2 - Südösterreich	3,448.34	COLD
AT21 - Kärnten	3,508.83	COLD
AT211 - Klagenfurt-Villach	3,157.89	COLD
AT212 - Oberkärnten	3,857.40	COLD
AT213 - Unterkärnten	3,293.09	COLD
AT22 - Steiermark	3,413.18	COLD
AT221 - Graz	2,891.82	AVERAGE
AT222 - Liezen	3,834.92	COLD
AT223 - Östliche Obersteiermark	3,538.51	COLD
AT224 - Oststeiermark	2,894.89	AVERAGE
AT225 - West- und Südsteiermark	2,941.56	AVERAGE
AT226 - Westliche Obersteiermark	3,950.54	COLD
AT3 - Westösterreich	3,768.74	COLD
AT31 - Oberösterreich	3,115.34	COLD
AT311 - Innviertel	2,980.45	AVERAGE
AT312 - Linz-Wels	2,980.21	AVERAGE
AT313 - Mühlviertel	3,254.25	COLD
AT314 - Steyr-Kirchdorf	3,148.62	COLD
AT315 - Traunviertel	3,183.63	COLD
AT32 - Salzburg	3,922.04	COLD
AT321 - Lungau	4,400.82	COLD
AT322 - Pinzgau-Pongau	4,081.22	COLD
AT323 - Salzburg und Umgebung	3,239.11	COLD
AT33 - Tirol	4,315.12	COLD
AT331 - Außerfern	4,122.89	COLD
AT332 - Innsbruck	4,223.61	COLD
AT333 - Osttirol	4,539.32	COLD
AT334 - Tiroler Oberland	4,829.04	COLD
AT335 - Tiroler Unterland	3,879.14	COLD
AT34 - Vorarlberg	3,700.50	COLD
AT341 - Bludenz-Bregenzer Wald	3,963.96	COLD
AT342 - Rheintal-Bodenseegebiet	3,035.77	COLD
PL - Poland	3,314.99	COLD
PL2 - Makroregion Poludniowy	3,295.00	COLD
PL21 - Malopolskie	3,347.34	COLD
PL213 - Miasto Kraków	3,279.23	COLD
PL214 - Krakowski	3,281.61	COLD
PL217 - Tarnowski	3,094.05	COLD
PL218 - Nowosadecki	3,380.27	COLD
PL219 - Nowotarski	3,704.14	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
PL21A - Oswiecimski	3,295.58	COLD
PL22 - Slaskie	3,230.58	COLD
PL224 - Czestochowski	3,224.57	COLD
PL225 - Bielski	3,258.57	COLD
PL227 - Rybnicki	3,153.02	COLD
PL228 - Bytomski	3,206.13	COLD
PL229 - Gliwicki	3,144.21	COLD
PL22A - Katowicki	3,205.15	COLD
PL22B - Sosnowiecki	3,346.32	COLD
PL22C - Tyski	3,201.84	COLD
PL4 - Makroregion Pólnocno-Zachodni	3,155.92	COLD
PL41 - Wielkopolskie	3,163.95	COLD
PL411 - Pilski	3,300.20	COLD
PL414 - Koninski	3,153.72	COLD
PL415 - Miasto Poznan	3,085.39	COLD
PL416 - Kaliski	3,118.92	COLD
PL417 - Leszczynski	3,106.50	COLD
PL418 - Poznanski	3,125.47	COLD
PL42 - Zachodniopomorskie	3,224.59	COLD
PL424 - Miasto Szczecin	3,117.56	COLD
PL426 - Koszalinski	3,256.65	COLD
PL427 - Szczecinecko-pyrzycki	3,283.33	COLD
PL428 - Szczecinski	3,128.50	COLD
PL43 - Lubuskie	3,028.60	COLD
PL431 - Gorzowski	3,052.87	COLD
PL432 - Zielonogórski	3,009.77	COLD
PL5 - Makroregion Poludniowo-Zachodni	3,146.39	COLD
PL51 - Dolnoslaskie	3,172.41	COLD
PL514 - Miasto Wroclaw	2,974.82	AVERAGE
PL515 - Jeleniogórski	3,262.91	COLD
PL516 - Legnicko-Glogowski	3,068.15	COLD
PL517 - Walbrzyski	3,360.63	COLD
PL518 - Wroclawski	3,036.89	COLD
PL52 - Opolskie	3,091.25	COLD
PL523 - Nyski	3,105.80	COLD
PL524 - Opolski	3,080.04	COLD
PL6 - Makroregion Pólnocny	3,443.80	COLD
PL61 - Kujawsko-Pomorskie	3,308.07	COLD
PL613 - Bydgosko-Torunski	3,315.15	COLD
PL616 - Grudziadzki	3,353.82	COLD
PL617 - Inowroclawski	3,261.20	COLD
PL618 - Swiecki	3,379.03	COLD
PL619 - Wloclawski	3,238.45	COLD
PL62 - Warminsko-Mazurskie	3,563.19	COLD
PL621 - Elblaski	3,529.22	COLD
PL622 - Olsztynski	3,541.92	COLD
PL623 - Elcki	3,637.03	COLD
PL63 - Pomorskie	3,420.33	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
PL633 - Trojmiejski	3,352.41	COLD
PL634 - Gdanski	3,418.96	COLD
PL636 - Slupski	3,393.16	COLD
PL637 - Chojnicki	3,468.25	COLD
PL638 - Starogardzki	3,415.38	COLD
PL7 - Makroregion Centralny	3,283.44	COLD
PL71 - Lódzkie	3,242.81	COLD
PL711 - Miasto Lódz	3,288.59	COLD
PL712 - Lódzki	3,271.31	COLD
PL713 - Piotrkowski	3,314.65	COLD
PL714 - Sieradzki	3,164.73	COLD
PL715 - Skierniewicki	3,227.47	COLD
PL72 - Swietokrzyskie	3,346.65	COLD
PL721 - Kielecki	3,431.42	COLD
PL722 - Sandomiersko-jedrzejowski	3,282.79	COLD
PL8 - Makroregion Wschodni	3,431.87	COLD
PL81 - Lubelskie	3,389.34	COLD
PL811 - Bialski	3,408.11	COLD
PL812 - Chelmsko-zamojski	3,384.45	COLD
PL814 - Lubelski	3,386.55	COLD
PL815 - Pulawski	3,379.57	COLD
PL82 - Podkarpackie	3,237.84	COLD
PL821 - Krosnienski	3,374.97	COLD
PL822 - Przemyski	3,185.85	COLD
PL823 - Rzeszowski	3,190.78	COLD
PL824 - Tarnobrzeski	3,155.17	COLD
PL84 - Podlaskie	3,656.37	COLD
PL841 - Bialostocki	3,710.55	COLD
PL842 - Lomzynski	3,579.41	COLD
PL843 - Suwalski	3,720.62	COLD
PL9 - Makroregion Województwo Mazowieckie	3,366.99	COLD
PL91 - Warszawski stoleczny	3,266.88	COLD
PL911 - Miasto Warszawa	3,181.21	COLD
PL912 - Warszawski wschodni	3,323.19	COLD
PL913 - Warszawski zachodni	3,213.49	COLD
PL92 - Mazowiecki regionalny	3,387.75	COLD
PL921 - Radomski	3,326.89	COLD
PL922 - Ciechanowski	3,387.29	COLD
PL923 - Plocki	3,287.72	COLD
PL924 - Ostrolecki	3,471.33	COLD
PL925 - Siedlecki	3,460.08	COLD
PL926 - Zyrardowski	3,272.37	COLD
PT - Portugal	1,199.46	WARM
PT1 - Continente	1,199.46	WARM
PT11 - Norte	1,660.97	WARM
PT111 - Alto Minho	1,373.83	WARM
PT112 - Cávado	1,303.91	WARM
PT119 - Ave	1,471.64	WARM

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
PT11A - Área Metropolitana do Porto	1,236.15	WARM
PT11B - Alto Tâmega	2,080.52	AVERAGE
PT11C - Tâmega e Sousa	1,357.12	WARM
PT11D - Douro	1,617.59	WARM
PT11E - Terras de Trás-os-Montes	1,972.89	WARM
PT15 - Algarve	739.05	WARM
PT150 - Algarve	739.05	WARM
PT16 - Centro (PT)	1,246.04	WARM
PT16B - Oeste	758.38	WARM
PT16D - Região de Aveiro	1,169.93	WARM
PT16E - Região de Coimbra	1,122.75	WARM
PT16F - Região de Leiria	1,019.52	WARM
PT16G - Viseu Dão Lafões	1,464.21	WARM
PT16H - Beira Baixa	1,221.58	WARM
PT16I - Médio Tejo	980.03	WARM
PT16J - Beiras e Serra da Estrela	1,658.14	WARM
PT17 - Área Metropolitana de Lisboa	772.84	WARM
PT170 - Área Metropolitana de Lisboa	772.84	WARM
PT18 - Alentejo	957.69	WARM
PT181 - Alentejo Litoral	786.30	WARM
PT184 - Baixo Alentejo	956.17	WARM
PT185 - Lezíria do Tejo	769.48	WARM
PT186 - Alto Alentejo	1,122.56	WARM
PT187 - Alentejo Central	1,053.76	WARM
PT3 - Região Autónoma da Madeira (PT)	:	COLD
PT30 - Região Autónoma da Madeira (PT)	:	COLD
PT300 - Região Autónoma da Madeira (PT)	:	COLD
RO - Romania	2,886.03	AVERAGE
RO1 - Macroregiunea unu	3,129.92	COLD
RO11 - Nord-Vest	2,957.75	AVERAGE
RO111 - Bihor	2,681.99	AVERAGE
RO112 - Bistrita-Nasaud	3,314.75	COLD
RO113 - Cluj	3,032.05	COLD
RO114 - Maramures	3,215.48	COLD
RO115 - Satu Mare	2,683.32	AVERAGE
RO116 - Salaj	2,765.85	AVERAGE
RO12 - Centru	3,302.35	COLD
RO121 - Alba	3,038.35	COLD
RO122 - Brasov	3,237.84	COLD
RO123 - Covasna	3,543.68	COLD
RO124 - Harghita	3,821.55	COLD
RO125 - Mures	3,144.60	COLD
RO126 - Sibiu	3,065.83	COLD
RO2 - Macroregiunea doi	2,938.20	AVERAGE
RO21 - Nord-Est	3,215.73	COLD
RO211 - Bacau	3,094.64	COLD
RO212 - Botosani	3,012.13	COLD
RO213 - Iasi	2,945.00	AVERAGE

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
RO214 - Neamt	3,295.29	COLD
RO215 - Suceava	3,724.77	COLD
RO216 - Vaslui	2,929.37	AVERAGE
RO22 - Sud-Est	2,652.03	AVERAGE
RO221 - Braila	2,598.23	AVERAGE
RO222 - Buzau	2,828.96	AVERAGE
RO223 - Constanta	2,441.49	AVERAGE
RO224 - Galati	2,743.16	AVERAGE
RO225 - Tulcea	2,529.73	AVERAGE
RO226 - Vrancea	2,918.75	AVERAGE
RO3 - Macroregiunea trei	2,692.36	AVERAGE
RO31 - Sud - Muntenia	2,700.69	AVERAGE
RO311 - Arges	2,964.63	AVERAGE
RO312 - Calarasi	2,514.80	AVERAGE
RO313 - Dâmbovita	2,745.79	AVERAGE
RO314 - Giurgiu	2,518.75	AVERAGE
RO315 - Ialomita	2,555.50	AVERAGE
RO316 - Prahova	2,909.54	AVERAGE
RO317 - Teleorman	2,574.32	AVERAGE
RO32 - Bucuresti - Ilfov	2,532.70	AVERAGE
RO321 - Bucuresti	2,403.01	AVERAGE
RO322 - Ilfov	2,552.44	AVERAGE
RO4 - Macroregiunea patru	2,667.03	AVERAGE
RO41 - Sud-Vest Oltenia	2,661.41	AVERAGE
RO411 - Dolj	2,520.92	AVERAGE
RO412 - Gorj	2,772.05	AVERAGE
RO413 - Mehedinti	2,571.15	AVERAGE
RO414 - Olt	2,565.66	AVERAGE
RO415 - Vâlcea	2,904.21	AVERAGE
RO42 - Vest	2,672.15	AVERAGE
RO421 - Arad	2,566.19	AVERAGE
RO422 - Caras-Severin	2,682.20	AVERAGE
RO423 - Hunedoara	3,007.66	COLD
RO424 - Timis	2,483.41	AVERAGE
SI - Slovenia	2,749.44	AVERAGE
SI0 - Slovenija	2,749.44	AVERAGE
SI03 - Vzhodna Slovenija	2,756.56	AVERAGE
SI031 - Pomurska	2,636.07	AVERAGE
