

1 Comparative Assessment

1.1 Indices based on fixed thresholds - R10mm, R20mm, CWD, CDD

1.1.1 IMERG DATA

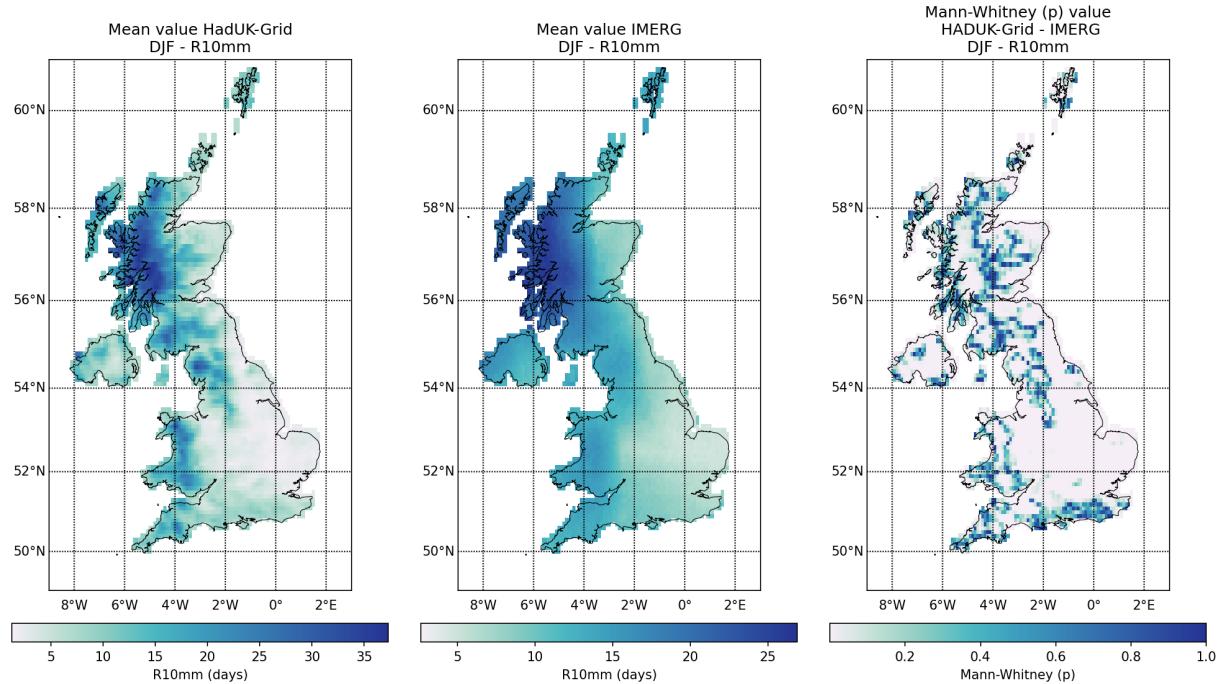


Figure 1: Spatial distribution of R10mm values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

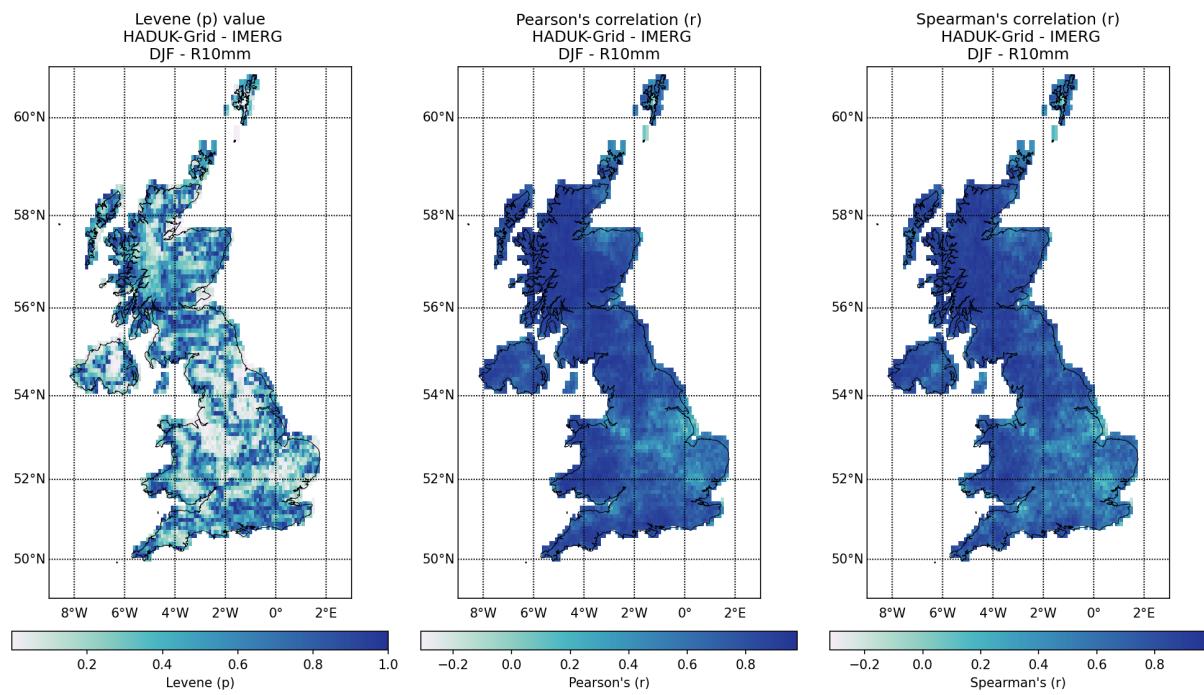


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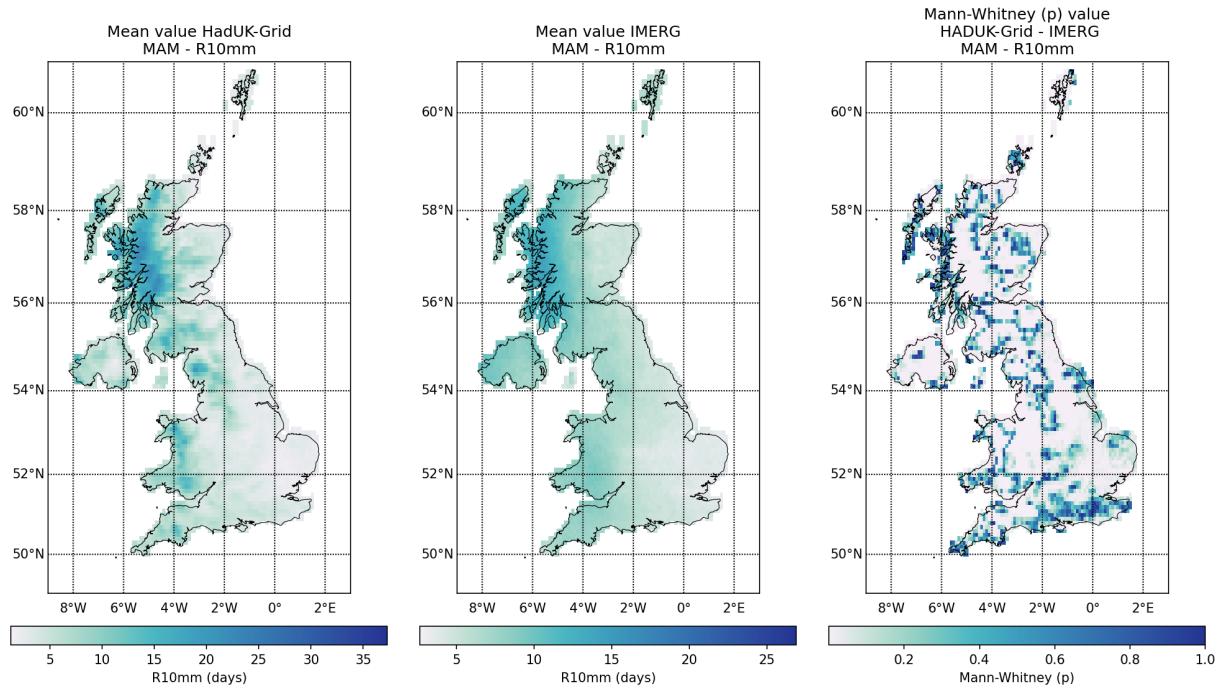


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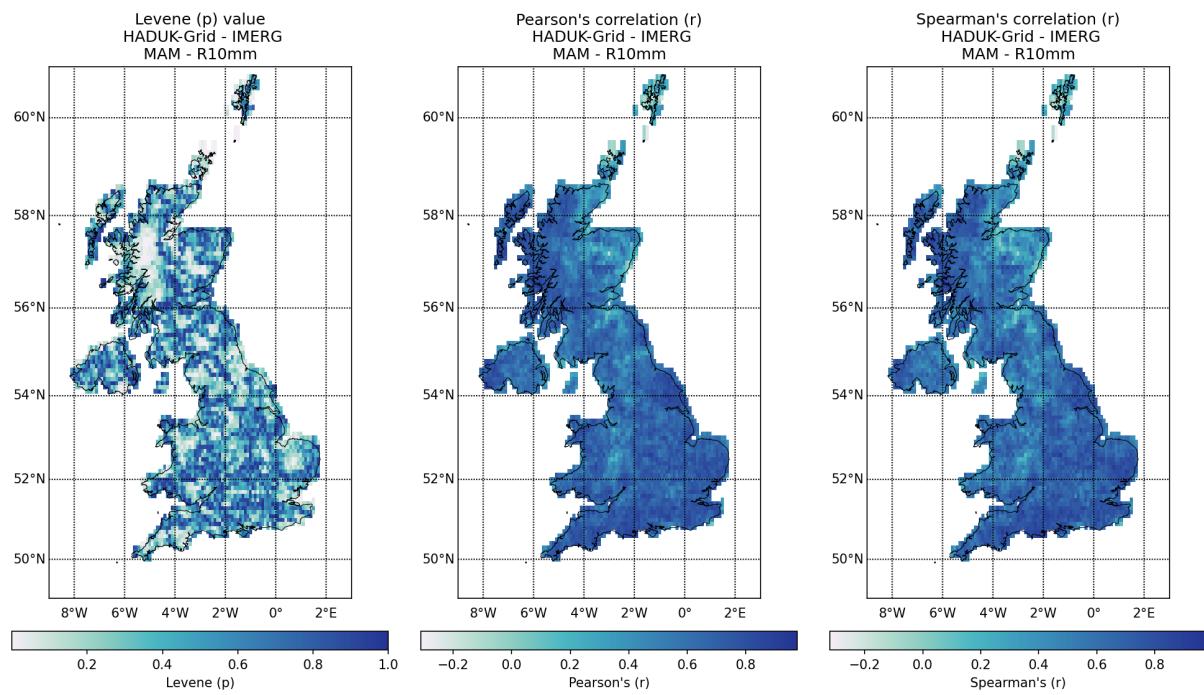


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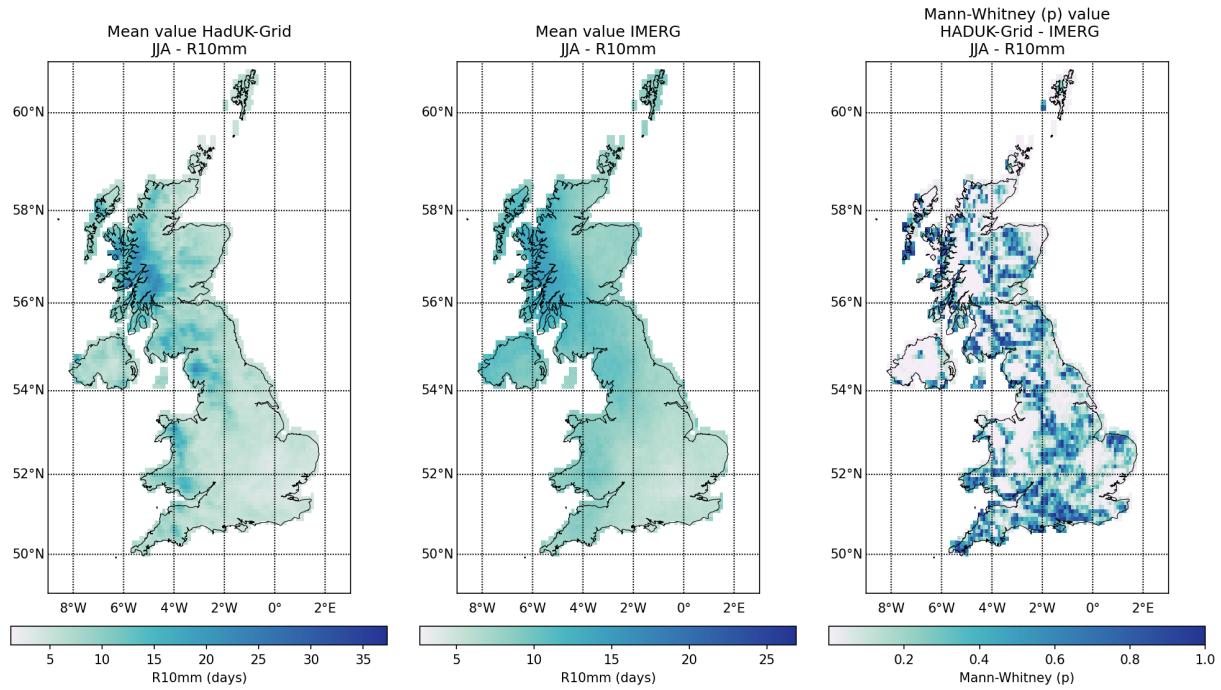


