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TRANSLATE was funded by [Met Éireann](https://eur05.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.met.ie%2F&data=05%7C01%7CCatriona.Duffy%40met.ie%7C216652c866384c049fab08dbc0113a41%7C50f92bd147124111953d7d378a5e8ad0%7C0%7C0%7C638314952446267762%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=zW%2BJUV1qOlBmhPcDkLZH6fKA6WicZvmvcP9itF6e9ag%3D&reserved=0) under [Met Éireann’s “Weather and Climate Research Programme](https://eur05.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.met.ie%2Fscience%2Fweather-and-climate-research-programme&data=05%7C01%7CCatriona.Duffy%40met.ie%7C216652c866384c049fab08dbc0113a41%7C50f92bd147124111953d7d378a5e8ad0%7C0%7C0%7C638314952446267762%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=1qOze9HQlmFELMeq1%2F2Lsj7G5%2FZlZfXRjB%2FDNbKOJNg%3D&reserved=0)”.

Further information about the initiative can be found here: [TRANSLATE - Met Éireann - Seirbhís Náisiúnta Meitéareolaíochta na hÉireann](https://www.met.ie/ga/science/translate)

**How to cite the TRANSLATE data:**

**In the text**: “Met Éireann TRANSLATE report (2023)”

**In the Reference List**: O’Brien,E., Ryan,P., Holloway,P., Wang,J., Nowbakht,P., Phillips,C., Fitton,J., O Dwyer,B. and Nolan,P. (2023). Met Éireann TRANSLATE report. Prepared for Met Éireann by Irish Centre of High-End Computing, University College Cork and the MAREI Centre. Available at: [TRANSLATE - Met Éireann - Seirbhís Náisiúnta Meitéareolaíochta na hÉireann](https://www.met.ie/ga/science/translate)

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Please contact the TRANSLATE team at Met Éireann with any queries: [enquiries@met.ie](mailto:enquiries@met.ie)

**Note**: The ‘\*’ symbols below are wildcard symbols for various strings including the variable, time period, GWL or RCP.

This folder contains:

1. Three NetCDF files:
   * 1. \*ensmean\*.nc represents the ensemble mean for the GWL/RCP of interest. The pngs were produced using this file.
     2. \*ens10\*.nc represents the 10th percentile of the ensemble for the GWL/RCP of interest.
     3. \*ens90\*.nc represents the 90th percentile of the ensemble for the GWL/RCP of interest.
     4. \*\_chg\_\*.nc represents the change in the variable between the baseline and the GWL/RCP of interest.
     5. \*\_final\_\*.nc represents the absolute value of the variable for the GWL/RCP of interest.
2. Two pngs of the mean data for the variable/scenario/GWL/baseline selected (one map including major cities, a North arrow and scale bar and one map without). These files are in the format ‘\*\_ensmid\_\*.png’. The ‘ensmid refers to the mean of the ensemble.
3. 3 gridded shapefiles of the data specified. The naming convention follows the same protocol as above for the NetCDF files.
4. 3 GeoTIFF files. The naming convention follows the same protocol as above for the NetCDF files.
5. A readme file (this document) containing information about the data along with how to cite the data and relevant disclaimer.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Full variable name** | **Description** | **Units (chg)** | **Units (final)** |
| tmax | Maximum Temperature | daily maximum temperature | ˚C | ˚C |
| tmin | Minimum Temperature | daily minimum temperature | ˚C | ˚C |
| tmean | Mean Temperature | daily mean temperature | ˚C | ˚C |
| tot\_prec | Precipitation | Mean Total | % | mm |
| tnn | TNn | Minimum value of daily minimum temperature | ˚C | ˚C |
| tnx | TNx | Maximum value of daily minimum temperature | ˚C | ˚C |
| fd | Frost Days | Number of days when daily minimum temperature < 0˚C | Number | Number |
| tr15 | Nights > 15 degrees | Number of days when minimum temperature > 15˚C | Number | Number |
| hdd | Heating Degree Days | Cumulative number of degrees that the mean temperature is below 15.5˚C | % | Degree Days (DD |
| gsl\_start | Growing Season Start | First annual instance of 6 consecutive days where tmean > 5˚C | Day of year (DOY) | Day of year (DOY) |
| gsl | Growing Season Length | Number of days between growing season start and end | Number | Number |
| txn | TXn | Minimum value of daily maximum temperature | ˚C | ˚C |
| txx | TXx | Maximum value of daily maximum temperature: | ˚C | ˚C |
| id | Icing Days | Number of days when daily maximum temperature < 0˚C | Number | Number |
| su | Summer Days | Number of days when daily maximum temperature > 25˚C | Number | Number |
| csu | No. of Heatwaves | Number of heatwaves (periods of at least 5 consecutive summer days) | Number | Number |
| rr1 | RR1 | Number of Wet days (>1mm) | % | Number |
| r20mm | R20mm | Number of days where precipitation is > 20mm | Number | Number |
| r30mm | R30mm (Very Wet Days) | Number of days where precipitation is > 30mm | Number | Number |
| rx1day | Rx1day | Maximum 1 day precipitation | % | Number |
| rx5day | Rx5day | Maximum consecutive 5 day precipitation | % | Number |
| snow | Snowfall | Change in snowfall | % |  |
| Solar Photovoltaic | Solar Photovoltaic | Change in solar PV power | % |  |
| et | Evapotranspiration | Change in evapotranspiration | % |  |
| wind | 10m wind Speed | Change in wind speed at 10m | % |  |
| wind\_energy | 120m wind Energy | Change in wind energy at 120m | % |  |
| driving\_rain | Driving Rain | Change in the driving rain metric | % |  |
|  |  |  |  |  |
| TRANSLATE Variables |  | ICHEC Variables |  |  |