SI032 - Podravska	2,685.77	AVERAGE
SI033 - Koroska	3,056.18	COLD
SI034 - Savinjska	2,846.19	AVERAGE
SI035 - Zasavska	2,672.71	AVERAGE
SI036 - Posavska	2,502.81	AVERAGE
SI037 - Jugovzhodna Slovenija	2,726.48	AVERAGE
SI038 - Primorsko-notranjska	2,868.52	AVERAGE
SI04 - Zahodna Slovenija	2,738.16	AVERAGE
SI041 - Osrednjeslovenska	2,692.94	AVERAGE
SI042 - Gorenjska	3,028.20	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
SI043 - Goriska	2,745.51	AVERAGE
SI044 - Obalno-kraska	2,229.91	AVERAGE
SK - Slovakia	3,133.07	COLD
SK0 - Slovensko	3,133.07	COLD
SK01 - Bratislavský kraj	2,716.85	AVERAGE
SK010 - Bratislavský kraj	2,716.85	AVERAGE
SK02 - Západné Slovensko	2,823.11	AVERAGE
SK021 - Trnavský kraj	2,749.13	AVERAGE
SK022 - Trenciansky kraj	3,021.06	COLD
SK023 - Nitriansky kraj	2,731.03	AVERAGE
SK03 - Stredné Slovensko	3,341.88	COLD
SK031 - Zilinský kraj	3,597.27	COLD
SK032 - Banskobystrický kraj	3,158.01	COLD
SK04 - Východné Slovensko	3,266.91	COLD
SK041 - Presovský kraj	3,416.26	COLD
SK042 - Kosický kraj	3,068.43	COLD
FI - Finland	5,441.60	COLD
FI1 - Manner-Suomi	5,447.48	COLD
FI19 - Länsi-Suomi	4,844.65	COLD
FI193 - Keski-Suomi	4,989.93	COLD
FI194 - Etelä-Pohjanmaa	4,979.62	COLD
FI195 - Pohjanmaa	4,764.19	COLD
FI196 - Satakunta	4,523.05	COLD
FI197 - Pirkanmaa	4,741.42	COLD
FI1B - Helsinki-Uusimaa	4,331.79	COLD
FI1B1 - Helsinki-Uusimaa	4,331.79	COLD
FI1C - Etelä-Suomi	4,535.58	COLD
FI1C1 - Varsinais-Suomi	4,299.74	COLD
FI1C2 - Kanta-Häme	4,599.80	COLD
FI1C3 - Päijät-Häme	4,652.60	COLD
FI1C4 - Kymenlaakso	4,524.84	COLD
FI1C5 - Etelä-Karjala	4,748.44	COLD
FI1D - Pohjois- ja Itä-Suomi	5,806.08	COLD
FI1D1 - Etelä-Savo	4,881.15	COLD
FI1D2 - Pohjois-Savo	5,091.23	COLD
FI1D3 - Pohjois-Karjala	5,211.53	COLD
FI1D5 - Keski-Pohjanmaa	5,169.47	COLD
FI1D7 - Lappi	6,415.35	COLD
FI1D8 - Kainuu	5,664.32	COLD
FI1D9 - Pohjois-Pohjanmaa	5,584.19	COLD
FI2 - Åland	4,024.52	COLD
FI20 - Åland	4,024.52	COLD
FI200 - Åland	4,024.52	COLD
SE - Sweden	5,174.95	COLD
SE1 - Östra Sverige	3,966.81	COLD
SE11 - Stockholm	3,929.09	COLD
SE110 - Stockholms län	3,929.09	COLD
SE12 - Östra Mellansverige	3,972.97	COLD

COUNTRY AND REGION	HDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
SE121 - Uppsala län	4,121.90	COLD
SE122 - Södermanlands län	3,888.35	COLD
SE123 - Östergötlands län	3,821.45	COLD
SE124 - Örebro län	4,014.59	COLD
SE125 - Västmanlands län	4,107.73	COLD
SE2 - Södra Sverige	3,692.42	COLD
SE21 - Småland med öarna	3,804.19	COLD
SE211 - Jönköpings län	3,996.65	COLD
SE212 - Kronobergs län	3,782.78	COLD
SE213 - Kalmar län	3,699.18	COLD
SE214 - Gotlands län	3,539.96	COLD
SE22 - Sydsverige	3,362.26	COLD
SE221 - Blekinge län	3,466.55	COLD
SE224 - Skåne län	3,334.43	COLD
SE23 - Västsverige	3,713.57	COLD
SE231 - Hallands län	3,503.52	COLD
SE232 - Västra Götalands län	3,755.11	COLD
SE3 - Norra Sverige	5,769.16	COLD
SE31 - Norra Mellansverige	4,806.83	COLD
SE311 - Värmlands län	4,435.41	COLD
SE312 - Dalarnas län	5,068.34	COLD
SE313 - Gävleborgs län	4,816.45	COLD
SE32 - Mellersta Norrland	5,536.44	COLD
SE321 - Västernorrlands län	5,277.69	COLD
SE322 - Jämtlands län	5,646.86	COLD
SE33 - Övre Norrland	6,297.60	COLD
SE331 - Västerbottens län	5,946.12	COLD
SE332 - Norrbottens län	6,494.20	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
BE - Belgium	21.65	COLD
BE1 - Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	23.00	COLD
BE10 - Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	23.00	COLD
BE100 - Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad	23.00	COLD
BE2 - Vlaams Gewest	20.26	COLD
BE21 - Prov. Antwerpen	22.06	COLD
BE211 - Arr. Antwerpen	20.86	COLD
BE212 - Arr. Mechelen	22.90	COLD
BE213 - Arr. Turnhout	22.64	COLD
BE22 - Prov. Limburg (BE)	27.25	COLD
BE221 - Arr. Hasselt (NUTS 2016)	27.34	COLD
BE222 - Arr. Maaseik (NUTS 2016)	24.10	COLD
BE223 - Arr. Tongeren	31.50	COLD
BE23 - Prov. Oost-Vlaanderen	19.26	COLD
BE231 - Arr. Aalst	18.41	COLD
BE232 - Arr. Dendermonde	22.54	COLD
BE233 - Arr. Eeklo	16.72	COLD
BE234 - Arr. Gent	19.56	COLD
BE235 - Arr. Oudenaarde	16.48	COLD
BE236 - Arr. Sint-Niklaas	21.37	COLD
BE24 - Prov. Vlaams-Brabant	24.27	COLD
BE241 - Arr. Halle-Vilvoorde	23.19	COLD
BE242 - Arr. Leuven	25.14	COLD
BE25 - Prov. West-Vlaanderen	11.53	COLD
BE251 - Arr. Brugge	10.37	COLD
BE252 - Arr. Diksmuide	7.83	COLD
BE253 - Arr. Ieper	14.34	COLD
BE254 - Arr. Kortrijk	15.81	COLD
BE255 - Arr. Oostende	7.62	COLD
BE256 - Arr. Roeselare	13.27	COLD
BE257 - Arr. Tielt	14.59	COLD
BE258 - Arr. Veurne	6.08	COLD
BE3 - Région wallonne	22.76	COLD
BE31 - Prov. Brabant wallon	26.38	COLD
BE310 - Arr. Nivelles	26.38	COLD
BE32 - Prov. Hainaut	21.16	COLD
BE321 - Arr. Ath (NUTS 2016)	20.40	COLD
BE322 - Arr. Charleroi (NUTS 2016)	21.65	COLD
BE323 - Arr. Mons	20.51	COLD
BE324 - Arr. Mouscron (NUTS 2016)	17.65	COLD
BE325 - Arr. Soignies (NUTS 2016)	21.56	COLD
BE326 - Arr. Thuin (NUTS 2016)	20.71	COLD
BE327 - Arr. Tournai (NUTS 2016)	22.91	COLD
BE33 - Prov. Liège	26.97	COLD
BE331 - Arr. Huy	28.23	COLD
BE332 - Arr. Liège	36.83	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
BE334 - Arr. Waremme	31.93	COLD
BE335 - Arr. Verviers - communes francophones	24.64	COLD
BE336 - Bezirk Verviers - Deutschsprachige Gemeinschaft	17.64	COLD
BE34 - Prov. Luxembourg (BE)	20.64	COLD
BE341 - Arr. Arlon	25.42	COLD
BE342 - Arr. Bastogne	22.02	COLD
BE343 - Arr. Marche-en-Famenne	19.60	COLD
BE344 - Arr. Neufchâteau	18.33	COLD
BE345 - Arr. Virton	22.16	COLD
BE35 - Prov. Namur	21.51	COLD
BE351 - Arr. Dinant	20.77	COLD
BE352 - Arr. Namur	23.78	COLD
BE353 - Arr. Philippeville	19.90	COLD
BG - Bulgaria	170.47	WARM
BG3 - Severna i yugoiztochna Bulgaria	199.67	WARM
BG31 - Severozapaden	192.77	WARM
BG311 - Vidin	176.66	WARM
BG312 - Montana	191.99	WARM
BG313 - Vratsa	200.40	WARM
BG314 - Pleven	239.13	WARM
BG315 - Lovech	146.38	WARM
BG32 - Severen tsentralen	196.87	WARM
BG321 - Veliko Tarnovo	215.36	WARM
BG322 - Gabrovo	148.37	WARM
BG323 - Ruse	221.52	WARM
BG324 - Razgrad	187.34	WARM
BG325 - Silistra	184.27	WARM
BG33 - Severoiztochen	169.04	WARM
BG331 - Varna	174.21	WARM
BG332 - Dobrich	153.56	WARM
BG333 - Shumen	179.31	WARM
BG334 - Targovishte	175.83	WARM
BG34 - Yugoiztochen	231.07	WARM
BG341 - Burgas	202.36	WARM
BG342 - Sliven	249.02	WARM
BG343 - Yambol	282.04	WARM
BG344 - Stara Zagora	228.68	WARM
BG4 - Yugozapadna i yuzhna tsentralna Bulgaria	123.72	WARM
BG41 - Yugozapaden	83.03	AVERAGE
BG411 - Sofia (stolitsa)	56.10	AVERAGE
BG412 - Sofia	52.63	AVERAGE
BG413 - Blagoevgrad	135.10	WARM
BG414 - Pernik	34.74	COLD
BG415 - Kyustendil	93.03	AVERAGE
BG42 - Yuzhen tsentralen	160.67	WARM
BG421 - Plovdiv	181.67	WARM
BG422 - Haskovo	279.27	WARM
BG423 - Pazardzhik	91.22	AVERAGE

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
BG424 - Smolyan	16.82	COLD
BG425 - Kardzhali	157.47	WARM
CZ - Czechia	33.49	COLD
CZ0 - Cesko	33.49	COLD
CZ01 - Praha	62.94	AVERAGE
CZ010 - Hlavní mesto Praha	62.94	AVERAGE
CZ02 - Strední Cechy	38.37	COLD
CZ020 - Stredoceský kraj	38.37	COLD
CZ03 - Jihozápad	26.04	COLD
CZ031 - Jihocecký kraj	27.99	COLD
CZ032 - Plzenský kraj	23.45	COLD
CZ04 - Severozápad	27.61	COLD
CZ041 - Karlovarský kraj	16.91	COLD
CZ042 - Ústecký kraj	34.27	COLD
CZ05 - Severovýchod	27.61	COLD
CZ051 - Liberecký kraj	26.22	COLD
CZ052 - Královéhradecký kraj	23.41	COLD
CZ053 - Pardubický kraj	33.01	COLD
CZ06 - Jihovýchod	46.76	COLD
CZ063 - Kraj Vysocina	24.71	COLD
CZ064 - Jihomoravský kraj	67.57	AVERAGE
CZ07 - Strední Morava	36.42	COLD
CZ071 - Olomoucký kraj	31.14	COLD
CZ072 - Zlínský kraj	43.45	COLD
CZ08 - Moravskoslezsko	28.73	COLD
CZ080 - Moravskoslezský kraj	28.73	COLD
DK - Denmark	2.17	COLD
DK0 - Danmark	2.17	COLD
DK01 - Hovedstaden	3.25	COLD
DK011 - Byen København	5.87	COLD
DK012 - Københavns omegn	4.16	COLD
DK013 - Nordsjælland	2.97	COLD
DK014 - Bornholm	2.59	COLD
DK02 - Sjælland	3.02	COLD
DK021 - Østsjælland	2.85	COLD
DK022 - Vest- og Sydsjælland	3.04	COLD
DK03 - Syddanmark	2.48	COLD
DK031 - Fyn	2.46	COLD