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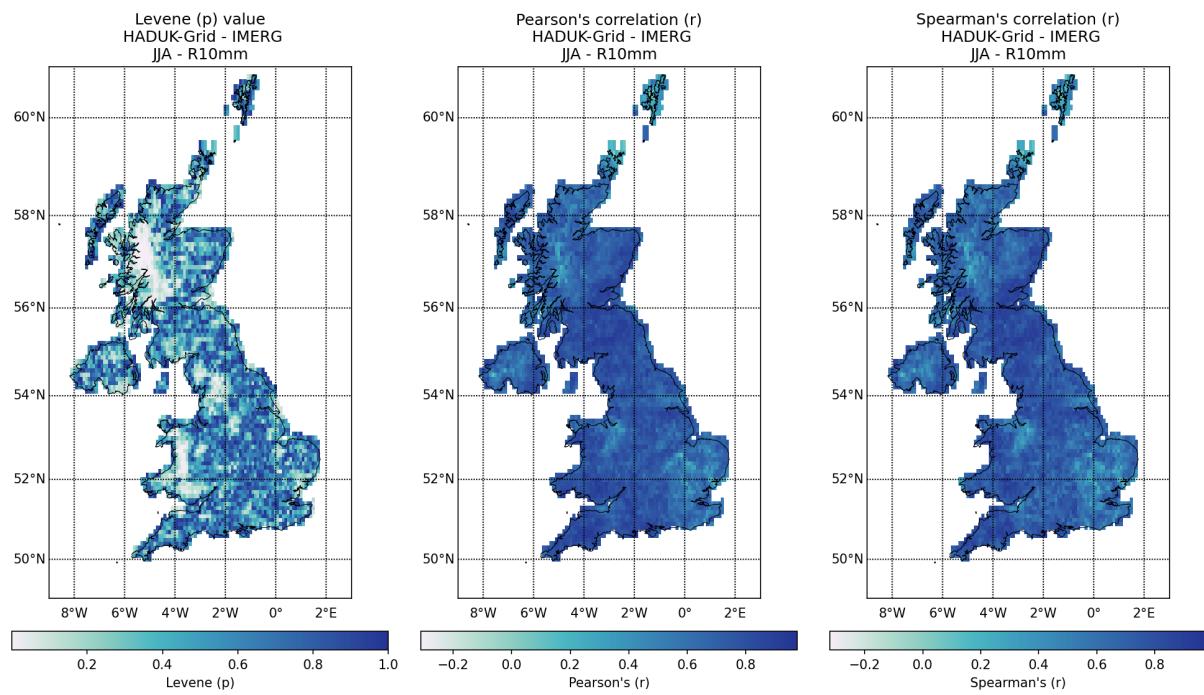


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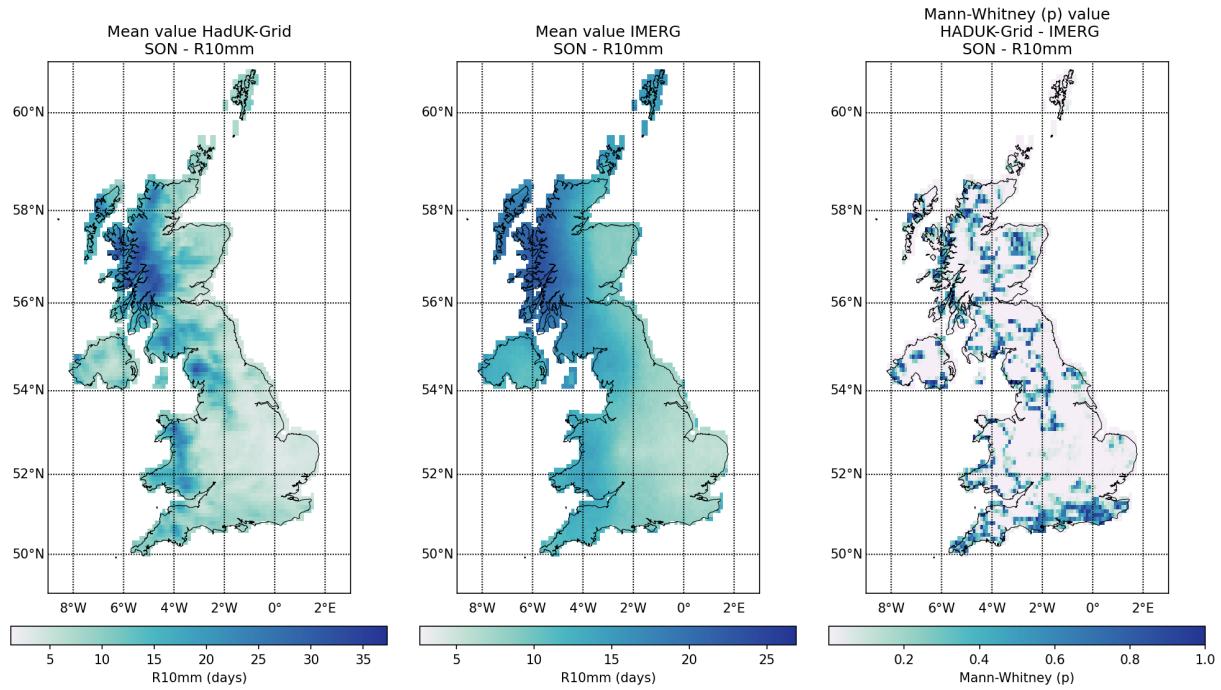


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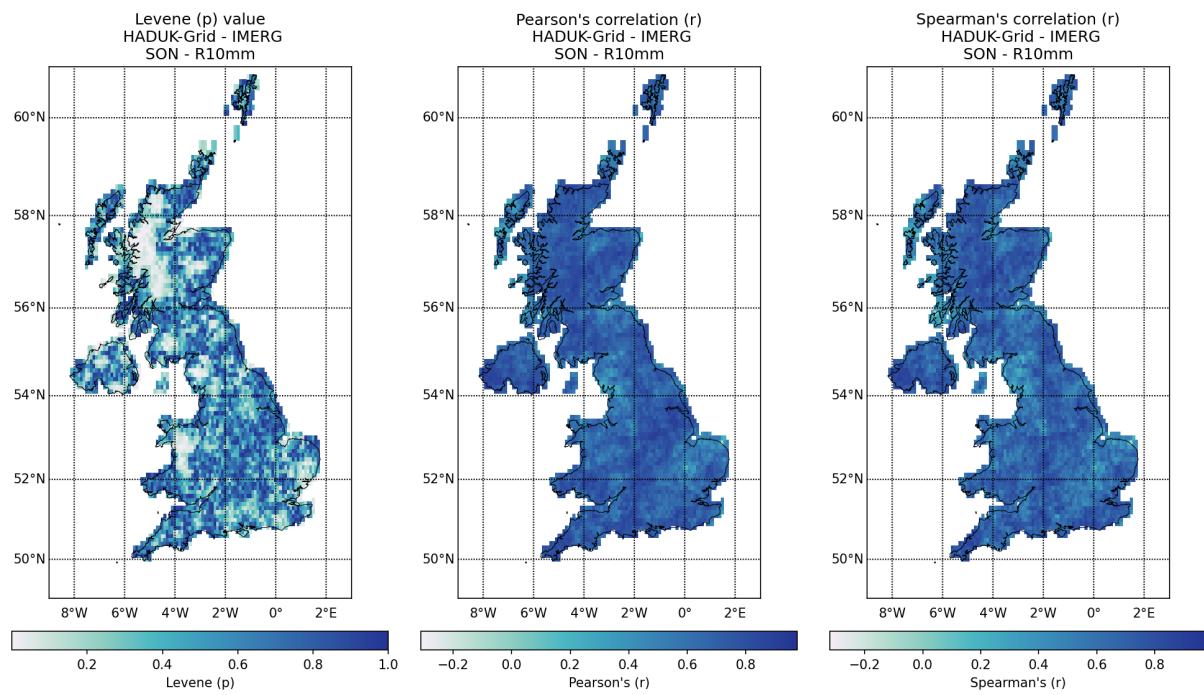


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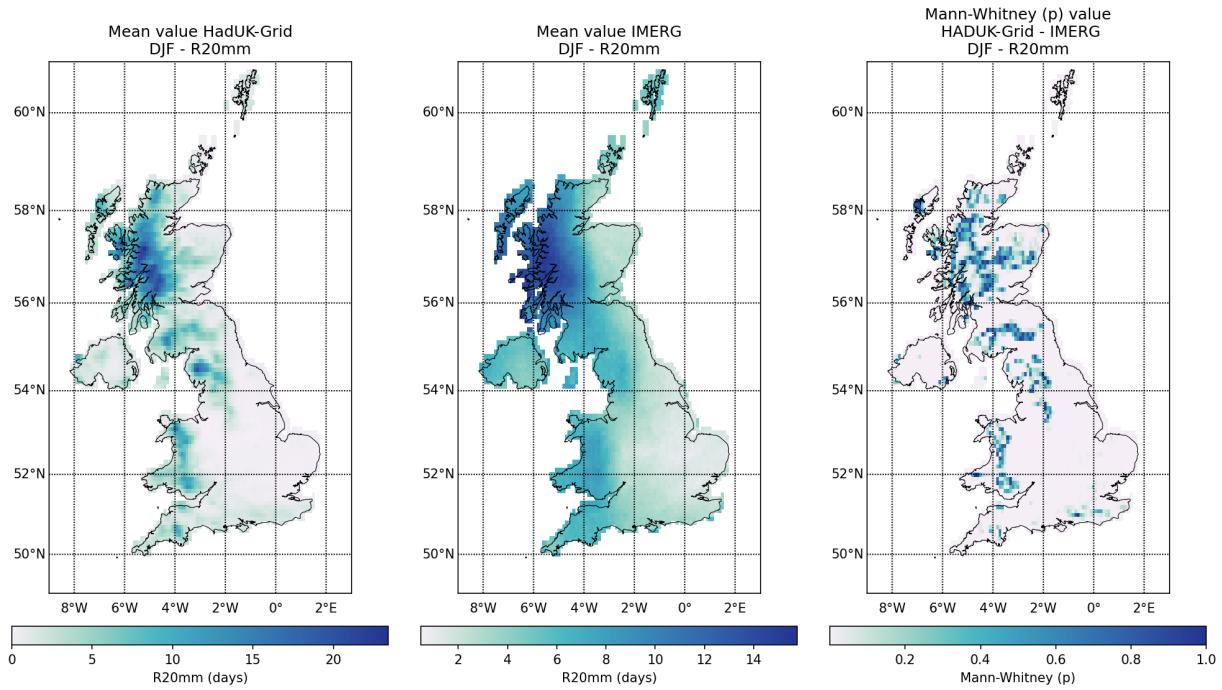


Figure 2: Spatial distribution of R20mm values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