**To visualise the data in ArcGIS:**

Open ArcMap->

Add data ->



A screenshot of a computer

Description automatically generated

Right click on the file and select ‘Properties’->

A screenshot of a computer

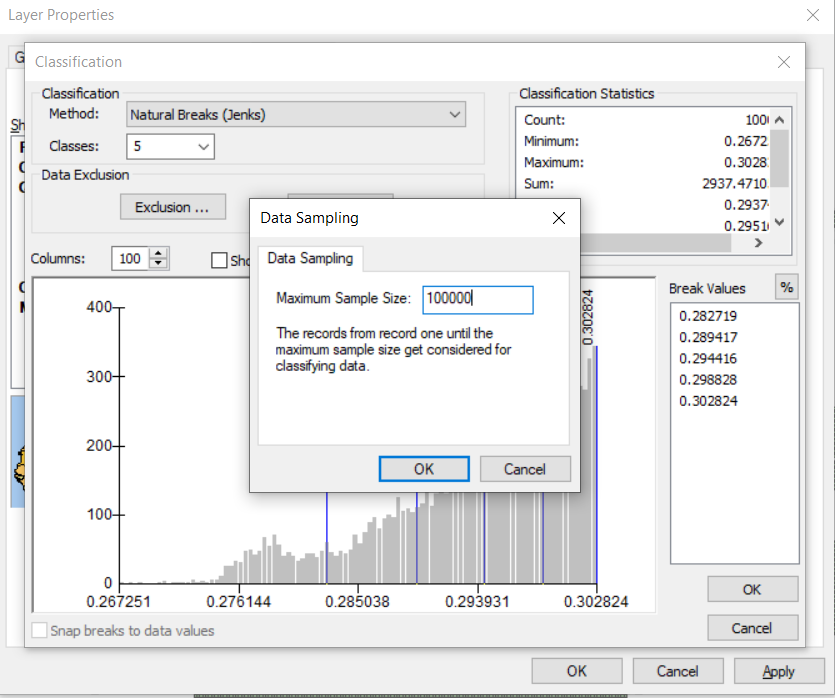
Description automatically generated

Go to the ‘Symbology’ tab -> ‘Quantities’ -> ‘Graduated Color’ -> Change ‘Value’ to the variable name. You may see the warning below. If so, click ‘ok’ and then ‘Classify’.

A screenshot of a computer

Description automatically generated

Choose ‘Sampling’ and increase the sample size (for example, add a zero) and press ‘ok’, then ‘ok’ and ‘apply’ (then ‘ok’ again).



Finally, in the Table of Contents, click on the coloured box beside each category.

A number of numbers and a number of numbers

Description automatically generated

Then change the ‘Outline colour’ to ‘no colour’. Do this for each category/colour box until your data looks like this:

A close-up of a colorful cloud

Description automatically generated