DK032 - Sydjylland	2.49	COLD
DK04 - Midtjylland	1.80	COLD
DK041 - Vestjylland	1.96	COLD
DK042 - Østjylland	1.61	COLD
DK05 - Nordjylland	1.18	COLD
DK050 - Nordjylland	1.18	COLD
DE - Germany (until 1990 former territory of the FRG)	27.51	COLD
DE1 - Baden-Württemberg	34.34	COLD
DE11 - Stuttgart	37.57	COLD
DE111 - Stuttgart, Stadtkreis	65.78	AVERAGE

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE112 - Böblingen	31.34	COLD
DE113 - Esslingen	41.47	COLD
DE114 - Göppingen	31.24	COLD
DE115 - Ludwigsburg	47.64	COLD
DE116 - Rems-Murr-Kreis	52.01	AVERAGE
DE117 - Heilbronn, Stadtkreis	53.00	AVERAGE
DE118 - Heilbronn, Landkreis	51.34	AVERAGE
DE119 - Hohenlohekreis	49.16	COLD
DE11A - Schwäbisch Hall	32.88	COLD
DE11B - Main-Tauber-Kreis	38.01	COLD
DE11C - Heidenheim	19.50	COLD
DE11D - Ostalbkreis	19.13	COLD
DE12 - Karlsruhe	45.90	COLD
DE121 - Baden-Baden, Stadtkreis	64.50	AVERAGE
DE122 - Karlsruhe, Stadtkreis	50.81	AVERAGE
DE123 - Karlsruhe, Landkreis	52.85	AVERAGE
DE124 - Rastatt	57.32	AVERAGE
DE125 - Heidelberg, Stadtkreis	57.51	AVERAGE
DE126 - Mannheim, Stadtkreis	75.32	AVERAGE
DE127 - Neckar-Odenwald-Kreis	36.22	COLD
DE128 - Rhein-Neckar-Kreis	57.57	AVERAGE
DE129 - Pforzheim, Stadtkreis	37.24	COLD
DE12A - Calw	34.91	COLD
DE12B - Enzkreis	36.94	COLD
DE12C - Freudenstadt	32.42	COLD
DE13 - Freiburg	34.87	COLD
DE131 - Freiburg im Breisgau, Stadtkreis	48.43	COLD
DE132 - Breisgau-Hochschwarzwald	38.88	COLD
DE133 - Emmendingen	42.96	COLD
DE134 - Ortenaukreis	47.50	COLD
DE135 - Rottweil	24.05	COLD
DE136 - Schwarzwald-Baar-Kreis	18.52	COLD
DE137 - Tuttlingen	20.82	COLD
DE138 - Konstanz	36.08	COLD
DE139 - Lörrach	43.73	COLD
DE13A - Waldshut	26.52	COLD
DE14 - Tübingen	21.32	COLD
DE141 - Reutlingen	24.87	COLD
DE142 - Tübingen, Landkreis	25.33	COLD
DE143 - Zollernalbkreis	19.29	COLD
DE144 - Ulm, Stadtkreis	21.87	COLD
DE145 - Alb-Donau-Kreis	23.73	COLD
DE146 - Biberach	18.09	COLD
DE147 - Bodenseekreis	37.07	COLD
DE148 - Ravensburg	12.54	COLD
DE149 - Sigmaringen	19.31	COLD
DE2 - Bayern	23.88	COLD
DE21 - Oberbayern	21.37	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE211 - Ingolstadt, Kreisfreie Stadt	27.62	COLD
DE212 - München, Kreisfreie Stadt	54.79	AVERAGE
DE213 - Rosenheim, Kreisfreie Stadt	26.01	COLD
DE214 - Altötting	23.63	COLD
DE215 - Berchtesgadener Land	23.34	COLD
DE216 - Bad Tölz-Wolfratshausen	13.13	COLD
DE217 - Dachau	22.70	COLD
DE218 - Ebersberg	33.73	COLD
DE219 - Eichstätt	31.15	COLD
DE21A - Erding	15.07	COLD
DE21B - Freising	15.08	COLD
DE21C - Fürstenfeldbruck	27.59	COLD
DE21D - Garmisch-Partenkirchen	6.31	COLD
DE21E - Landsberg am Lech	15.91	COLD
DE21F - Miesbach	15.46	COLD
DE21G - Mühldorf am Inn	16.22	COLD
DE21H - München, Landkreis	39.73	COLD
DE21I - Neuburg-Schrobenhausen	22.09	COLD
DE21J - Pfaffenhofen an der Ilm	19.83	COLD
DE21K - Rosenheim, Landkreis	24.71	COLD
DE21L - Starnberg	28.12	COLD
DE21M - Traunstein	21.44	COLD
DE21N - Weilheim-Schongau	13.35	COLD
DE22 - Niederbayern	23.98	COLD
DE221 - Landshut, Kreisfreie Stadt	13.00	COLD
DE222 - Passau, Kreisfreie Stadt	43.59	COLD
DE223 - Straubing, Kreisfreie Stadt	23.30	COLD
DE224 - Deggendorf	26.45	COLD
DE225 - Freyung-Grafenau	19.32	COLD
DE226 - Kelheim	26.52	COLD
DE227 - Landshut, Landkreis	15.36	COLD
DE228 - Passau, Landkreis	38.41	COLD
DE229 - Regen	10.50	COLD
DE22A - Rottal-Inn	28.79	COLD
DE22B - Straubing-Bogen	22.88	COLD
DE22C - Dingolfing-Landau	20.53	COLD
DE23 - Oberpfalz	23.91	COLD
DE231 - Amberg, Kreisfreie Stadt	27.66	COLD
DE232 - Regensburg, Kreisfreie Stadt	34.56	COLD
DE233 - Weiden in der Oberpfalz, Kreisfreie Stadt	20.50	COLD
DE234 - Amberg-Sulzbach	25.53	COLD
DE235 - Cham	18.89	COLD
DE236 - Neumarkt in der Oberpfalz	29.60	COLD
DE237 - Neustadt an der Waldnaab	21.11	COLD
DE238 - Regensburg, Landkreis	31.61	COLD
DE239 - Schwandorf	21.73	COLD
DE23A - Tirschenreuth	17.96	COLD
DE24 - Oberfranken	22.77	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE241 - Bamberg, Kreisfreie Stadt	19.88	COLD
DE242 - Bayreuth, Kreisfreie Stadt	24.91	COLD
DE243 - Coburg, Kreisfreie Stadt	24.07	COLD
DE244 - Hof, Kreisfreie Stadt	18.41	COLD
DE245 - Bamberg, Landkreis	24.38	COLD
DE246 - Bayreuth, Landkreis	23.51	COLD
DE247 - Coburg, Landkreis	24.65	COLD
DE248 - Forchheim	26.23	COLD
DE249 - Hof, Landkreis	17.02	COLD
DE24A - Kronach	24.35	COLD
DE24B - Kulmbach	22.73	COLD
DE24C - Lichtenfels	26.31	COLD
DE24D - Wunsiedel im Fichtelgebirge	16.75	COLD
DE25 - Mittelfranken	30.81	COLD
DE251 - Ansbach, Kreisfreie Stadt	28.06	COLD
DE252 - Erlangen, Kreisfreie Stadt	34.20	COLD
DE253 - Fürth, Kreisfreie Stadt	37.37	COLD
DE254 - Nürnberg, Kreisfreie Stadt	37.05	COLD
DE255 - Schwabach, Kreisfreie Stadt	31.32	COLD
DE256 - Ansbach, Landkreis	27.28	COLD
DE257 - Erlangen-Höchstadt	32.56	COLD
DE258 - Fürth, Landkreis	37.10	COLD
DE259 - Nürnberger Land	31.61	COLD
DE25A - Neustadt an der Aisch-Bad Windsheim	34.45	COLD
DE25B - Roth	31.15	COLD
DE25C - Weißenburg-Gunzenhausen	27.54	COLD
DE26 - Unterfranken	33.91	COLD
DE261 - Aschaffenburg, Kreisfreie Stadt	49.41	COLD
DE262 - Schweinfurt, Kreisfreie Stadt	31.20	COLD
DE263 - Würzburg, Kreisfreie Stadt	48.69	COLD
DE264 - Aschaffenburg, Landkreis	43.77	COLD
DE265 - Bad Kissingen	24.11	COLD
DE266 - Rhön-Grabfeld	23.75	COLD
DE267 - Haßberge	28.19	COLD
DE268 - Kitzingen	48.00	COLD
DE269 - Miltenberg	34.63	COLD
DE26A - Main-Spessart	31.96	COLD
DE26B - Schweinfurt, Landkreis	32.76	COLD
DE26C - Würzburg, Landkreis	45.69	COLD
DE27 - Schwaben	15.41	COLD
DE271 - Augsburg, Kreisfreie Stadt	13.11	COLD
DE272 - Kaufbeuren, Kreisfreie Stadt	9.21	COLD
DE273 - Kempten (Allgäu), Kreisfreie Stadt	6.55	COLD
DE274 - Memmingen, Kreisfreie Stadt	15.11	COLD
DE275 - Aichach-Friedberg	18.97	COLD
DE276 - Augsburg, Landkreis	16.98	COLD
DE277 - Dillingen an der Donau	23.24	COLD
DE278 - Günzburg	18.47	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE279 - Neu-Ulm	19.55	COLD
DE27A - Lindau (Bodensee)	14.51	COLD
DE27B - Ostallgäu	6.31	COLD
DE27C - Unterallgäu	15.90	COLD
DE27D - Donau-Ries	25.93	COLD
DE27E - Oberallgäu	5.60	COLD
DE3 - Berlin	56.42	AVERAGE
DE30 - Berlin	56.42	AVERAGE
DE300 - Berlin	56.42	AVERAGE
DE4 - Brandenburg	39.50	COLD
DE40 - Brandenburg	39.50	COLD
DE401 - Brandenburg an der Havel, Kreisfreie Stadt	33.97	COLD
DE402 - Cottbus, Kreisfreie Stadt	58.48	AVERAGE
DE403 - Frankfurt (Oder), Kreisfreie Stadt	41.68	COLD
DE404 - Potsdam, Kreisfreie Stadt	55.10	AVERAGE
DE405 - Barnim	39.02	COLD
DE406 - Dahme-Spreewald	48.57	COLD
DE407 - Elbe-Elster	39.15	COLD
DE408 - Havelland	39.20	COLD
DE409 - Märkisch-Oderland	41.20	COLD
DE40A - Oberhavel	35.98	COLD
DE40B - Oberspreewald-Lausitz	42.84	COLD
DE40C - Oder-Spree	51.68	AVERAGE
DE40D - Ostprignitz-Ruppin	27.90	COLD
DE40E - Potsdam-Mittelmark	48.76	COLD
DE40F - Prignitz	24.02	COLD
DE40G - Spree-Neiße	54.02	AVERAGE
DE40H - Teltow-Fläming	44.74	COLD
DE40I - Uckermark	23.46	COLD
DE5 - Bremen	20.44	COLD
DE50 - Bremen	20.44	COLD
DE501 - Bremen, Kreisfreie Stadt	20.33	COLD
DE502 - Bremerhaven, Kreisfreie Stadt	20.84	COLD
DE6 - Hamburg	18.32	COLD
DE60 - Hamburg	18.32	COLD
DE600 - Hamburg	18.32	COLD
DE7 - Hessen	27.59	COLD
DE71 - Darmstadt	42.17	COLD
DE711 - Darmstadt, Kreisfreie Stadt	58.97	AVERAGE
DE712 - Frankfurt am Main, Kreisfreie Stadt	54.85	AVERAGE
DE713 - Offenbach am Main, Kreisfreie Stadt	48.88	COLD
DE714 - Wiesbaden, Kreisfreie Stadt	29.36	COLD
DE715 - Bergstraße	58.39	AVERAGE
DE716 - Darmstadt-Dieburg	54.30	AVERAGE
DE717 - Groß-Gerau	66.46	AVERAGE
DE718 - Hochtaunuskreis	38.21	COLD
DE719 - Main-Kinzig-Kreis	31.42	COLD
DE71A - Main-Taunus-Kreis	60.23	AVERAGE

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE71B - Odenwaldkreis	38.92	COLD
DE71C - Offenbach, Landkreis	52.18	AVERAGE
DE71D - Rheingau-Taunus-Kreis	23.64	COLD
DE71E - Wetteraukreis	35.65	COLD
DE72 - Gießen	23.61	COLD
DE721 - Gießen, Landkreis	28.04	COLD
DE722 - Lahn-Dill-Kreis	24.73	COLD
DE723 - Limburg-Weilburg	29.79	COLD
DE724 - Marburg-Biedenkopf	20.66	COLD
DE725 - Vogelsbergkreis	19.60	COLD