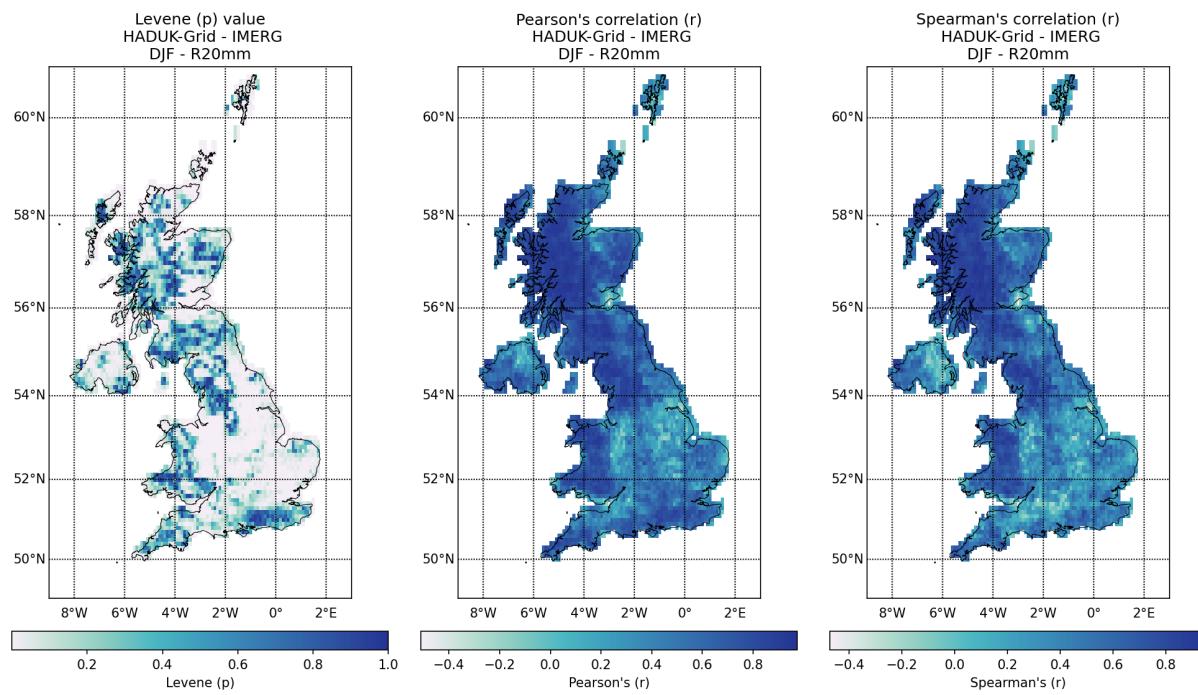


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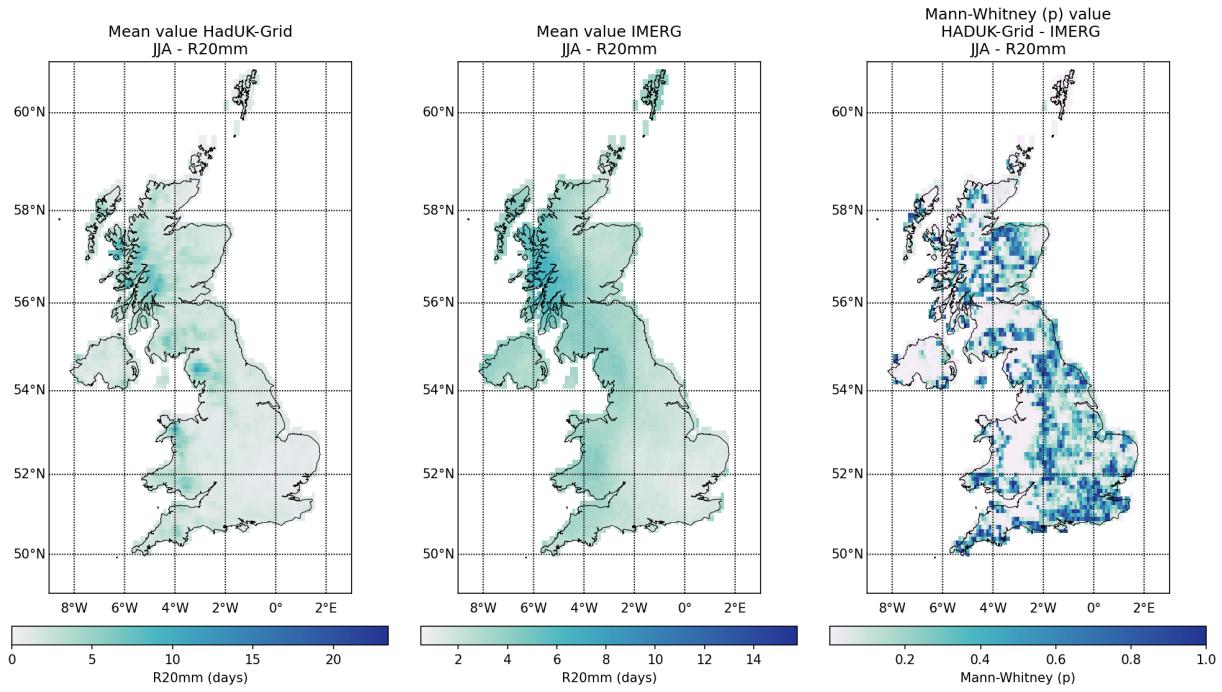


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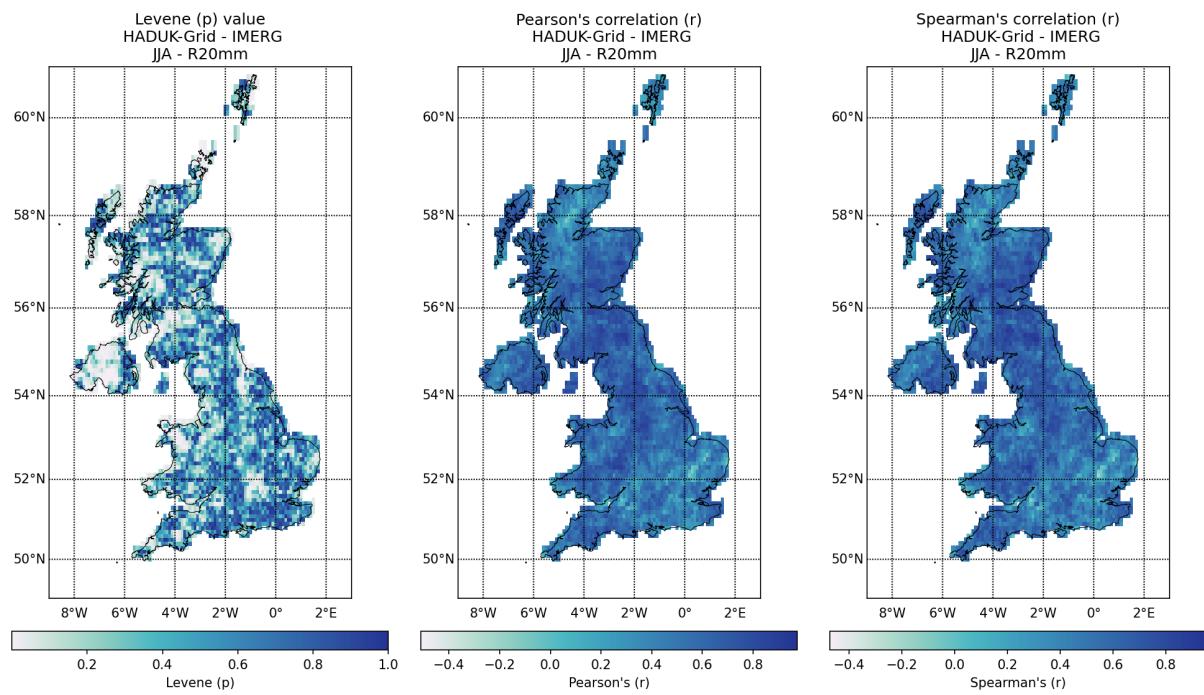


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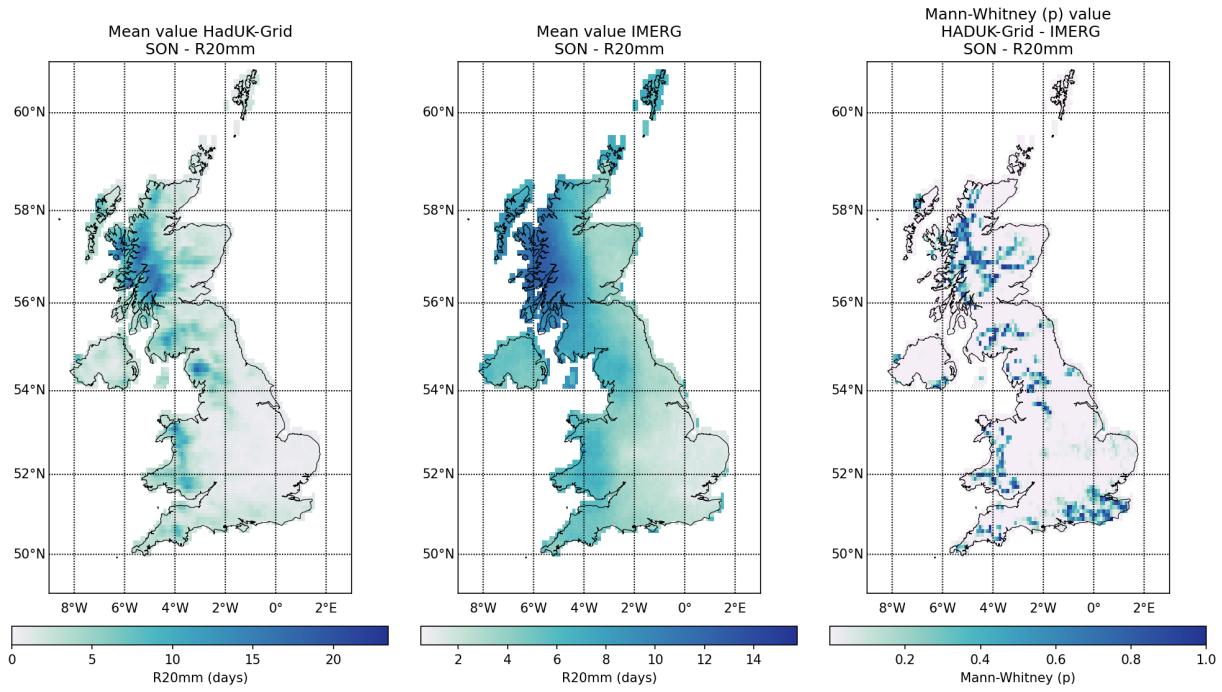


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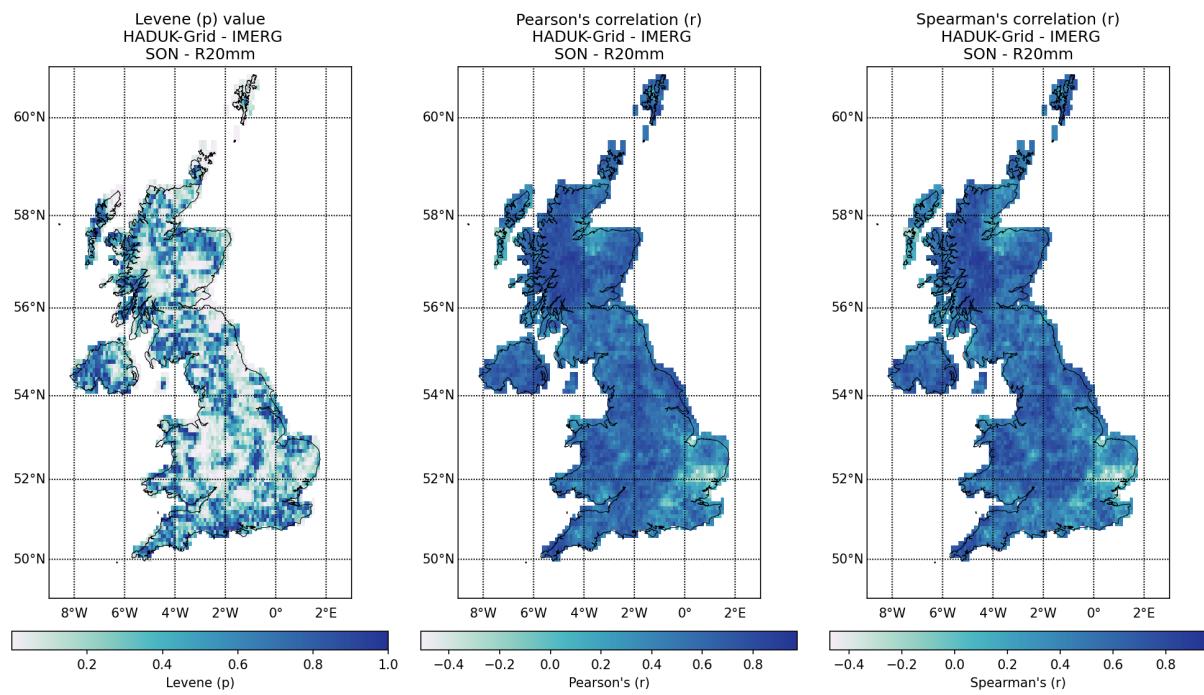


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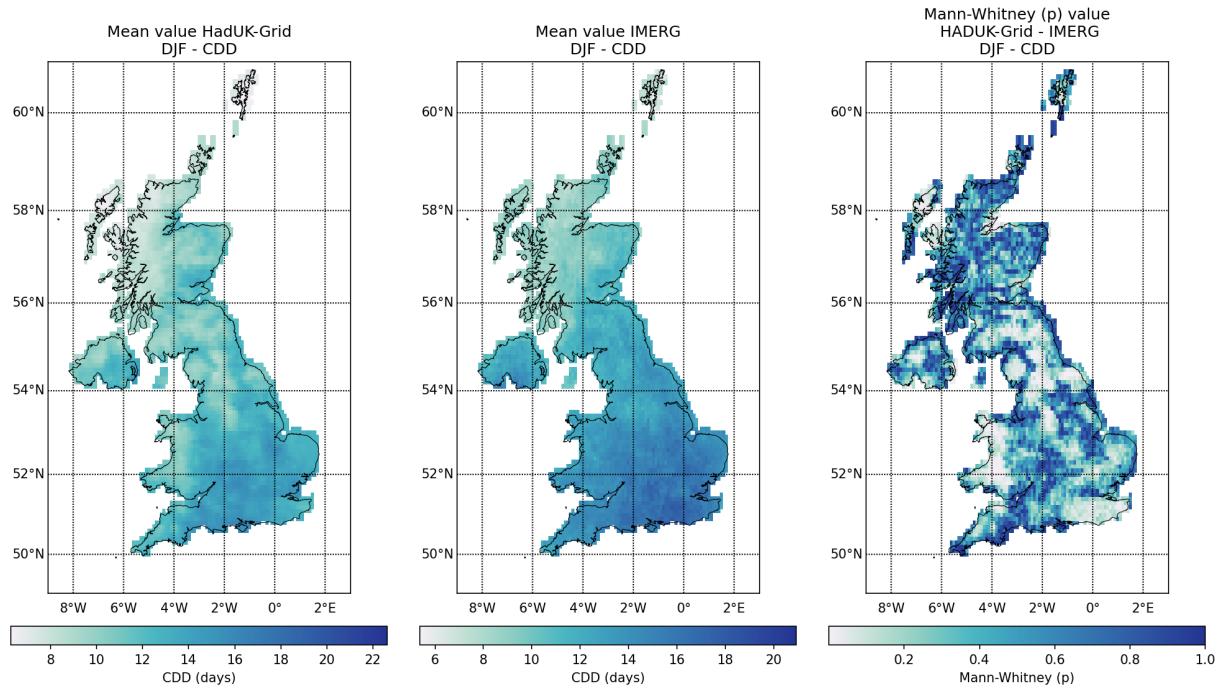