DE73 - Kassel	17.08	COLD
DE731 - Kassel, Kreisfreie Stadt	19.90	COLD
DE732 - Fulda	17.63	COLD
DE733 - Hersfeld-Rotenburg	17.24	COLD
DE734 - Kassel, Landkreis	16.29	COLD
DE735 - Schwalm-Eder-Kreis	17.96	COLD
DE736 - Waldeck-Frankenberg	15.23	COLD
DE737 - Werra-Meißner-Kreis	18.89	COLD
DE8 - Mecklenburg-Vorpommern	17.32	COLD
DE80 - Mecklenburg-Vorpommern	17.32	COLD
DE803 - Rostock, Kreisfreie Stadt	18.14	COLD
DE804 - Schwerin, Kreisfreie Stadt	25.96	COLD
DE80J - Mecklenburgische Seenplatte	20.42	COLD
DE80K - Landkreis Rostock	15.43	COLD
DE80L - Vorpommern-Rügen	7.81	COLD
DE80M - Nordwestmecklenburg	15.58	COLD
DE80N - Vorpommern-Greifswald	15.92	COLD
DE80O - Ludwigslust-Parchim	23.05	COLD
DE9 - Niedersachsen	20.54	COLD
DE91 - Braunschweig	21.42	COLD
DE911 - Braunschweig, Kreisfreie Stadt	26.64	COLD
DE912 - Salzgitter, Kreisfreie Stadt	25.20	COLD
DE913 - Wolfsburg, Kreisfreie Stadt	26.66	COLD
DE914 - Gifhorn	24.50	COLD
DE916 - Goslar	18.23	COLD
DE917 - Helmstedt	27.93	COLD
DE918 - Northeim	16.63	COLD
DE91A - Peine	28.46	COLD
DE91B - Wolfenbüttel	26.05	COLD
DE91C - Göttingen	15.65	COLD
DE92 - Hannover	25.37	COLD
DE922 - Diepholz	21.37	COLD
DE923 - Hameln-Pyrmont	24.00	COLD
DE925 - Hildesheim	23.03	COLD
DE926 - Holzminden	18.88	COLD
DE927 - Nienburg (Weser)	26.50	COLD
DE928 - Schaumburg	30.47	COLD
DE929 - Region Hannover	30.30	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DE93 - Lüneburg	19.29	COLD
DE931 - Celle	25.73	COLD
DE932 - Cuxhaven	16.05	COLD
DE933 - Harburg	19.76	COLD
DE934 - Lüchow-Dannenberg	20.73	COLD
DE935 - Lüneburg, Landkreis	23.76	COLD
DE936 - Osterholz	17.23	COLD
DE937 - Rotenburg (Wümme)	15.79	COLD
DE938 - Heidekreis	20.02	COLD
DE939 - Stade	15.43	COLD
DE93A - Uelzen	19.30	COLD
DE93B - Verden	20.14	COLD
DE94 - Weser-Ems	18.45	COLD
DE941 - Delmenhorst, Kreisfreie Stadt	20.65	COLD
DE942 - Emden, Kreisfreie Stadt	10.27	COLD
DE943 - Oldenburg (Oldenburg), Kreisfreie Stadt	15.59	COLD
DE944 - Osnabrück, Kreisfreie Stadt	26.69	COLD
DE945 - Wilhelmshaven, Kreisfreie Stadt	14.67	COLD
DE946 - Ammerland	15.37	COLD
DE947 - Aurich	11.53	COLD
DE948 - Cloppenburg	15.59	COLD
DE949 - Emsland	21.20	COLD
DE94A - Friesland (DE)	14.30	COLD
DE94B - Grafschaft Bentheim	21.16	COLD
DE94C - Leer	12.78	COLD
DE94D - Oldenburg, Landkreis	16.28	COLD
DE94E - Osnabrück, Landkreis	26.36	COLD
DE94F - Vechta	20.75	COLD
DE94G - Wesermarsch	19.28	COLD
DE94H - Wittmund	13.60	COLD
DEA - Nordrhein-Westfalen	28.56	COLD
DEA1 - Düsseldorf	33.93	COLD
DEA11 - Düsseldorf, Kreisfreie Stadt	38.10	COLD
DEA12 - Duisburg, Kreisfreie Stadt	34.96	COLD
DEA13 - Essen, Kreisfreie Stadt	39.45	COLD
DEA14 - Krefeld, Kreisfreie Stadt	35.59	COLD
DEA15 - Mönchengladbach, Kreisfreie Stadt	33.99	COLD
DEA16 - Mülheim an der Ruhr, Kreisfreie Stadt	39.23	COLD
DEA17 - Oberhausen, Kreisfreie Stadt	38.58	COLD
DEA18 - Remscheid, Kreisfreie Stadt	31.81	COLD
DEA19 - Solingen, Kreisfreie Stadt	41.02	COLD
DEA1A - Wuppertal, Kreisfreie Stadt	36.04	COLD
DEA1B - Kleve	29.32	COLD
DEA1C - Mettmann	40.46	COLD
DEA1D - Rhein-Kreis Neuss	36.26	COLD
DEA1E - Viersen	32.78	COLD
DEA1F - Wesel	32.09	COLD
DEA2 - Köln	30.77	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DEA22 - Bonn, Kreisfreie Stadt	36.11	COLD
DEA23 - Köln, Kreisfreie Stadt	38.09	COLD
DEA24 - Leverkusen, Kreisfreie Stadt	38.40	COLD
DEA26 - Düren	32.59	COLD
DEA27 - Rhein-Erft-Kreis	35.01	COLD
DEA28 - Euskirchen	23.50	COLD
DEA29 - Heinsberg	34.22	COLD
DEA2A - Oberbergischer Kreis	26.05	COLD
DEA2B - Rheinisch-Bergischer Kreis	33.44	COLD
DEA2C - Rhein-Sieg-Kreis	33.44	COLD
DEA2D - Städteregion Aachen	27.85	COLD
DEA3 - Münster	28.39	COLD
DEA31 - Bottrop, Kreisfreie Stadt	34.84	COLD
DEA32 - Gelsenkirchen, Kreisfreie Stadt	36.69	COLD
DEA33 - Münster, Kreisfreie Stadt	29.39	COLD
DEA34 - Borken	22.44	COLD
DEA35 - Coesfeld	28.06	COLD
DEA36 - Recklinghausen	32.12	COLD
DEA37 - Steinfurt	28.92	COLD
DEA38 - Warendorf	30.84	COLD
DEA4 - Detmold	26.88	COLD
DEA41 - Bielefeld, Kreisfreie Stadt	31.57	COLD
DEA42 - Gütersloh	31.75	COLD
DEA43 - Herford	30.10	COLD
DEA44 - Höxter	16.30	COLD
DEA45 - Lippe	29.38	COLD
DEA46 - Minden-Lübbecke	29.12	COLD
DEA47 - Paderborn	26.52	COLD
DEA5 - Arnsberg	24.49	COLD
DEA51 - Bochum, Kreisfreie Stadt	36.58	COLD
DEA52 - Dortmund, Kreisfreie Stadt	34.47	COLD
DEA53 - Hagen, Kreisfreie Stadt	29.79	COLD
DEA54 - Hamm, Kreisfreie Stadt	31.39	COLD
DEA55 - Herne, Kreisfreie Stadt	36.68	COLD
DEA56 - Ennepe-Ruhr-Kreis	31.98	COLD
DEA57 - Hochsauerlandkreis	18.26	COLD
DEA58 - Märkischer Kreis	24.64	COLD
DEA59 - Olpe	20.45	COLD
DEA5A - Siegen-Wittgenstein	20.26	COLD
DEA5B - Soest	28.31	COLD
DEA5C - Unna	31.75	COLD
DEB - Rheinland-Pfalz	32.63	COLD
DEB1 - Koblenz	25.05	COLD
DEB11 - Koblenz, Kreisfreie Stadt	29.34	COLD
DEB12 - Ahrweiler	26.59	COLD
DEB13 - Altenkirchen (Westerwald)	25.51	COLD
DEB14 - Bad Kreuznach	31.05	COLD
DEB15 - Birkenfeld	22.72	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DEB17 - Mayen-Koblenz	28.23	COLD
DEB18 - Neuwied	27.23	COLD
DEB1A - Rhein-Lahn-Kreis	24.58	COLD
DEB1B - Westerwaldkreis	22.29	COLD
DEB1C - Cochem-Zell	21.40	COLD
DEB1D - Rhein-Hunsrück-Kreis	21.33	COLD
DEB2 - Trier	28.43	COLD
DEB21 - Trier, Kreisfreie Stadt	38.29	COLD
DEB22 - Bernkastel-Wittlich	26.19	COLD
DEB23 - Eifelkreis Bitburg-Prüm	27.51	COLD
DEB24 - Vulkaneifel	19.76	COLD
DEB25 - Trier-Saarburg	38.30	COLD
DEB3 - Rheinhessen-Pfalz	44.58	COLD
DEB31 - Frankenthal (Pfalz), Kreisfreie Stadt	73.80	AVERAGE
DEB32 - Kaiserslautern, Kreisfreie Stadt	22.45	COLD
DEB33 - Landau in der Pfalz, Kreisfreie Stadt	54.70	AVERAGE
DEB34 - Ludwigshafen am Rhein, Kreisfreie Stadt	74.80	AVERAGE
DEB35 - Mainz, Kreisfreie Stadt	54.95	AVERAGE
DEB36 - Neustadt an der Weinstraße, Kreisfreie Stadt	65.28	AVERAGE
DEB37 - Pirmasens, Kreisfreie Stadt	31.99	COLD
DEB38 - Speyer, Kreisfreie Stadt	71.61	AVERAGE
DEB39 - Worms, Kreisfreie Stadt	56.80	AVERAGE
DEB3A - Zweibrücken, Kreisfreie Stadt	32.34	COLD
DEB3B - Alzey-Worms	48.16	COLD
DEB3C - Bad Dürkheim	57.67	AVERAGE
DEB3D - Donnersbergkreis	30.37	COLD
DEB3E - Germersheim	66.88	AVERAGE
DEB3F - Kaiserslautern, Landkreis	22.98	COLD
DEB3G - Kusel	21.50	COLD
DEB3H - Südliche Weinstraße	55.95	AVERAGE
DEB3I - Rhein-Pfalz-Kreis	70.57	AVERAGE
DEB3J - Mainz-Bingen	50.38	AVERAGE
DEB3K - Südwestpfalz	35.83	COLD
DEC - Saarland	38.28	COLD
DEC0 - Saarland	38.28	COLD
DEC01 - Regionalverband Saarbrücken	38.99	COLD
DEC02 - Merzig-Wadern	43.49	COLD
DEC03 - Neunkirchen	33.77	COLD
DEC04 - Saarlouis	44.00	COLD
DEC05 - Saarpfalz-Kreis	34.49	COLD
DEC06 - St. Wendel	31.77	COLD
DED - Sachsen	36.29	COLD
DED2 - Dresden	39.97	COLD
DED21 - Dresden, Kreisfreie Stadt	44.12	COLD
DED2C - Bautzen	42.91	COLD
DED2D - Görlitz	37.42	COLD
DED2E - Meißen	45.51	COLD
DED2F - Sächsische Schweiz-Osterzgebirge	33.26	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DED4 - Chemnitz	27.03	COLD
DED41 - Chemnitz, Kreisfreie Stadt	34.65	COLD
DED42 - Erzgebirgskreis	21.92	COLD
DED43 - Mittelsachsen	33.45	COLD
DED44 - Vogtlandkreis	21.26	COLD
DED45 - Zwickau	29.30	COLD
DED5 - Leipzig	44.10	COLD
DED51 - Leipzig, Kreisfreie Stadt	45.28	COLD
DED52 - Leipzig	41.80	COLD
DED53 - Nordsachsen	45.81	COLD
DEE - Sachsen-Anhalt	36.47	COLD
DEE0 - Sachsen-Anhalt	36.47	COLD
DEE01 - Dessau-Roßlau, Kreisfreie Stadt	49.04	COLD
DEE02 - Halle (Saale), Kreisfreie Stadt	45.00	COLD
DEE03 - Magdeburg, Kreisfreie Stadt	44.49	COLD
DEE04 - Altmarkkreis Salzwedel	24.22	COLD
DEE05 - Anhalt-Bitterfeld	48.72	COLD
DEE06 - Jerichower Land	37.45	COLD
DEE07 - Börde	31.28	COLD
DEE08 - Burgenlandkreis (DE)	41.62	COLD
DEE09 - Harz	28.47	COLD
DEE0A - Mansfeld-Südharz	35.76	COLD
DEE0B - Saalekreis	42.66	COLD
DEE0C - Salzlandkreis	41.94	COLD
DEE0D - Stendal	29.36	COLD
DEE0E - Wittenberg	50.11	AVERAGE
DEF - Schleswig-Holstein	8.67	COLD
DEF0 - Schleswig-Holstein	8.67	COLD
DEF01 - Flensburg, Kreisfreie Stadt	4.22	COLD
DEF02 - Kiel, Kreisfreie Stadt	8.93	COLD
DEF03 - Lübeck, Kreisfreie Stadt	9.23	COLD
DEF04 - Neumünster, Kreisfreie Stadt	8.39	COLD
DEF05 - Dithmarschen	8.36	COLD
DEF06 - Herzogtum Lauenburg	20.23	COLD
DEF07 - Nordfriesland	4.29	COLD
DEF08 - Ostholstein	5.54	COLD
DEF09 - Pinneberg	12.44	COLD
DEF0A - Plön	6.85	COLD
DEF0B - Rendsburg-Eckernförde	7.54	COLD
DEF0C - Schleswig-Flensburg	5.24	COLD
DEF0D - Segeberg	8.87	COLD
DEF0E - Steinburg	11.97	COLD
DEF0F - Stormarn	14.51	COLD
DEG - Thüringen	26.82	COLD
DEG0 - Thüringen	26.82	COLD
DEG01 - Erfurt, Kreisfreie Stadt	35.07	COLD
DEG02 - Gera, Kreisfreie Stadt	31.61	COLD
DEG03 - Jena, Kreisfreie Stadt	35.95	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
DEG04 - Suhl, Kreisfreie Stadt	21.04	COLD
DEG05 - Weimar, Kreisfreie Stadt	35.08	COLD
DEG06 - Eichsfeld	22.23	COLD
DEG07 - Nordhausen	24.91	COLD
DEG09 - Unstrut-Hainich-Kreis	25.73	COLD
DEG0A - Kyffhäuserkreis	33.52	COLD
DEG0B - Schmalkalden-Meiningen	22.77	COLD
DEG0C - Gotha	26.06	COLD
DEG0D - Sömmerda	37.36	COLD
DEG0E - Hildburghausen	24.22	COLD
DEG0F - Ilm-Kreis	23.19	COLD
DEG0G - Weimarer Land	29.52	COLD
DEG0H - Sonneberg	24.13	COLD
DEG0I - Saalfeld-Rudolstadt	22.12	COLD
DEG0J - Saale-Holzland-Kreis	34.81	COLD
DEG0K - Saale-Orla-Kreis	24.54	COLD
DEG0L - Greiz	26.39	COLD
DEG0M - Altenburger Land	37.60	COLD
DEG0N - Eisenach, Kreisfreie Stadt	21.94	COLD
DEG0P - Wartburgkreis	21.41	COLD
EE - Estonia	10.50	COLD
EE0 - Eesti	10.50	COLD
EE00 - Eesti	10.50	COLD
EE001 - Põhja-Eesti	9.54	COLD
EE004 - Lääne-Eesti	10.22	COLD
EE006 - Kesk-Eesti (NUTS 2016)	8.97	COLD
EE007 - Kirde-Eesti (NUTS 2016)	10.82	COLD
EE008 - Lõuna-Eesti	11.67	COLD
IE - Ireland	0.00	COLD
IE0 - Éire/Ireland	0.00	COLD
IE04 - Northern and Western	0.00	COLD
IE041 - Border	0.00	COLD
IE042 - West	0.00	COLD
IE05 - Southern	0.00	COLD
IE051 - Mid-West	0.00	COLD
IE052 - South-East (IE)	0.00	COLD
IE053 - South-West (IE)	0.00	COLD
IE06 - Eastern and Midland	0.00	COLD
IE061 - Dublin	0.00	COLD
IE062 - Mid-East	0.00	COLD
IE063 - Midland	0.00	COLD
EL - Greece	344.26	WARM
EL3 - Attiki	559.81	WARM
EL30 - Attiki	559.81	WARM
EL301 - Voreios Tomeas Athinon	488.93	WARM
EL302 - Dytikos Tomeas Athinon	612.58	WARM
EL303 - Kentrikos Tomeas Athinon	526.36	WARM
EL304 - Notios Tomeas Athinon	540.55	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
EL305 - Anatoliki Attiki	535.17	WARM
EL306 - Dytiki Attiki	520.03	WARM
EL307 - Peiraias, Nisoi	653.29	WARM
EL4 - Nisia Aigaiou, Kriti	469.05	WARM
EL41 - Voreio Aigaio	470.81	WARM
EL411 - Lesvos, Limnos	478.84	WARM
EL412 - Ikaria, Samos	516.80	WARM
EL413 - Chios	412.11	WARM
EL42 - Notio Aigaio	566.99	WARM
EL421 - Kalymnos, Karpathos, Kasos, Kos, Rodos	633.60	WARM
EL422 - Andros, Thira, Kea, Milos, Mykonos, Naxos, Paros, Syros, Tinos	497.87	WARM
EL43 - Kriti	405.83	WARM
EL431 - Irakleio	378.11	WARM
EL432 - Lasithi	361.03	WARM
EL433 - Rethymni	413.25	WARM
EL434 - Chania	466.25	WARM
EL5 - Voreia Ellada	292.77	WARM
EL51 - Anatoliki Makedonia, Thraki	285.70	WARM
EL511 - Evros	367.99	WARM
EL512 - Xanthi	254.94	WARM
EL513 - Rodopi	281.01	WARM
EL514 - Drama	176.54	WARM
EL515 - Thasos, Kavala	331.00	WARM
EL52 - Kentriki Makedonia	400.62	WARM
EL521 - Imathia	379.23	WARM
EL522 - Thessaloniki	425.98	WARM
EL523 - Kilkis	435.49	WARM
EL524 - Pella	328.89	WARM
EL525 - Pieria	407.38	WARM
EL526 - Serres	439.81	WARM
EL527 - Chalkidiki	355.89	WARM
EL53 - Dytiki Makedonia	129.33	WARM
EL531 - Grevena, Kozani	166.86	WARM
EL532 - Kastoria	59.42	AVERAGE
EL533 - Florina	78.57	AVERAGE
EL54 - Ipeiros	250.65	WARM
EL541 - Arta, Preveza	340.54	WARM
EL542 - Thesprotia	343.89	WARM
EL543 - Ioannina	174.82	WARM
EL6 - Kentriki Ellada	338.34	WARM
EL61 - Thessalia	341.74	WARM
EL611 - Karditsa, Trikala	314.38	WARM
EL612 - Larisa	347.31	WARM
EL613 - Magnisia	392.78	WARM
EL62 - Ionia Nisia	410.36	WARM
EL621 - Zakynthos	392.25	WARM
EL622 - Kerkyra	492.52	WARM
EL623 - Ithaki, Kefallinia	373.53	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
EL624 - Lefkada	376.99	WARM
EL63 - Dytiki Ellada	296.17	WARM
EL631 - Aitoloakarnania	338.63	WARM
EL632 - Achaia	205.61	WARM
EL633 - Ileia	321.52	WARM
EL64 - Sterea Ellada	356.31	WARM
EL641 - Voiotia	496.28	WARM
EL642 - Evvoia	474.49	WARM
EL643 - Evrytania	125.05	WARM
EL644 - Fthiotida	298.73	WARM
EL645 - Fokida	254.12	WARM
EL65 - Peloponnisos	337.33	WARM
EL651 - Argolida, Arkadia	284.74	WARM
EL652 - Korinthia	404.42	WARM
EL653 - Lakonia, Messinia	366.22	WARM
ES - Spain	248.21	WARM
ES1 - Noroeste (ES)	20.06	COLD
ES11 - Galicia	27.38	COLD
ES111 - A Coruña	16.11	COLD
ES112 - Lugo	14.91	COLD
ES113 - Ourense	50.13	AVERAGE
ES114 - Pontevedra	37.82	COLD
ES12 - Principado de Asturias	4.29	COLD
ES120 - Asturias	4.29	COLD
ES13 - Cantabria	10.83	COLD
ES130 - Cantabria	10.83	COLD
ES2 - Noreste (ES)	148.35	WARM
ES21 - País Vasco	38.68	COLD
ES211 - Araba/Álava	43.45	COLD
ES212 - Gipuzkoa	35.35	COLD
ES213 - Bizkaia	35.12	COLD
ES22 - Comunidad Foral de Navarra	113.00	WARM
ES220 - Navarra	113.00	WARM
ES23 - La Rioja	75.91	AVERAGE
ES230 - La Rioja	75.91	AVERAGE
ES24 - Aragón	180.34	WARM
ES241 - Huesca	188.48	WARM
ES242 - Teruel	99.16	AVERAGE
ES243 - Zaragoza	242.54	WARM
ES3 - Comunidad de Madrid	343.39	WARM
ES30 - Comunidad de Madrid	343.39	WARM
ES300 - Madrid	343.39	WARM
ES4 - Centro (ES)	240.41	WARM
ES41 - Castilla y León	65.32	AVERAGE
ES411 - Ávila	191.24	WARM
ES412 - Burgos	23.29	COLD
ES413 - León	22.20	COLD
ES414 - Palencia	22.04	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ES415 - Salamanca	110.76	WARM
ES416 - Segovia	86.96	AVERAGE
ES417 - Soria	42.01	COLD
ES418 - Valladolid	75.88	AVERAGE
ES419 - Zamora	70.10	AVERAGE
ES42 - Castilla-la Mancha	320.93	WARM
ES421 - Albacete	280.01	WARM
ES422 - Ciudad Real	452.22	WARM
ES423 - Cuenca	236.47	WARM
ES424 - Guadalajara	91.95	AVERAGE
ES425 - Toledo	467.48	WARM
ES43 - Extremadura	483.02	WARM
ES431 - Badajoz	456.58	WARM
ES432 - Cáceres	511.97	WARM
ES5 - Este (ES)	254.79	WARM
ES51 - Cataluña	186.75	WARM
ES511 - Barcelona	148.14	WARM
ES512 - Girona	173.31	WARM
ES513 - Lleida	155.18	WARM
ES514 - Tarragona	307.68	WARM
ES52 - Comunitat Valenciana	321.03	WARM
ES521 - Alicante/Alacant	413.86	WARM
ES522 - Castellón/Castelló	232.50	WARM
ES523 - Valencia/València	325.46	WARM
ES53 - Illes Balears	384.04	WARM
ES531 - Eivissa, Formentera	407.70	WARM
ES532 - Mallorca	386.75	WARM
ES533 - Menorca	347.47	WARM
ES6 - Sur (ES)	436.09	WARM
ES61 - Andalucía	437.19	WARM
ES611 - Almería	348.98	WARM
ES612 - Cádiz	352.24	WARM
ES613 - Córdoba	542.52	WARM
ES614 - Granada	266.67	WARM
ES615 - Huelva	386.37	WARM
ES616 - Jaén	529.21	WARM
ES617 - Málaga	376.60	WARM
ES618 - Sevilla	567.38	WARM
ES62 - Región de Murcia	428.09	WARM
ES620 - Murcia	428.09	WARM
ES63 - Ciudad de Ceuta	256.03	WARM
ES630 - Ceuta	256.03	WARM
ES64 - Ciudad de Melilla	278.49	WARM
ES640 - Melilla	278.49	WARM
ES7 - Canarias	153.85	WARM
ES70 - Canarias	153.85	WARM
ES704 - Fuerteventura	270.47	WARM
ES705 - Gran Canaria	120.34	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ES706 - La Gomera	90.49	AVERAGE
ES707 - La Palma	28.64	COLD
ES708 - Lanzarote	195.02	WARM
ES709 - Tenerife	113.95	WARM
FR - France	52.28	AVERAGE
FR1 - Île de France	35.69	COLD
FR10 - Île de France	35.69	COLD
FR101 - Paris	62.99	AVERAGE
FR102 - Seine-et-Marne	34.21	COLD
FR103 - Yvelines	32.71	COLD
FR104 - Essonne	37.82	COLD
FR105 - Hauts-de-Seine	53.15	AVERAGE
FR106 - Seine-Saint-Denis	47.49	COLD
FR107 - Val-de-Marne	64.28	AVERAGE
FR108 - Val-d'Oise	32.58	COLD
FRB - Centre - Val de Loire	40.76	COLD
FRB0 - Centre - Val de Loire	40.76	COLD
FRB01 - Cher	51.50	AVERAGE
FRB02 - Eure-et-Loir	28.97	COLD
FRB03 - Indre	45.66	COLD
FRB04 - Indre-et-Loire	43.26	COLD
FRB05 - Loir-et-Cher	37.27	COLD
FRB06 - Loiret	35.59	COLD
FRC - Bourgogne - Franche-Comté	43.60	COLD
FRC1 - Bourgogne	46.51	COLD
FRC11 - Côte-d'Or	44.08	COLD
FRC12 - Nièvre	41.74	COLD
FRC13 - Saône-et-Loire	54.90	AVERAGE
FRC14 - Yonne	44.09	COLD
FRC2 - Franche-Comté	37.94	COLD
FRC21 - Doubs	28.66	COLD
FRC22 - Jura	38.58	COLD
FRC23 - Haute-Saône	45.30	COLD