Figure 3: Spatial distribution of CDD values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

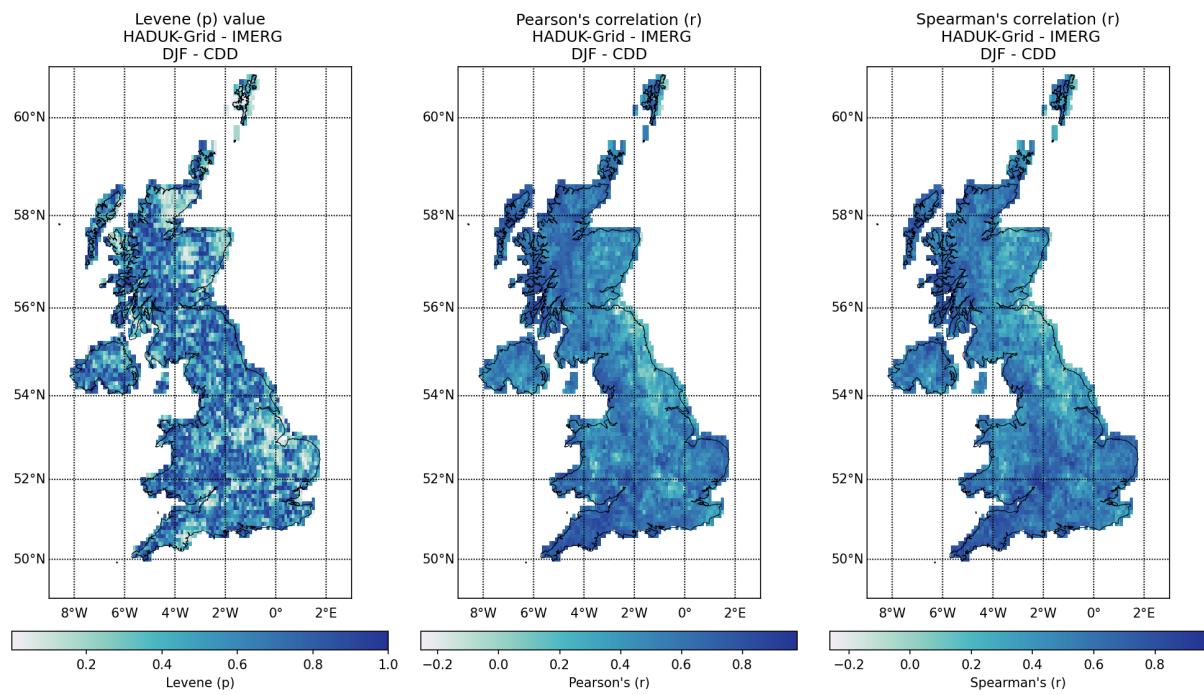


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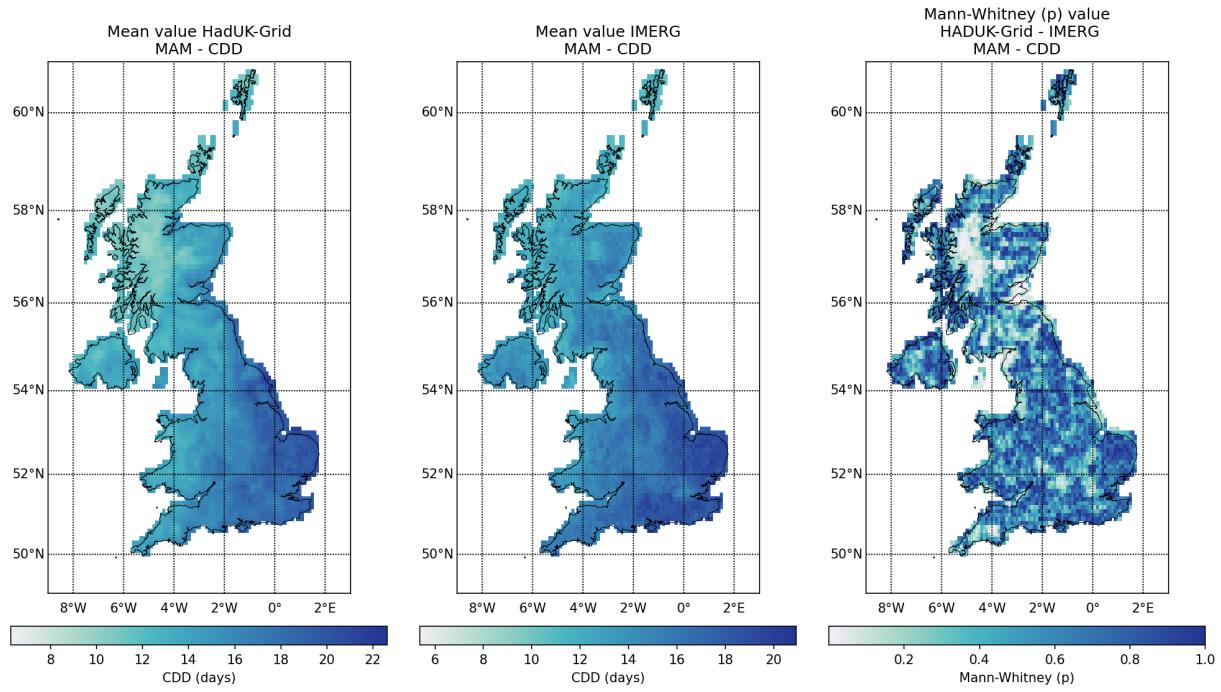


Figure 3: Spatial distribution of CDD values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

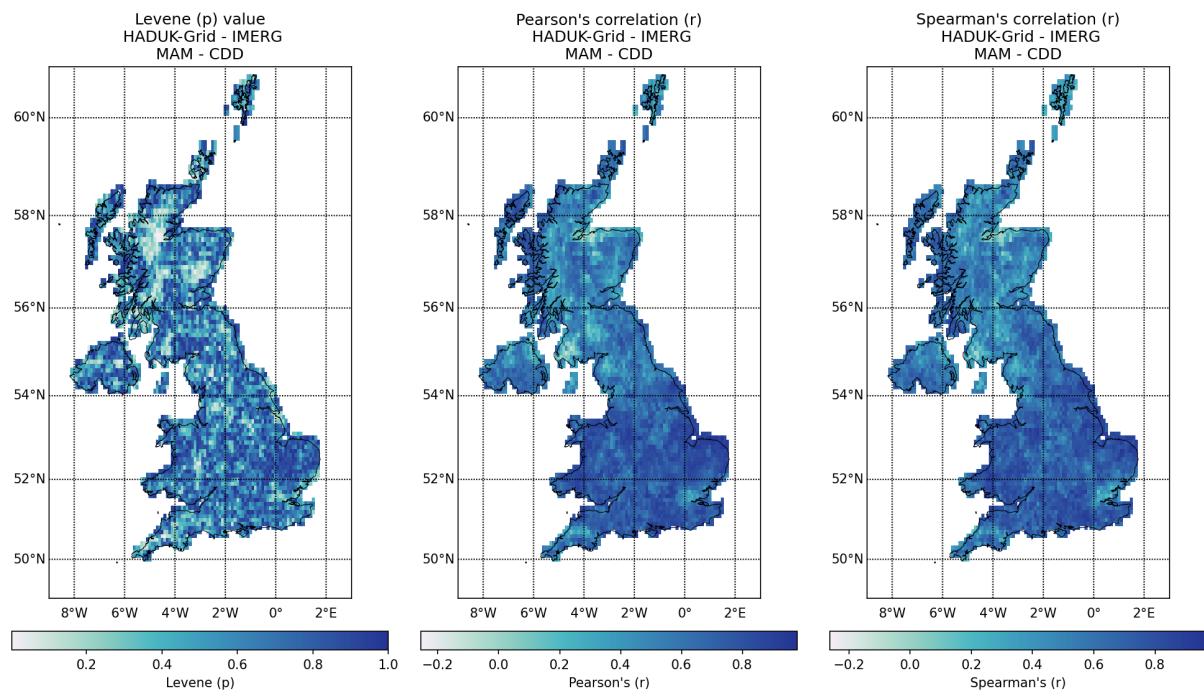


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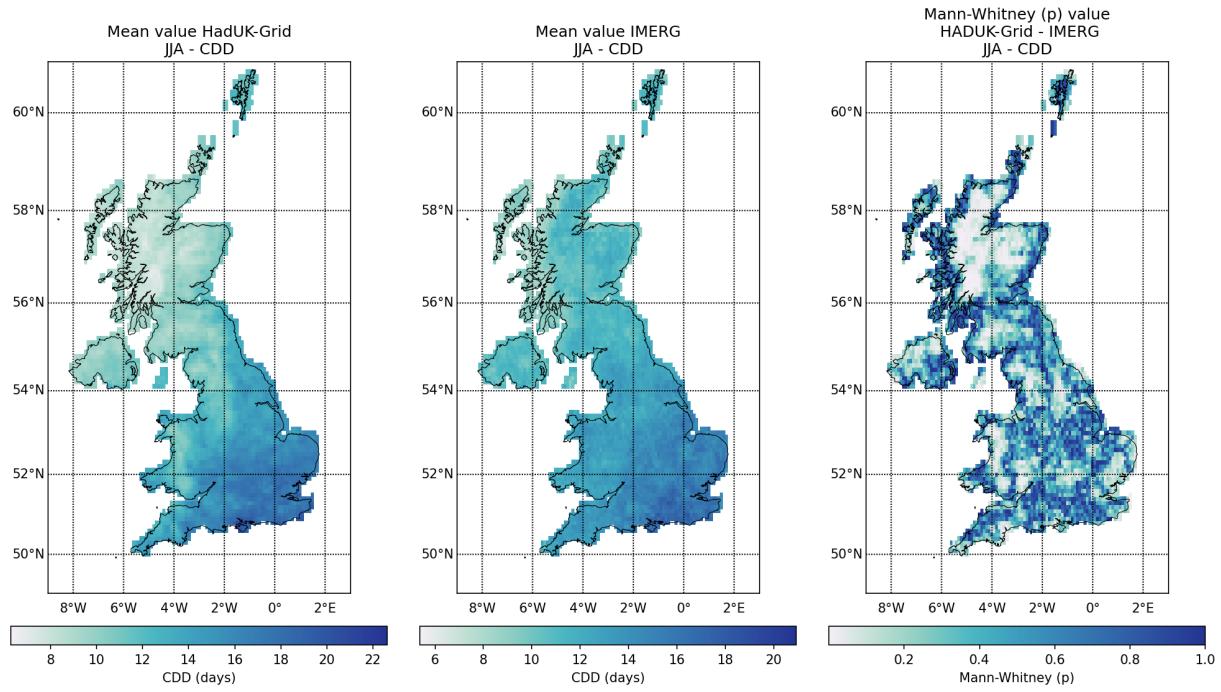


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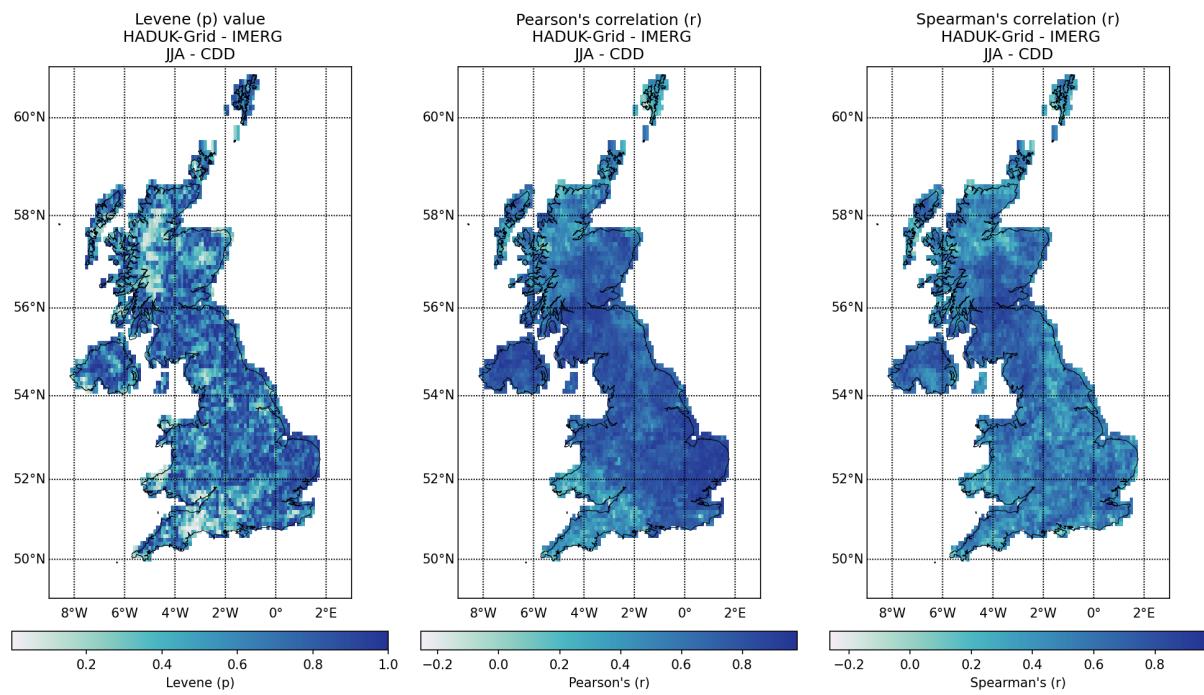


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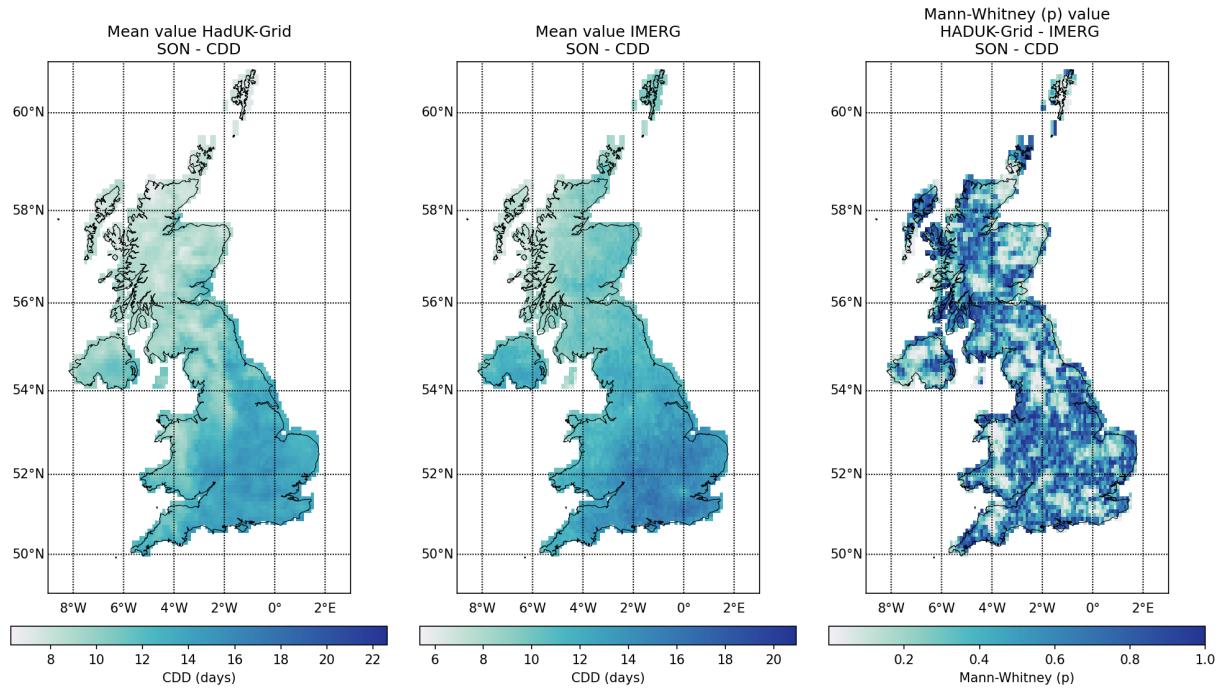


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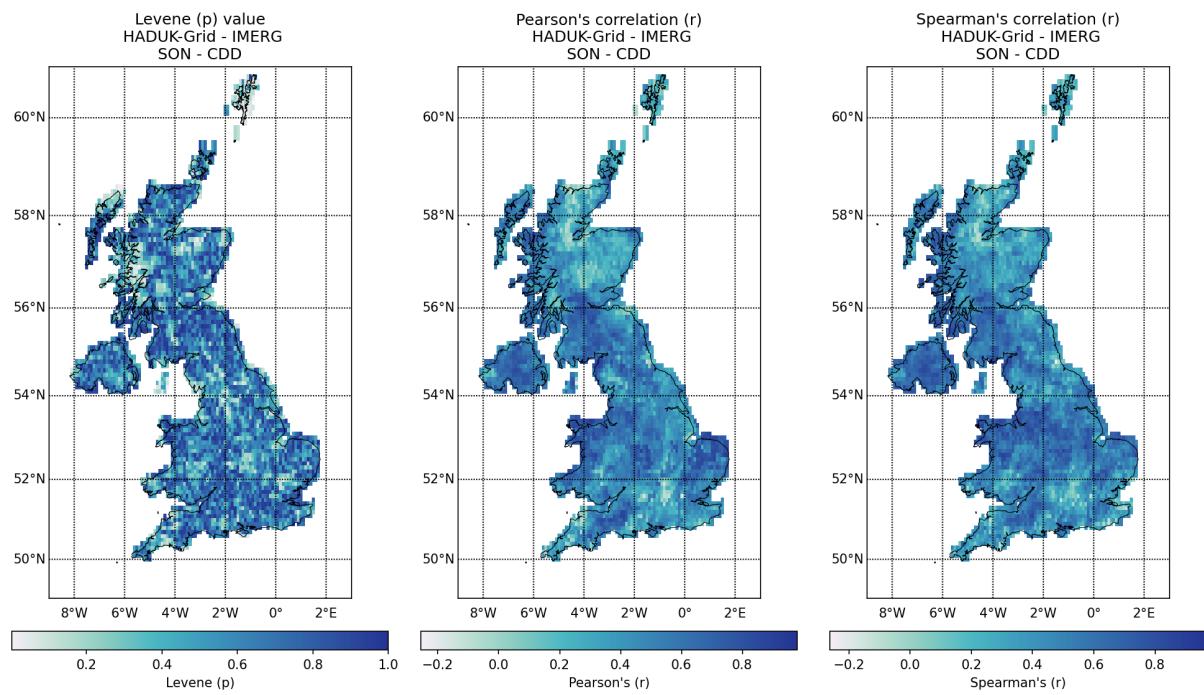


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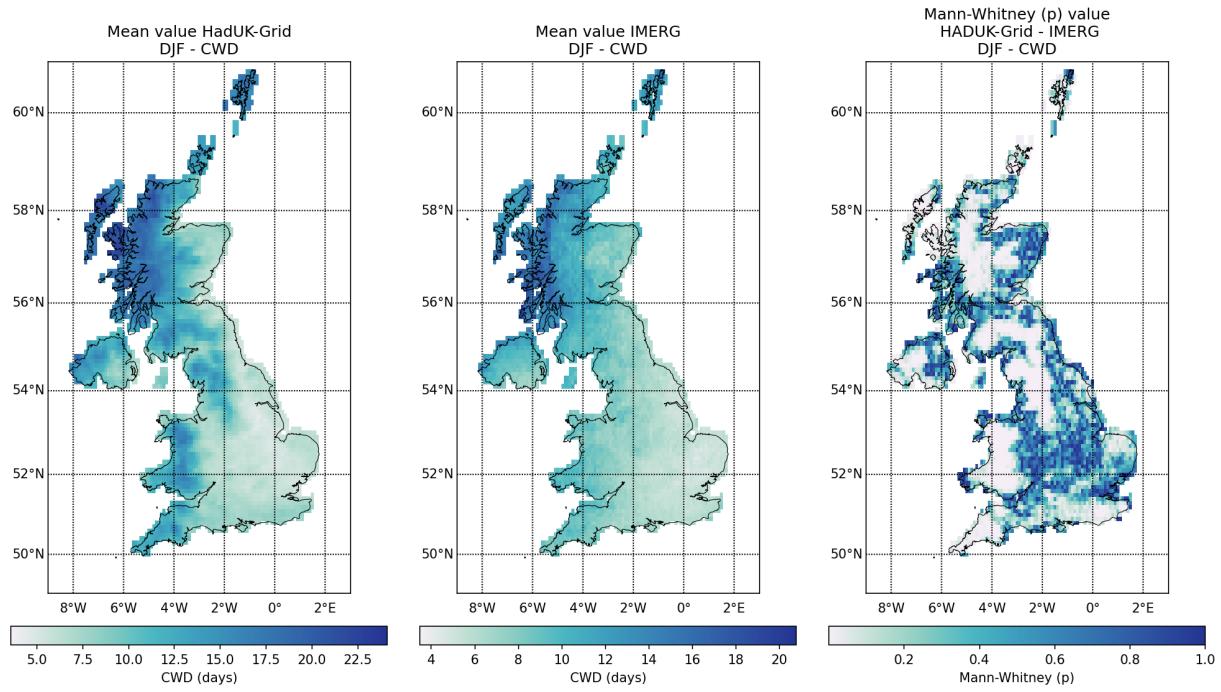


Figure 4: Spatial distribution of CWD values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

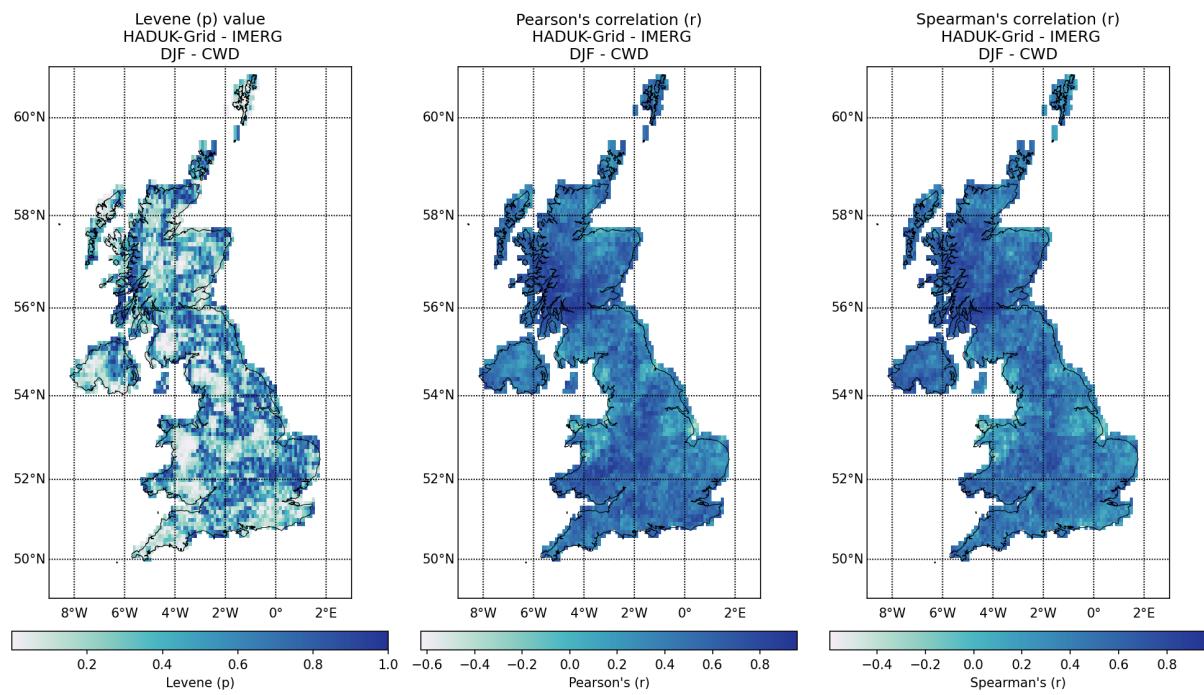


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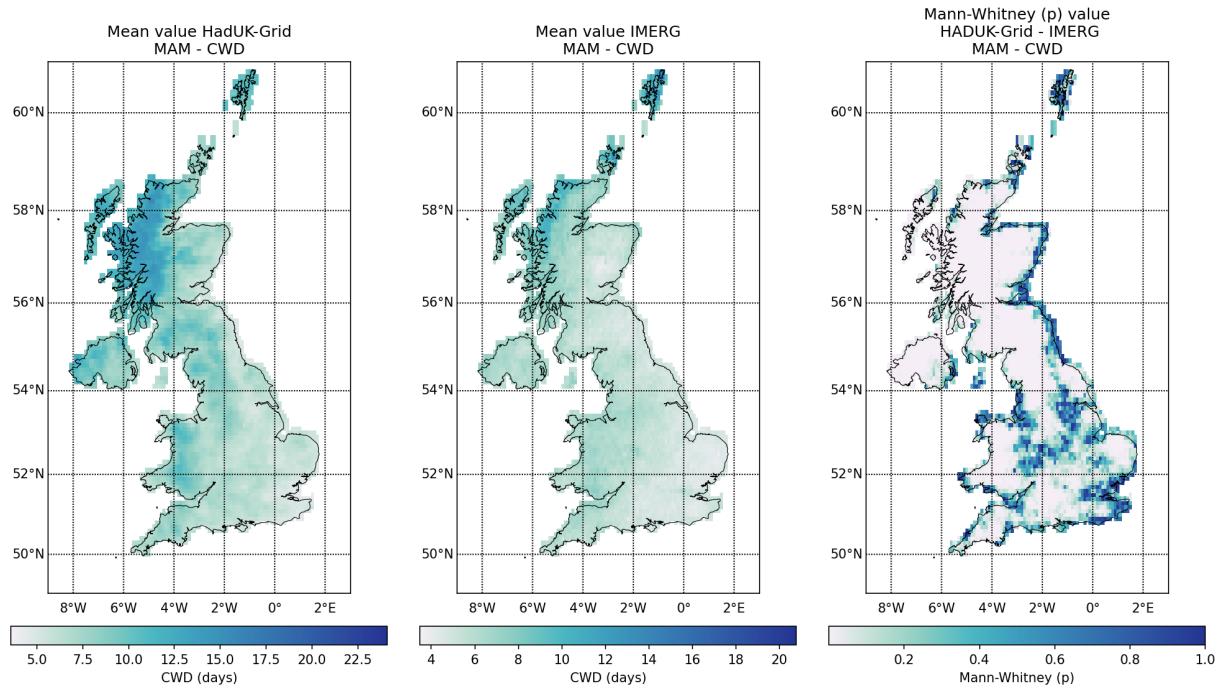