FRC24 - Territoire de Belfort	47.45	COLD
FRD - Normandie	10.65	COLD
FRD1 - Basse-Normandie	8.65	COLD
FRD11 - Calvados	7.35	COLD
FRD12 - Manche	4.76	COLD
FRD13 - Orne	13.63	COLD
FRD2 - Haute-Normandie	13.54	COLD
FRD21 - Eure	16.11	COLD
FRD22 - Seine-Maritime	11.09	COLD
FRE - Hauts-de-France	17.12	COLD
FRE1 - Nord-Pas-de-Calais	14.40	COLD
FRE11 - Nord	18.39	COLD
FRE12 - Pas-de-Calais	10.96	COLD
FRE2 - Picardie	18.86	COLD
FRE21 - Aisne	22.62	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
FRE22 - Oise	19.77	COLD
FRE23 - Somme	13.51	COLD
FRF - Grand Est	37.53	COLD
FRF1 - Alsace	52.52	AVERAGE
FRF11 - Bas-Rhin	53.95	AVERAGE
FRF12 - Haut-Rhin	50.58	AVERAGE
FRF2 - Champagne-Ardenne	34.51	COLD
FRF21 - Ardennes	20.12	COLD
FRF22 - Aube	45.20	COLD
FRF23 - Marne	33.52	COLD
FRF24 - Haute-Marne	37.54	COLD
FRF3 - Lorraine	35.53	COLD
FRF31 - Meurthe-et-Moselle	36.13	COLD
FRF32 - Meuse	33.29	COLD
FRF33 - Moselle	38.01	COLD
FRF34 - Vosges	34.71	COLD
FRG - Pays-de-la-Loire	30.58	COLD
FRG0 - Pays-de-la-Loire	30.58	COLD
FRG01 - Loire-Atlantique	24.99	COLD
FRG02 - Maine-et-Loire	34.86	COLD
FRG03 - Mayenne	21.30	COLD
FRG04 - Sarthe	34.22	COLD
FRG05 - Vendée	35.49	COLD
FRH - Bretagne	6.56	COLD
FRH0 - Bretagne	6.56	COLD
FRH01 - Côtes-d'Armor	2.70	COLD
FRH02 - Finistère	1.92	COLD
FRH03 - Ille-et-Vilaine	14.20	COLD
FRH04 - Morbihan	7.42	COLD
FRI - Nouvelle-Aquitaine	57.41	AVERAGE
FRI1 - Aquitaine	67.87	AVERAGE
FRI11 - Dordogne	67.23	AVERAGE
FRI12 - Gironde	71.57	AVERAGE
FRI13 - Landes	69.44	AVERAGE
FRI14 - Lot-et-Garonne	90.92	AVERAGE
FRI15 - Pyrénées-Atlantiques	45.69	COLD
FRI2 - Limousin	44.76	COLD
FRI21 - Corrèze	51.94	AVERAGE
FRI22 - Creuse	38.50	COLD
FRI23 - Haute-Vienne	43.44	COLD
FRI3 - Poitou-Charentes	48.92	COLD
FRI31 - Charente	53.74	AVERAGE
FRI32 - Charente-Maritime	51.59	AVERAGE
FRI33 - Deux-Sèvres	43.74	COLD
FRI34 - Vienne	46.67	COLD
FRJ - Occitanie	94.92	AVERAGE
FRJ1 - Languedoc-Roussillon	137.16	WARM
FRJ11 - Aude	138.20	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
FRJ12 - Gard	216.18	WARM
FRJ13 - Hérault	164.39	WARM
FRJ14 - Lozère	28.40	COLD
FRJ15 - Pyrénées-Orientales	118.41	WARM
FRJ2 - Midi-Pyrénées	69.20	AVERAGE
FRJ21 - Ariège	34.20	COLD
FRJ22 - Aveyron	41.41	COLD
FRJ23 - Haute-Garonne	80.94	AVERAGE
FRJ24 - Gers	87.63	AVERAGE
FRJ25 - Lot	98.76	AVERAGE
FRJ26 - Hautes-Pyrénées	28.54	COLD
FRJ27 - Tarn	86.64	AVERAGE
FRJ28 - Tarn-et-Garonne	110.28	WARM
FRK - Auvergne - Rhône-Alpes	54.22	AVERAGE
FRK1 - Auvergne	36.40	COLD
FRK11 - Allier	53.97	AVERAGE
FRK12 - Cantal	21.27	COLD
FRK13 - Haute-Loire	19.45	COLD
FRK14 - Puy-de-Dôme	41.69	COLD
FRK2 - Rhône-Alpes	64.59	AVERAGE
FRK21 - Ain	76.44	AVERAGE
FRK22 - Ardèche	104.28	WARM
FRK23 - Drôme	88.01	AVERAGE
FRK24 - Isère	53.90	AVERAGE
FRK25 - Loire	60.23	AVERAGE
FRK26 - Rhône	99.37	AVERAGE
FRK27 - Savoie	23.56	COLD
FRK28 - Haute-Savoie	24.52	COLD
FRL - Provence-Alpes-Côte d'Azur	103.88	WARM
FRL0 - Provence-Alpes-Côte d'Azur	103.88	WARM
FRL01 - Alpes-de-Haute-Provence	38.80	COLD
FRL02 - Hautes-Alpes	8.62	COLD
FRL03 - Alpes-Maritimes	58.16	AVERAGE
FRL04 - Bouches-du-Rhône	216.23	WARM
FRL05 - Var	165.35	WARM
FRL06 - Vaucluse	169.04	WARM
FRM - Corse	156.83	WARM
FRM0 - Corse	156.83	WARM
FRM01 - Corse-du-Sud	144.36	WARM
FRM02 - Haute-Corse	167.50	WARM
HR - Croatia	162.63	WARM
HR0 - Hrvatska	162.63	WARM
HR03 - Jadranska Hrvatska	209.15	WARM
HR031 - Primorsko-goranska zupanija	134.04	WARM
HR032 - Licko-senjska zupanija	54.39	AVERAGE
HR033 - Zadarska zupanija	225.56	WARM
HR034 - Sibensko-kninska zupanija	286.11	WARM
HR035 - Splitsko-dalmatinska zupanija	329.46	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
HR036 - Istarska zupanija	193.33	WARM
HR037 - Dubrovacko-neretvanska zupanija	382.32	WARM
HR04 - Kontinentalna Hrvatska (NUTS 2016)	126.52	WARM
HR041 - Grad Zagreb (NUTS 2016)	141.02	WARM
HR042 - Zagrebacka zupanija (NUTS 2016)	126.31	WARM
HR043 - Krapinsko-zagorska zupanija (NUTS 2016)	111.72	WARM
HR044 - Varazdinska zupanija (NUTS 2016)	87.53	AVERAGE
HR045 - Koprivnicko-krizevacka zupanija (NUTS 2016)	111.56	WARM
HR046 - Medimurska zupanija (NUTS 2016)	83.64	AVERAGE
HR047 - Bjelovarsko-bilogorska zupanija (NUTS 2016)	134.34	WARM
HR048 - Viroviticko-podravska zupanija (NUTS 2016)	130.53	WARM
HR049 - Pozesko-slavonska zupanija (NUTS 2016)	127.60	WARM
HR04A - Brodsko-posavska zupanija (NUTS 2016)	140.18	WARM
HR04B - Osjecko-baranjska zupanija (NUTS 2016)	147.69	WARM
HR04C - Vukovarsko-srijemska zupanija (NUTS 2016)	170.04	WARM
HR04D - Karlovacka zupanija (NUTS 2016)	83.37	AVERAGE
HR04E - Sisacko-moslavacka zupanija (NUTS 2016)	130.99	WARM
IT - Italy	243.53	WARM
ITC - Nord-Ovest	149.09	WARM
ITC1 - Piemonte	134.66	WARM
ITC11 - Torino	108.01	WARM
ITC12 - Vercelli	135.57	WARM
ITC13 - Biella	111.26	WARM
ITC14 - Verbano-Cusio-Ossola	26.25	COLD
ITC15 - Novara	181.87	WARM
ITC16 - Cuneo	133.47	WARM
ITC17 - Asti	201.12	WARM
ITC18 - Alessandria	216.54	WARM
ITC2 - Valle d'Aosta/Vallée d'Aoste	1.96	COLD
ITC20 - Valle d'Aosta/Vallée d'Aoste	1.96	COLD
ITC3 - Liguria	142.97	WARM
ITC31 - Imperia	139.43	WARM
ITC32 - Savona	229.29	WARM
ITC33 - Genova	84.33	AVERAGE
ITC34 - La Spezia	117.94	WARM
ITC4 - Lombardia	185.91	WARM
ITC41 - Varese	130.19	WARM
ITC42 - Como	84.32	AVERAGE
ITC43 - Lecco	82.73	AVERAGE
ITC44 - Sondrio	1.06	COLD
ITC46 - Bergamo	123.26	WARM
ITC47 - Brescia	186.68	WARM
ITC48 - Pavia	269.50	WARM
ITC49 - Lodi	312.71	WARM
ITC4A - Cremona	315.05	WARM
ITC4B - Mantova	309.31	WARM
ITC4C - Milano	281.48	WARM
ITC4D - Monza e della Brianza	244.55	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ITH - Nord-Est	179.92	WARM
ITH1 - Provincia Autonoma di Bolzano/Bozen	5.70	COLD
ITH10 - Bolzano-Bozen	5.70	COLD
ITH2 - Provincia Autonoma di Trento	33.36	COLD
ITH20 - Trento	33.36	COLD
ITH3 - Veneto	230.58	WARM
ITH31 - Verona	297.47	WARM
ITH32 - Vicenza	212.74	WARM
ITH33 - Belluno	47.86	COLD
ITH34 - Treviso	289.28	WARM
ITH35 - Venezia	254.65	WARM
ITH36 - Padova	326.64	WARM
ITH37 - Rovigo	300.10	WARM
ITH4 - Friuli-Venezia Giulia	141.51	WARM
ITH41 - Pordenone	169.74	WARM
ITH42 - Udine	121.23	WARM
ITH43 - Gorizia	205.11	WARM
ITH44 - Trieste	179.33	WARM
ITH5 - Emilia-Romagna	250.96	WARM
ITH51 - Piacenza	217.12	WARM
ITH52 - Parma	222.78	WARM
ITH53 - Reggio nell'Emilia	257.44	WARM
ITH54 - Modena	253.24	WARM
ITH55 - Bologna	283.99	WARM
ITH56 - Ferrara	291.38	WARM
ITH57 - Ravenna	264.68	WARM
ITH58 - Forlì-Cesena	219.26	WARM
ITH59 - Rimini	233.85	WARM
ITI - Centro (IT)	222.85	WARM
ITI1 - Toscana	211.88	WARM
ITI11 - Massa-Carrara	116.84	WARM
ITI12 - Lucca	134.23	WARM
ITI13 - Pistoia	190.06	WARM
ITI14 - Firenze	266.61	WARM
ITI15 - Prato	240.97	WARM
ITI16 - Livorno	246.75	WARM
ITI17 - Pisa	222.02	WARM
ITI18 - Arezzo	173.78	WARM
ITI19 - Siena	188.64	WARM
ITI1A - Grosseto	258.54	WARM
ITI2 - Umbria	174.81	WARM
ITI21 - Perugia	168.48	WARM
ITI22 - Terni	193.65	WARM
ITI3 - Marche	230.59	WARM
ITI31 - Pesaro e Urbino	246.82	WARM
ITI32 - Ancona	234.82	WARM
ITI33 - Macerata	214.51	WARM
ITI34 - Ascoli Piceno	229.42	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ITI35 - Fermo	226.14	WARM
ITI4 - Lazio	256.92	WARM
ITI41 - Viterbo	236.51	WARM
ITI42 - Rieti	148.65	WARM
ITI43 - Roma	282.05	WARM
ITI44 - Latina	330.91	WARM
ITI45 - Frosinone	278.67	WARM
ITF - Sud	317.84	WARM
ITF1 - Abruzzo	225.00	WARM
ITF11 - L'Aquila	156.19	WARM
ITF12 - Teramo	264.99	WARM
ITF13 - Pescara	287.24	WARM
ITF14 - Chieti	299.07	WARM
ITF2 - Molise	285.85	WARM
ITF21 - Isernia	195.77	WARM
ITF22 - Campobasso	333.17	WARM
ITF3 - Campania	325.86	WARM
ITF31 - Caserta	358.01	WARM
ITF32 - Benevento	301.72	WARM
ITF33 - Napoli	440.10	WARM
ITF34 - Avellino	274.43	WARM
ITF35 - Salerno	320.81	WARM
ITF4 - Puglia	388.20	WARM
ITF43 - Taranto	393.33	WARM
ITF44 - Brindisi	395.95	WARM
ITF45 - Lecce	440.62	WARM
ITF46 - Foggia	408.42	WARM
ITF47 - Bari	328.40	WARM
ITF48 - Barletta-Andria-Trani	333.22	WARM
ITF5 - Basilicata	284.76	WARM
ITF51 - Potenza	225.63	WARM
ITF52 - Matera	397.12	WARM
ITF6 - Calabria	318.18	WARM
ITF61 - Cosenza	274.90	WARM
ITF62 - Crotone	472.84	WARM
ITF63 - Catanzaro	291.09	WARM
ITF64 - Vibo Valentia	301.10	WARM
ITF65 - Reggio di Calabria	351.80	WARM
ITG - Isole	346.80	WARM
ITG1 - Sicilia	366.53	WARM
ITG11 - Trapani	403.89	WARM
ITG12 - Palermo	306.10	WARM
ITG13 - Messina	343.72	WARM
ITG14 - Agrigento	371.21	WARM
ITG15 - Caltanissetta	377.37	WARM
ITG16 - Enna	397.47	WARM
ITG17 - Catania	384.94	WARM
ITG18 - Ragusa	368.07	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
ITG19 - Siracusa	413.56	WARM
ITG2 - Sardegna	325.72	WARM
ITG25 - Sassari (NUTS 2016)	245.14	WARM
ITG26 - Nuoro (NUTS 2016)	275.57	WARM
ITG27 - Cagliari (NUTS 2016)	418.23	WARM
ITG28 - Oristano (NUTS 2016)	335.33	WARM
ITG29 - Olbia-Tempio (NUTS 2016)	252.06	WARM
ITG2A - Ogliastra (NUTS 2016)	416.76	WARM
ITG2B - Medio Campidano (NUTS 2016)	375.36	WARM
ITG2C - Carbonia-Iglesias (NUTS 2016)	392.55	WARM
CY - Cyprus	721.32	WARM
CY0 - Kypros	721.32	WARM
CY00 - Kypros	721.32	WARM
CY000 - Kypros	721.32	WARM
LV - Latvia	12.39	COLD
LV0 - Latvija	12.39	COLD
LV00 - Latvija	12.39	COLD
LV003 - Kurzeme	9.71	COLD
LV005 - Latgale	12.16	COLD
LV006 - Riga	25.76	COLD
LV007 - Pieriga	14.81	COLD
LV008 - Vidzeme	10.86	COLD
LV009 - Zemgale	15.63	COLD
LT - Lithuania	18.01	COLD
LT0 - Lietuva	18.01	COLD
LT01 - Sostines regionas	20.82	COLD
LT011 - Vilniaus apskritis	20.82	COLD
LT02 - Vidurio ir vakaru Lietuvos regionas	17.52	COLD
LT021 - Alytaus apskritis	23.59	COLD
LT022 - Kauno apskritis	19.83	COLD
LT023 - Klaipedos apskritis	19.12	COLD
LT024 - Marijampoles apskritis	19.81	COLD
LT025 - Panevezio apskritis	16.33	COLD
LT026 - Siauliu apskritis	16.29	COLD
LT027 - Taurages apskritis	17.68	COLD
LT028 - Telsiu apskritis	12.91	COLD
LT029 - Utenos apskritis	13.26	COLD
LU - Luxembourg	33.93	COLD
LU0 - Luxembourg	33.93	COLD
LU00 - Luxembourg	33.93	COLD
LU000 - Luxembourg	33.93	COLD
HU - Hungary	121.76	WARM
HU1 - Közép-Magyarország	128.95	WARM
HU11 - Budapest	153.59	WARM
HU110 - Budapest	153.59	WARM
HU12 - Pest	126.92	WARM
HU120 - Pest	126.92	WARM
HU2 - Dunántúl	107.26	WARM

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
HU21 - Közép-Dunántúl	107.82	WARM
HU211 - Fejér	114.57	WARM
HU212 - Komárom-Esztergom	110.01	WARM
HU213 - Veszprém	100.12	WARM
HU22 - Nyugat-Dunántúl	98.26	AVERAGE
HU221 - Gyor-Moson-Sopron	122.92	WARM
HU222 - Vas	87.57	AVERAGE
HU223 - Zala	80.23	AVERAGE
HU23 - Dél-Dunántúl	114.00	WARM
HU231 - Baranya	132.45	WARM
HU232 - Somogy	100.61	WARM
HU233 - Tolna	113.83	WARM
HU3 - Alföld és Észak	131.49	WARM
HU31 - Észak-Magyarország	105.75	WARM
HU311 - Borsod-Abaúj-Zemplén	112.88	WARM
HU312 - Heves	113.61	WARM
HU313 - Nógrád	74.23	AVERAGE
HU32 - Észak-Alföld	139.17	WARM
HU321 - Hajdú-Bihar	140.80	WARM
HU322 - Jász-Nagykun-Szolnok	151.71	WARM
HU323 - Szabolcs-Szatmár-Bereg	125.64	WARM
HU33 - Dél-Alföld	142.91	WARM
HU331 - Bács-Kiskun	131.23	WARM
HU332 - Békés	150.17	WARM
HU333 - Csongrád	156.46	WARM
MT - Malta	644.44	WARM
MT0 - Malta	644.44	WARM
MT00 - Malta	644.44	WARM
MT001 - Malta	640.45	WARM
MT002 - Gozo and Comino/Ghawdex u Kemmuna	658.77	WARM
NL - Netherlands	15.56	COLD
NL1 - Noord-Nederland	11.32	COLD
NL11 - Groningen	11.79	COLD
NL111 - Oost-Groningen	12.16	COLD
NL112 - Delfzijl en omgeving	11.06	COLD
NL113 - Overig Groningen	11.69	COLD
NL12 - Friesland (NL)	10.29	COLD
NL124 - Noord-Friesland	10.06	COLD
NL125 - Zuidwest-Friesland	10.23	COLD
NL126 - Zuidoost-Friesland	10.73	COLD
NL13 - Drenthe	12.44	COLD
NL131 - Noord-Drenthe	11.78	COLD
NL132 - Zuidoost-Drenthe	13.82	COLD
NL133 - Zuidwest-Drenthe	11.62	COLD
NL2 - Oost-Nederland	16.05	COLD
NL21 - Overijssel	14.37	COLD
NL211 - Noord-Overijssel	11.66	COLD
NL212 - Zuidwest-Overijssel	12.47	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
NL213 - Twente	17.59	COLD
NL22 - Gelderland	19.23	COLD
NL221 - Veluwe	17.02	COLD
NL224 - Zuidwest-Gelderland	17.18	COLD
NL225 - Achterhoek	20.52	COLD
NL226 - Arnhem/Nijmegen	23.09	COLD
NL23 - Flevoland	11.63	COLD
NL230 - Flevoland	11.63	COLD
NL3 - West-Nederland	13.26	COLD
NL31 - Utrecht	14.76	COLD
NL310 - Utrecht	14.76	COLD
NL32 - Noord-Holland	10.90	COLD
NL321 - Kop van Noord-Holland	8.85	COLD
NL323 - IJmond	11.90	COLD
NL324 - Agglomeratie Haarlem	13.35	COLD
NL325 - Zaanstreek	11.81	COLD
NL327 - Het Gooi en Vechtstreek	13.84	COLD
NL328 - Alkmaar en omgeving	10.27	COLD
NL329 - Groot-Amsterdam	13.03	COLD
NL33 - Zuid-Holland	14.03	COLD
NL332 - Agglomeratie 's-Gravenhage	12.20	COLD
NL333 - Delft en Westland	13.61	COLD
NL337 - Agglomeratie Leiden en Bollenstreek	11.93	COLD
NL33A - Zuidoost-Zuid-Holland	16.60	COLD
NL33B - Oost-Zuid-Holland	15.75	COLD
NL33C - Groot-Rijnmond	13.35	COLD
NL34 - Zeeland	14.99	COLD
NL341 - Zeeuwsch-Vlaanderen	15.70	COLD
NL342 - Overig Zeeland	14.55	COLD
NL4 - Zuid-Nederland	23.28	COLD
NL41 - Noord-Brabant	21.75	COLD
NL411 - West-Noord-Brabant	18.94	COLD
NL412 - Midden-Noord-Brabant	21.13	COLD
NL413 - Noordoost-Noord-Brabant	22.98	COLD
NL414 - Zuidoost-Noord-Brabant	23.51	COLD
NL42 - Limburg (NL)	26.79	COLD
NL421 - Noord-Limburg	25.31	COLD
NL422 - Midden-Limburg	21.61	COLD
NL423 - Zuid-Limburg	34.13	COLD
AT - Austria	31.90	COLD
AT1 - Ostösterreich	69.31	AVERAGE
AT11 - Burgenland (AT)	95.20	AVERAGE
AT111 - Mittelburgenland	70.98	AVERAGE
AT112 - Nordburgenland	136.50	WARM
AT113 - Südburgenland	56.51	AVERAGE
AT12 - Niederösterreich	61.46	AVERAGE
AT121 - Mostviertel-Eisenwurzen	49.93	COLD
AT122 - Niederösterreich-Süd	36.53	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
AT123 - Sankt Pölten	70.15	AVERAGE
AT124 - Waldviertel	27.90	COLD
AT125 - Weinviertel	80.40	AVERAGE
AT126 - Wiener Umland/Nordteil	104.21	WARM
AT127 - Wiener Umland/Südteil	132.40	WARM
AT13 - Wien	186.14	WARM
AT130 - Wien	186.14	WARM
AT2 - Südösterreich	19.69	COLD
AT21 - Kärnten	16.38	COLD
AT211 - Klagenfurt-Villach	26.34	COLD
AT212 - Oberkärnten	7.31	COLD
AT213 - Unterkärnten	21.51	COLD
AT22 - Steiermark	21.61	COLD
AT221 - Graz	49.22	COLD
AT222 - Liezen	1.73	COLD
AT223 - Östliche Obersteiermark	9.31	COLD
AT224 - Oststeiermark	49.20	COLD
AT225 - West- und Südsteiermark	39.86	COLD
AT226 - Westliche Obersteiermark	1.26	COLD
AT3 - Westösterreich	15.48	COLD
AT31 - Oberösterreich	36.61	COLD
AT311 - Innviertel	41.19	COLD
AT312 - Linz-Wels	50.81	AVERAGE
AT313 - Mühlviertel	31.59	COLD
AT314 - Steyr-Kirchdorf	35.08	COLD
AT315 - Traunviertel	28.30	COLD
AT32 - Salzburg	6.61	COLD
AT321 - Lungau	0.00	COLD
AT322 - Pinzgau-Pongau	0.89	COLD
AT323 - Salzburg und Umgebung	24.92	COLD
AT33 - Tirol	1.21	COLD
AT331 - Außerfern	0.29	COLD
AT332 - Innsbruck	0.68	COLD
AT333 - Osttirol	0.15	COLD
AT334 - Tiroler Oberland	0.40	COLD
AT335 - Tiroler Unterland	3.00	COLD
AT34 - Vorarlberg	12.00	COLD
AT341 - Bludenz-Bregenzer Wald	5.99	COLD
AT342 - Rheintal-Bodenseegebiet	27.15	COLD
PL - Poland	31.42	COLD
PL2 - Makroregion Poludniowy	31.38	COLD
PL21 - Malopolskie	27.21	COLD
PL213 - Miasto Kraków	28.28	COLD
PL214 - Krakowski	30.41	COLD
PL217 - Tarnowski	47.98	COLD
PL218 - Nowosadecki	20.94	COLD
PL219 - Nowotarski	7.76	COLD
PL21A - Oswiecimski	30.06	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
PL22 - Slaskie	36.50	COLD
PL224 - Czestochowski	42.27	COLD
PL225 - Bielski	35.48	COLD
PL227 - Rybnicki	34.44	COLD
PL228 - Bytomski	39.18	COLD
PL229 - Gliwicki	38.41	COLD
PL22A - Katowicki	34.08	COLD
PL22B - Sosnowiecki	28.85	COLD
PL22C - Tyski	32.74	COLD
PL4 - Makroregion Pólnocno-Zachodni	33.46	COLD
PL41 - Wielkopolskie	39.37	COLD
PL411 - Pilski	29.04	COLD
PL414 - Koninski	42.31	COLD
PL415 - Miasto Poznan	50.25	AVERAGE
PL416 - Kaliski	45.10	COLD
PL417 - Leszczynski	38.52	COLD
PL418 - Poznanski	42.83	COLD
PL42 - Zachodniopomorskie	20.30	COLD
PL424 - Miasto Szczecin	21.84	COLD
PL426 - Koszalinski	16.85	COLD
PL427 - Szczecinecko-pyrzycki	20.98	COLD
PL428 - Szczecinski	21.34	COLD
PL43 - Lubuskie	41.96	COLD
PL431 - Gorzowski	39.32	COLD
PL432 - Zielonogórski	44.01	COLD
PL5 - Makroregion Poludniowo-Zachodni	34.01	COLD
PL51 - Dolnoslaskie	29.82	COLD