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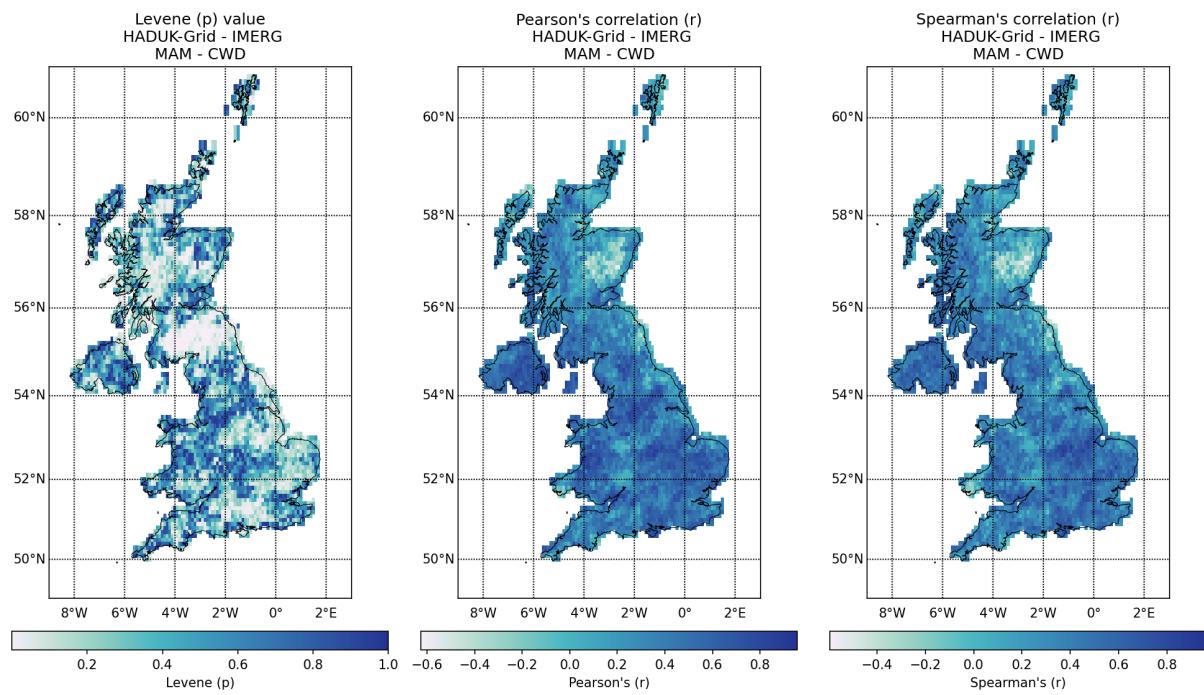


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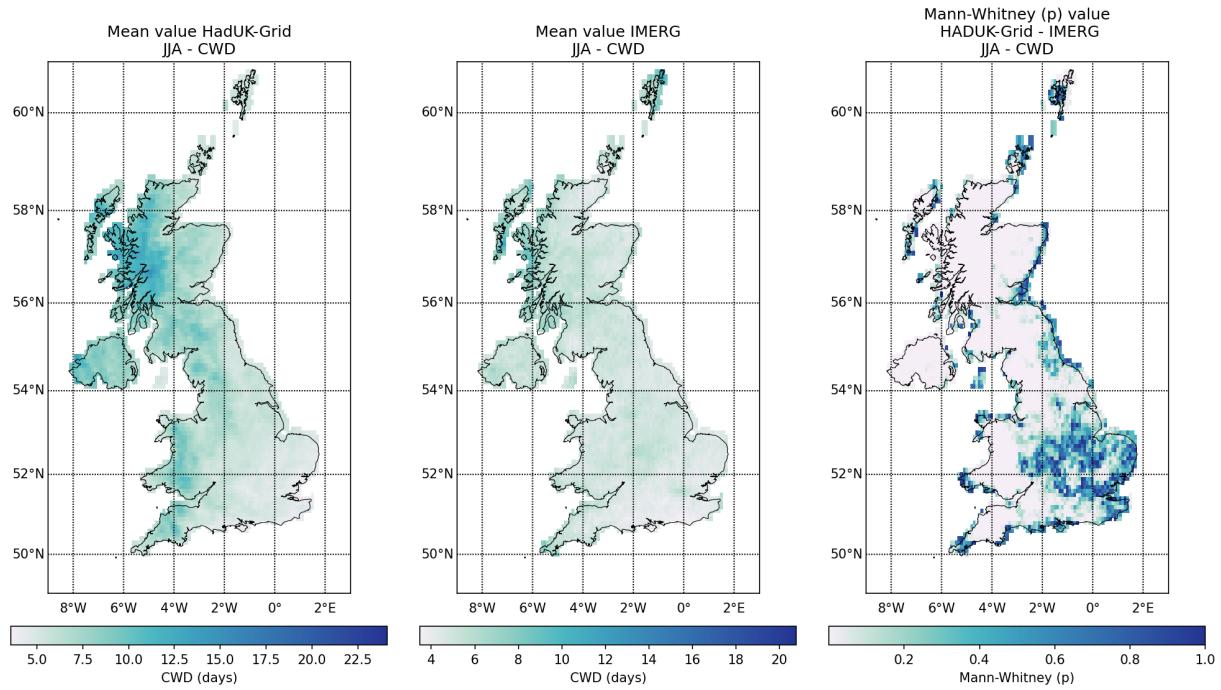


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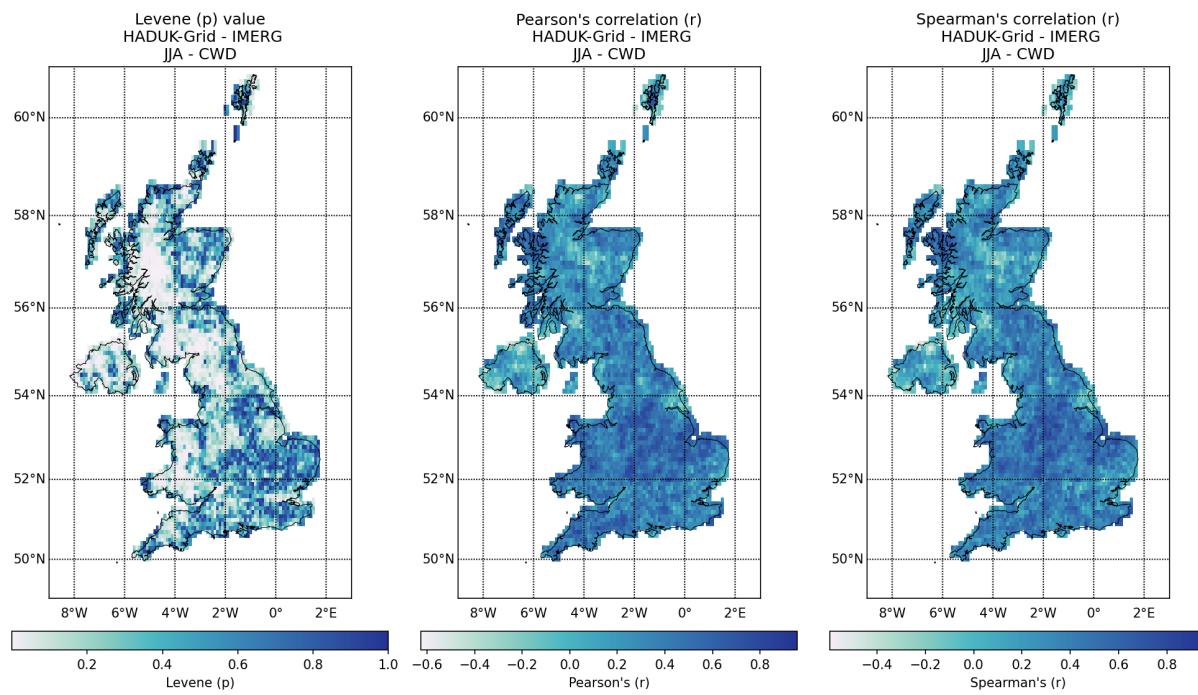


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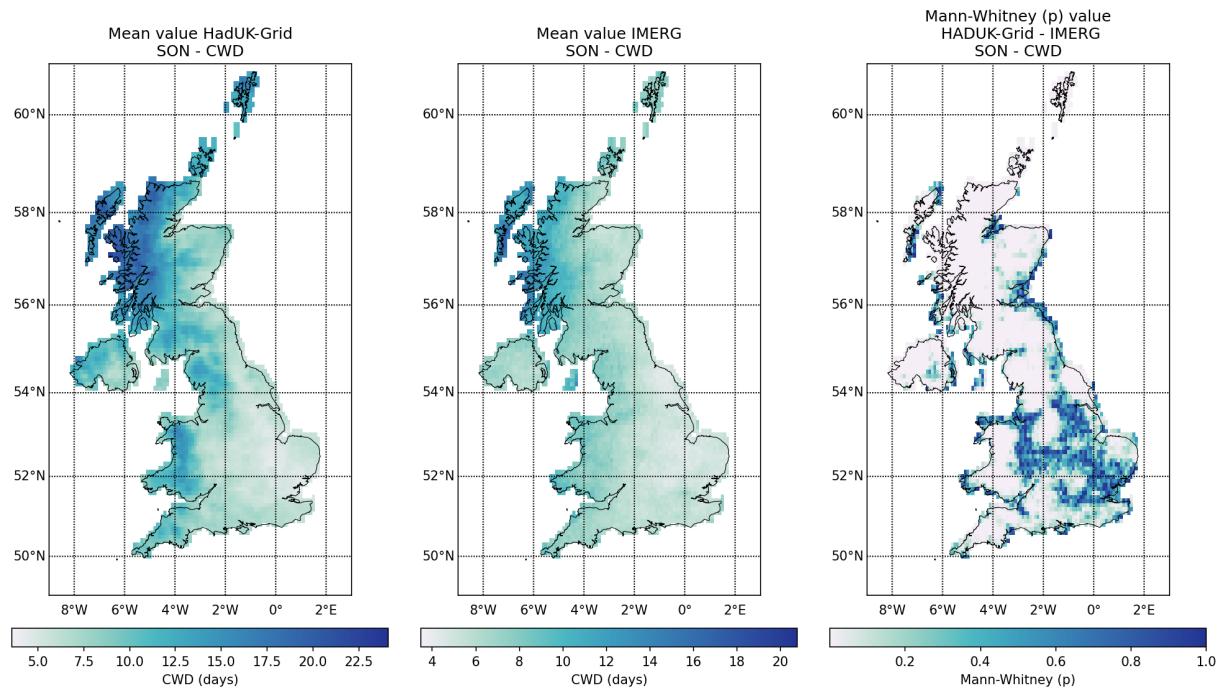


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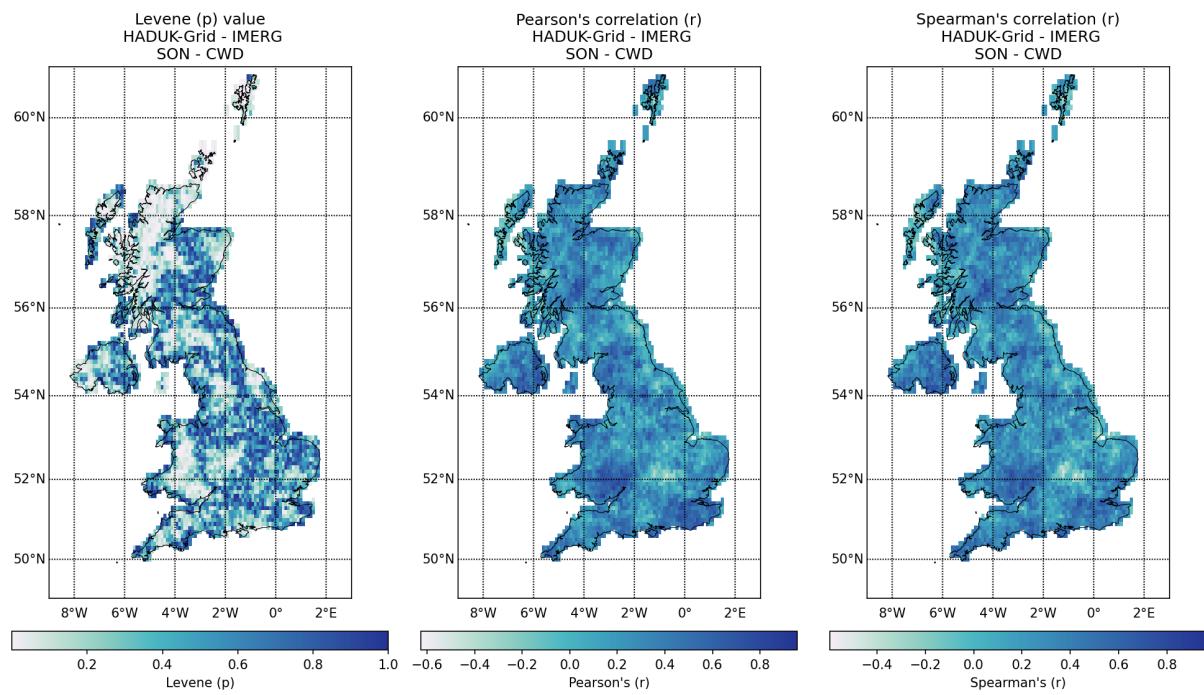


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1.1.2 ERA5 DATA

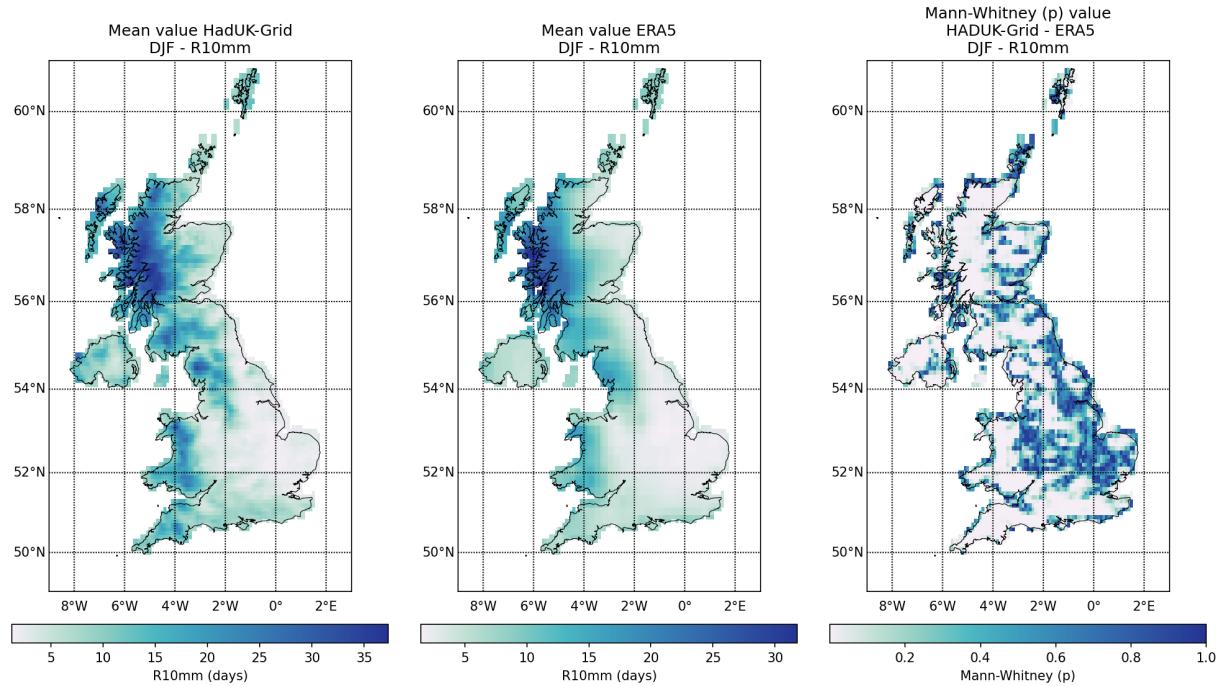


Figure 5: Spatial distribution of R10mm values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

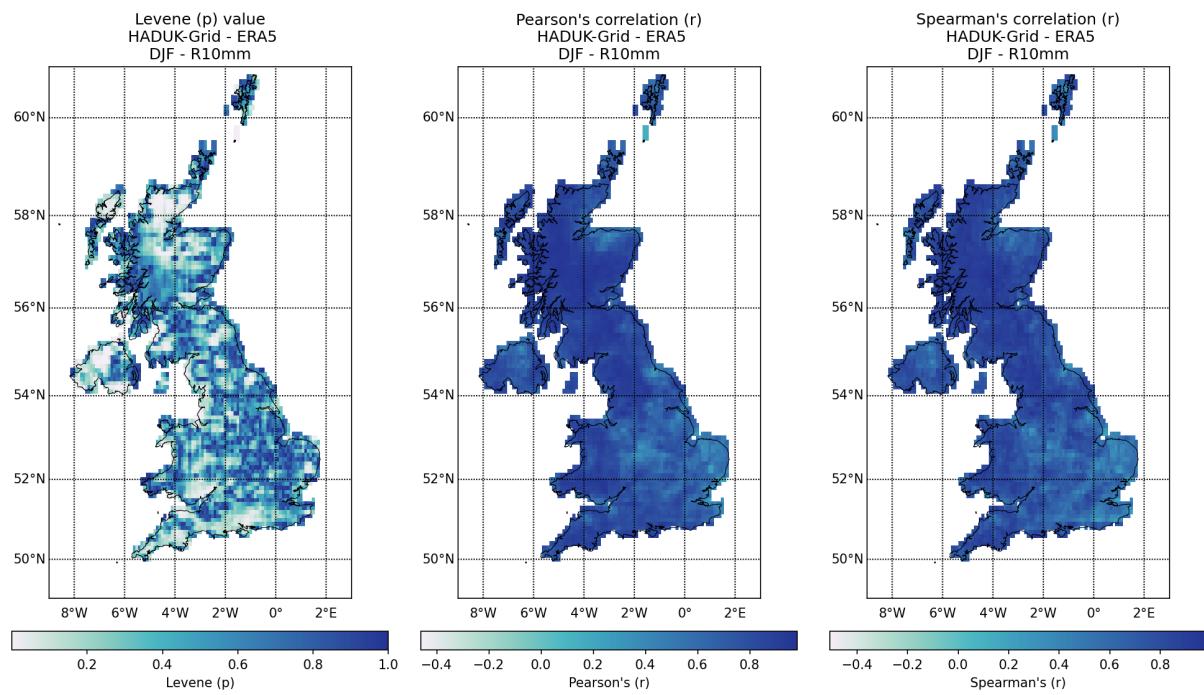


Figure 5: Spatial distribution of R10mm values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

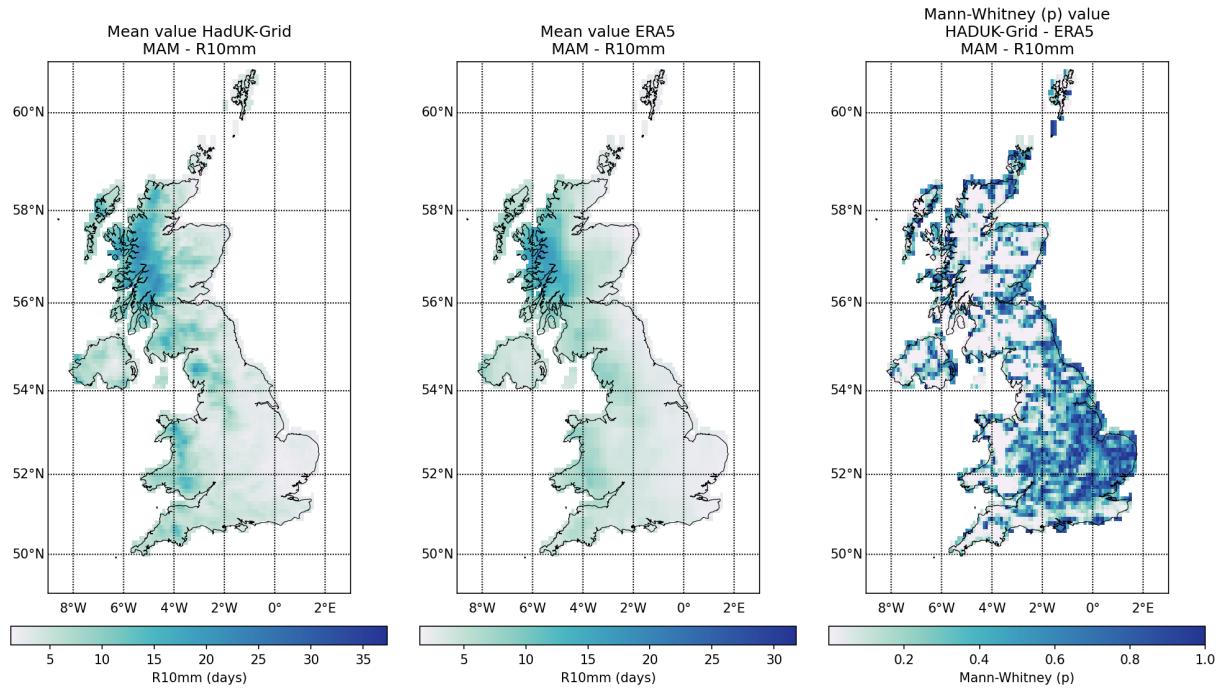


Figure 5: Spatial distribution of R10mm values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