PL514 - Miasto Wroclaw	45.90	COLD
PL515 - Jeleniogórski	24.56	COLD
PL516 - Legnicko-Glogowski	33.91	COLD
PL517 - Walbrzyski	16.40	COLD
PL518 - Wroclawski	40.17	COLD
PL52 - Opolskie	42.87	COLD
PL523 - Nyski	38.27	COLD
PL524 - Opolski	46.41	COLD
PL6 - Makroregion Pólnocny	24.29	COLD
PL61 - Kujawsko-Pomorskie	34.01	COLD
PL613 - Bydgosko-Torunski	36.20	COLD
PL616 - Grudziadzki	34.12	COLD
PL617 - Inowroclawski	35.41	COLD
PL618 - Swiecki	25.45	COLD
PL619 - Wloclawski	38.42	COLD
PL62 - Warminsko-Mazurskie	23.22	COLD
PL621 - Elblaski	24.06	COLD
PL622 - Olsztynski	23.76	COLD
PL623 - Elcki	21.37	COLD
PL63 - Pomorskie	16.10	COLD
PL633 - Trojmiejski	14.66	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
PL634 - Gdanski	13.59	COLD
PL636 - Slupski	14.44	COLD
PL637 - Chojnicki	15.40	COLD
PL638 - Starogardzki	21.72	COLD
PL7 - Makroregion Centralny	36.94	COLD
PL71 - Lódzkie	39.33	COLD
PL711 - Miasto Lódz	39.71	COLD
PL712 - Lódzki	39.24	COLD
PL713 - Piotrkowski	34.21	COLD
PL714 - Sieradzki	44.03	COLD
PL715 - Skierniewicki	40.30	COLD
PL72 - Swietokrzyskie	33.24	COLD
PL721 - Kielecki	27.66	COLD
PL722 - Sandomiersko-jedrzejowski	37.44	COLD
PL8 - Makroregion Wschodni	30.03	COLD
PL81 - Lubelskie	34.42	COLD
PL811 - Bialski	39.28	COLD
PL812 - Chelmsko-zamojski	31.04	COLD
PL814 - Lubelski	35.85	COLD
PL815 - Pulawski	33.76	COLD
PL82 - Podkarpackie	35.66	COLD
PL821 - Krosnienski	20.79	COLD
PL822 - Przemyski	38.74	COLD
PL823 - Rzeszowski	39.96	COLD
PL824 - Tarnobrzeski	47.71	COLD
PL84 - Podlaskie	19.59	COLD
PL841 - Bialostocki	16.05	COLD
PL842 - Lomzynski	22.18	COLD
PL843 - Suwalski	18.82	COLD
PL9 - Makroregion Województwo Mazowieckie	35.37	COLD
PL91 - Warszawski stoleczny	46.47	COLD
PL911 - Miasto Warszawa	56.05	AVERAGE
PL912 - Warszawski wschodni	41.76	COLD
PL913 - Warszawski zachodni	50.45	AVERAGE
PL92 - Mazowiecki regionalny	33.07	COLD
PL921 - Radomski	33.25	COLD
PL922 - Ciechanowski	35.67	COLD
PL923 - Plocki	36.07	COLD
PL924 - Ostrolecki	30.12	COLD
PL925 - Siedlecki	29.05	COLD
PL926 - Zyrardowski	40.51	COLD
PT - Portugal	204.34	WARM
PT1 - Continente	204.34	WARM
PT11 - Norte	105.86	WARM
PT111 - Alto Minho	43.71	COLD
PT112 - Cávado	42.81	COLD
PT119 - Ave	67.59	AVERAGE
PT11A - Área Metropolitana do Porto	43.02	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
PT11B - Alto Tâmega	82.43	AVERAGE
PT11C - Tâmega e Sousa	82.73	AVERAGE
PT11D - Douro	198.03	WARM
PT11E - Terras de Trás-os-Montes	131.10	WARM
PT15 - Algarve	173.42	WARM
PT150 - Algarve	173.42	WARM
PT16 - Centro (PT)	211.59	WARM
PT16B - Oeste	125.54	WARM
PT16D - Região de Aveiro	33.84	COLD
PT16E - Região de Coimbra	120.58	WARM
PT16F - Região de Leiria	147.17	WARM
PT16G - Viseu Dão Lafões	126.77	WARM
PT16H - Beira Baixa	449.03	WARM
PT16I - Médio Tejo	266.46	WARM
PT16J - Beiras e Serra da Estrela	217.92	WARM
PT17 - Área Metropolitana de Lisboa	180.18	WARM
PT170 - Área Metropolitana de Lisboa	180.18	WARM
PT18 - Alentejo	271.43	WARM
PT181 - Alentejo Litoral	101.68	WARM
PT184 - Baixo Alentejo	301.19	WARM
PT185 - Lezíria do Tejo	172.45	WARM
PT186 - Alto Alentejo	389.08	WARM
PT187 - Alentejo Central	317.46	WARM
PT3 - Região Autónoma da Madeira (PT)	:	WARM
PT30 - Região Autónoma da Madeira (PT)	:	WARM
PT300 - Região Autónoma da Madeira (PT)	:	WARM
RO - Romania	118.67	WARM
RO1 - Macroregiunea unu	51.59	AVERAGE
RO11 - Nord-Vest	73.56	AVERAGE
RO111 - Bihor	115.05	WARM
RO112 - Bistrita-Nasaud	32.66	COLD
RO113 - Cluj	56.41	AVERAGE
RO114 - Maramures	40.34	COLD
RO115 - Satu Mare	113.55	WARM
RO116 - Salaj	87.38	AVERAGE
RO12 - Centru	29.59	COLD
RO121 - Alba	55.70	AVERAGE
RO122 - Brasov	16.19	COLD
RO123 - Covasna	7.65	COLD
RO124 - Harghita	6.00	COLD
RO125 - Mures	45.60	COLD
RO126 - Sibiu	36.76	COLD
RO2 - Macroregiunea doi	134.28	WARM
RO21 - Nord-Est	76.02	AVERAGE
RO211 - Bacau	74.54	AVERAGE
RO212 - Botosani	108.65	WARM
RO213 - Iasi	122.69	WARM
RO214 - Neamt	46.96	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
RO215 - Suceava	20.09	COLD
RO216 - Vaslui	121.38	WARM
RO22 - Sud-Est	194.34	WARM
RO221 - Braila	229.80	WARM
RO222 - Buzau	159.45	WARM
RO223 - Constanta	221.98	WARM
RO224 - Galati	196.50	WARM
RO225 - Tulcea	209.79	WARM
RO226 - Vrancea	134.23	WARM
RO3 - Macroregiunea trei	180.02	WARM
RO31 - Sud - Muntenia	177.19	WARM
RO311 - Arges	84.65	AVERAGE
RO312 - Calarasi	231.90	WARM
RO313 - Dâmbovita	126.20	WARM
RO314 - Giurgiu	249.39	WARM
RO315 - Ialomita	232.61	WARM
RO316 - Prahova	113.30	WARM
RO317 - Teleorman	239.11	WARM
RO32 - Bucuresti - Ilfov	234.21	WARM
RO321 - Bucuresti	313.00	WARM
RO322 - Ilfov	222.21	WARM
RO4 - Macroregiunea patru	138.60	WARM
RO41 - Sud-Vest Oltenia	168.27	WARM
RO411 - Dolj	228.01	WARM
RO412 - Gorj	105.55	WARM
RO413 - Mehedinti	175.05	WARM
RO414 - Olt	220.80	WARM
RO415 - Vâlcea	96.00	AVERAGE
RO42 - Vest	111.52	WARM
RO421 - Arad	129.12	WARM
RO422 - Caras-Severin	99.19	AVERAGE
RO423 - Hunedoara	55.73	AVERAGE
RO424 - Timis	153.40	WARM
SI - Slovenia	61.93	AVERAGE
SI0 - Slovenija	61.93	AVERAGE
SI03 - Vzhodna Slovenija	60.06	AVERAGE
SI031 - Pomurska	78.64	AVERAGE
SI032 - Podravska	68.23	AVERAGE
SI033 - Koroska	26.86	COLD
SI034 - Savinjska	49.99	COLD
SI035 - Zasavska	74.89	AVERAGE
SI036 - Posavska	115.41	WARM
SI037 - Jugovzhodna Slovenija	62.29	AVERAGE
SI038 - Primorsko-notranjska	24.62	COLD
SI04 - Zahodna Slovenija	64.90	AVERAGE
SI041 - Osrednjeslovenska	81.64	AVERAGE
SI042 - Gorenjska	30.83	COLD
SI043 - Goriska	58.08	AVERAGE

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
SI044 - Obalno-kraska	112.37	WARM
SK - Slovakia	56.44	AVERAGE
SK0 - Slovensko	56.44	AVERAGE
SK01 - Bratislavský kraj	107.11	WARM
SK010 - Bratislavský kraj	107.11	WARM
SK02 - Západné Slovensko	91.90	AVERAGE
SK021 - Trnavský kraj	102.28	WARM
SK022 - Trenciansky kraj	60.63	AVERAGE
SK023 - Nitriansky kraj	107.32	WARM
SK03 - Stredné Slovensko	34.20	COLD
SK031 - Zilinský kraj	13.67	COLD
SK032 - Banskobystrický kraj	48.97	COLD
SK04 - Východné Slovensko	39.02	COLD
SK041 - Presovský kraj	21.39	COLD
SK042 - Kosický kraj	62.44	AVERAGE
FI - Finland	3.24	COLD
FI1 - Manner-Suomi	3.24	COLD
FI19 - Länsi-Suomi	4.11	COLD
FI193 - Keski-Suomi	4.06	COLD
FI194 - Etelä-Pohjanmaa	2.12	COLD
FI195 - Pohjanmaa	2.85	COLD
FI196 - Satakunta	6.69	COLD
FI197 - Pirkanmaa	5.30	COLD
FI1B - Helsinki-Uusimaa	6.48	COLD
FI1B1 - Helsinki-Uusimaa	6.48	COLD
FI1C - Etelä-Suomi	7.20	COLD
FI1C1 - Varsinais-Suomi	6.05	COLD
FI1C2 - Kanta-Häme	4.63	COLD
FI1C3 - Päijät-Häme	7.89	COLD
FI1C4 - Kymenlaakso	8.89	COLD
FI1C5 - Etelä-Karjala	9.11	COLD
FI1D - Pohjois- ja Itä-Suomi	2.25	COLD
FI1D1 - Etelä-Savo	5.85	COLD
FI1D2 - Pohjois-Savo	5.92	COLD
FI1D3 - Pohjois-Karjala	5.84	COLD
FI1D5 - Keski-Pohjanmaa	1.44	COLD
FI1D7 - Lappi	0.54	COLD
FI1D8 - Kainuu	1.50	COLD
FI1D9 - Pohjois-Pohjanmaa	1.47	COLD
FI2 - Åland	2.19	COLD
FI20 - Åland	2.19	COLD
FI200 - Åland	2.19	COLD
SE - Sweden	0.89	COLD
SE1 - Östra Sverige	3.24	COLD
SE11 - Stockholm	3.95	COLD
SE110 - Stockholms län	3.95	COLD
SE12 - Östra Mellansverige	3.12	COLD
SE121 - Uppsala län	3.50	COLD

COUNTRY AND REGION	CDD AVERAGE 2010-2019	CLIMATE ATTRIBUTION
SE122 - Södermanlands län	3.40	COLD
SE123 - Östergötlands län	3.48	COLD
SE124 - Örebro län	2.25	COLD
SE125 - Västmanlands län	2.93	COLD
SE2 - Södra Sverige	2.04	COLD
SE21 - Småland med öarna	2.20	COLD
SE211 - Jönköpings län	1.46	COLD
SE212 - Kronobergs län	1.97	COLD
SE213 - Kalmar län	2.51	COLD
SE214 - Gotlands län	4.44	COLD
SE22 - Sydsverige	3.19	COLD
SE221 - Blekinge län	2.98	COLD
SE224 - Skåne län	3.24	COLD
SE23 - Västsverige	1.40	COLD
SE231 - Hallands län	2.05	COLD
SE232 - Västra Götalands län	1.27	COLD
SE3 - Norra Sverige	0.20	COLD
SE31 - Norra Mellansverige	0.29	COLD
SE311 - Värmlands län	0.32	COLD
SE312 - Dalarnas län	0.18	COLD
SE313 - Gävleborgs län	0.44	COLD
SE32 - Mellersta Norrland	0.06	COLD
SE321 - Västernorrlands län	0.13	COLD
SE322 - Jämtlands län	0.03	COLD
SE33 - Övre Norrland	0.23	COLD
SE331 - Västerbottens län	0.22	COLD
SE332 - Norrbottens län	0.23	COLD