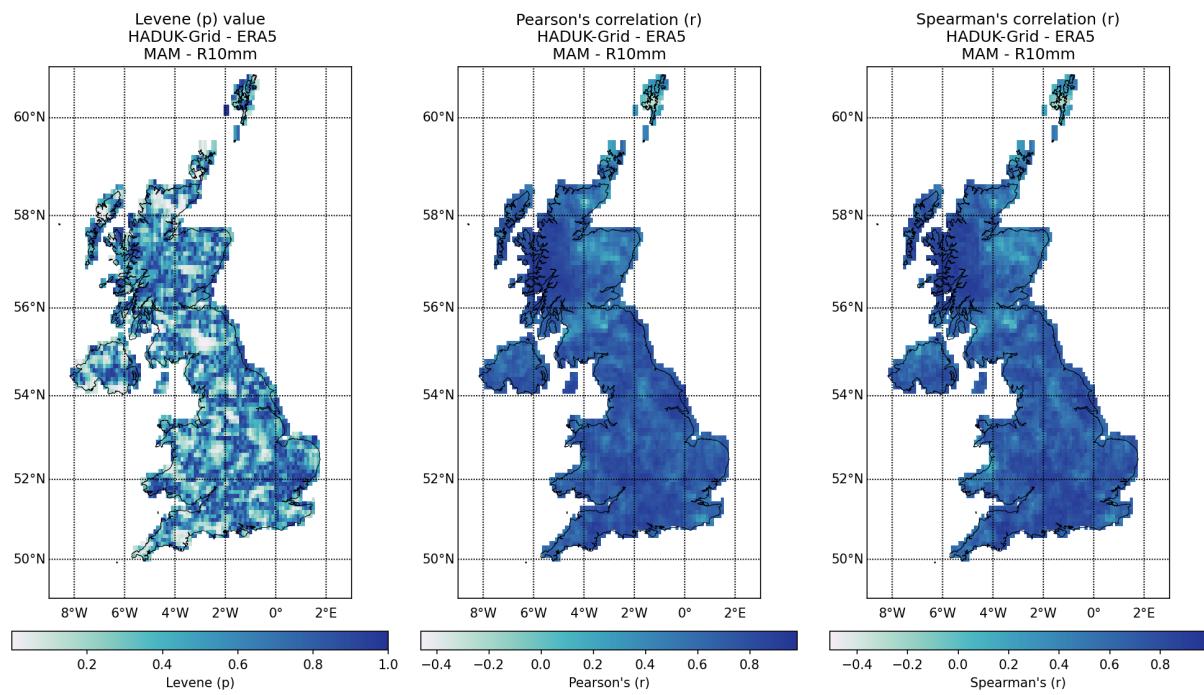


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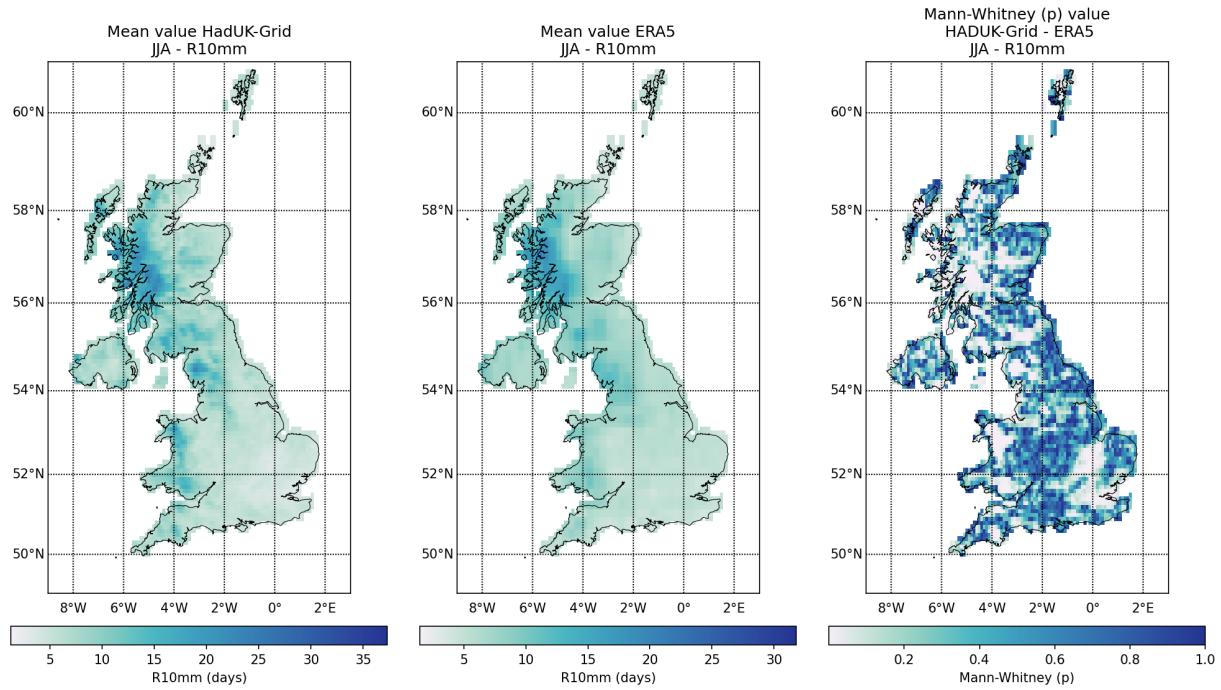


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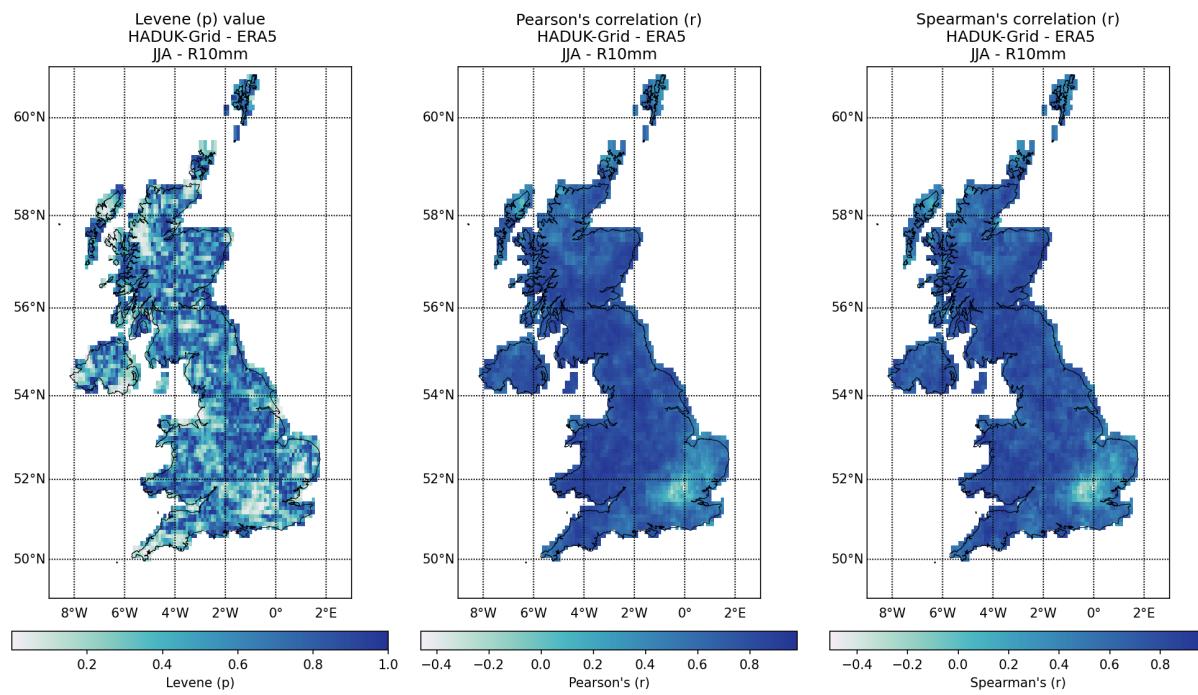


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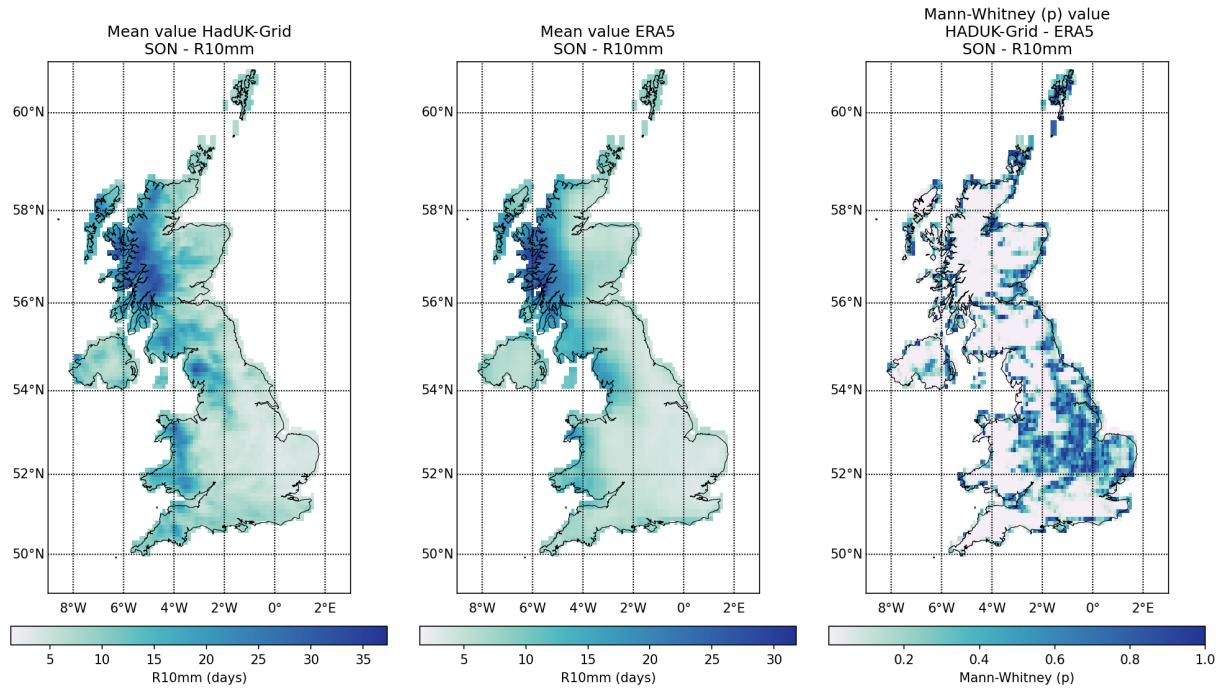


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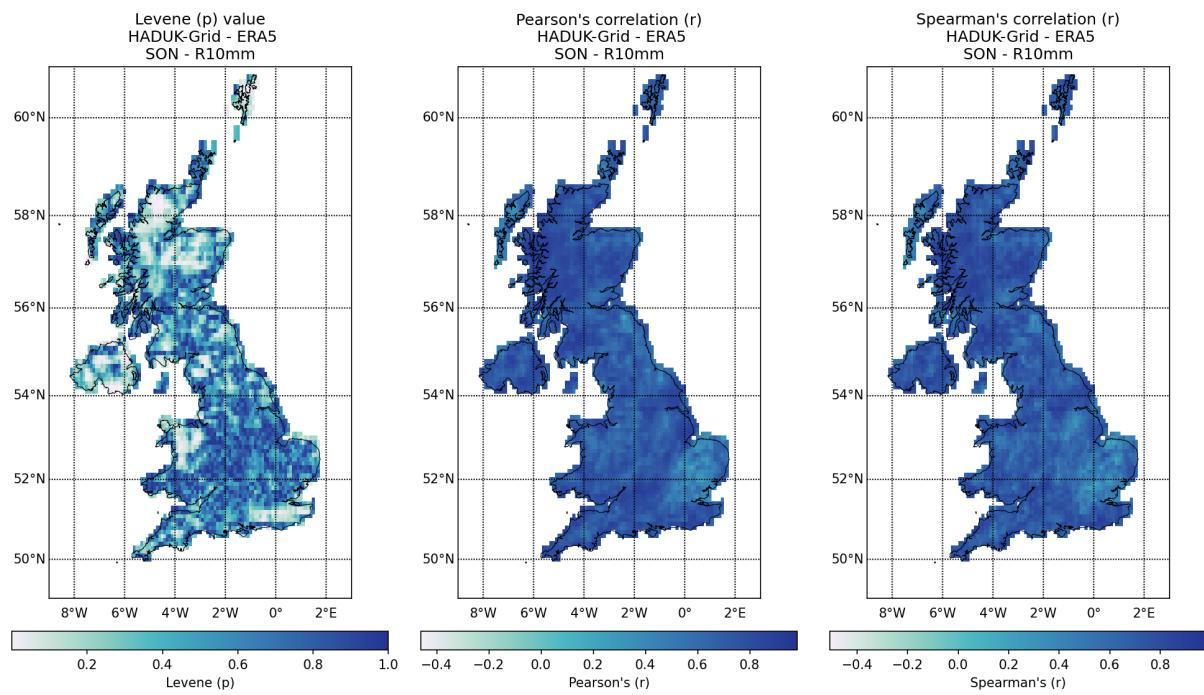


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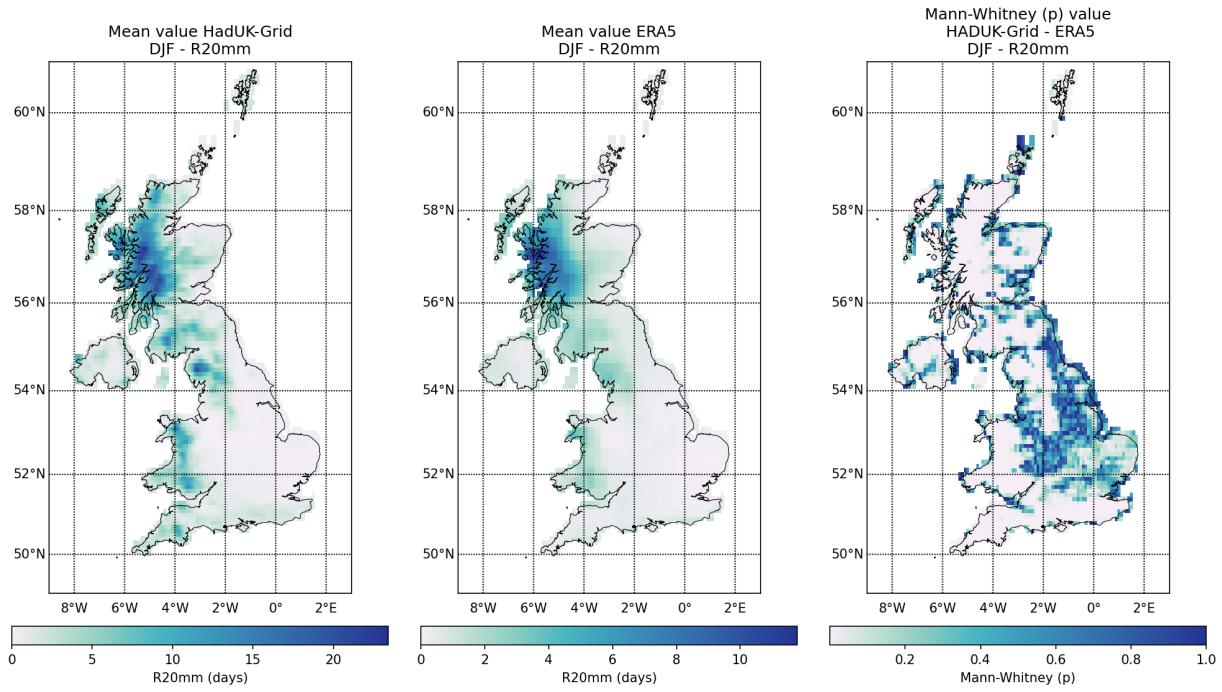


Figure 6: Spatial distribution of R20mm values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

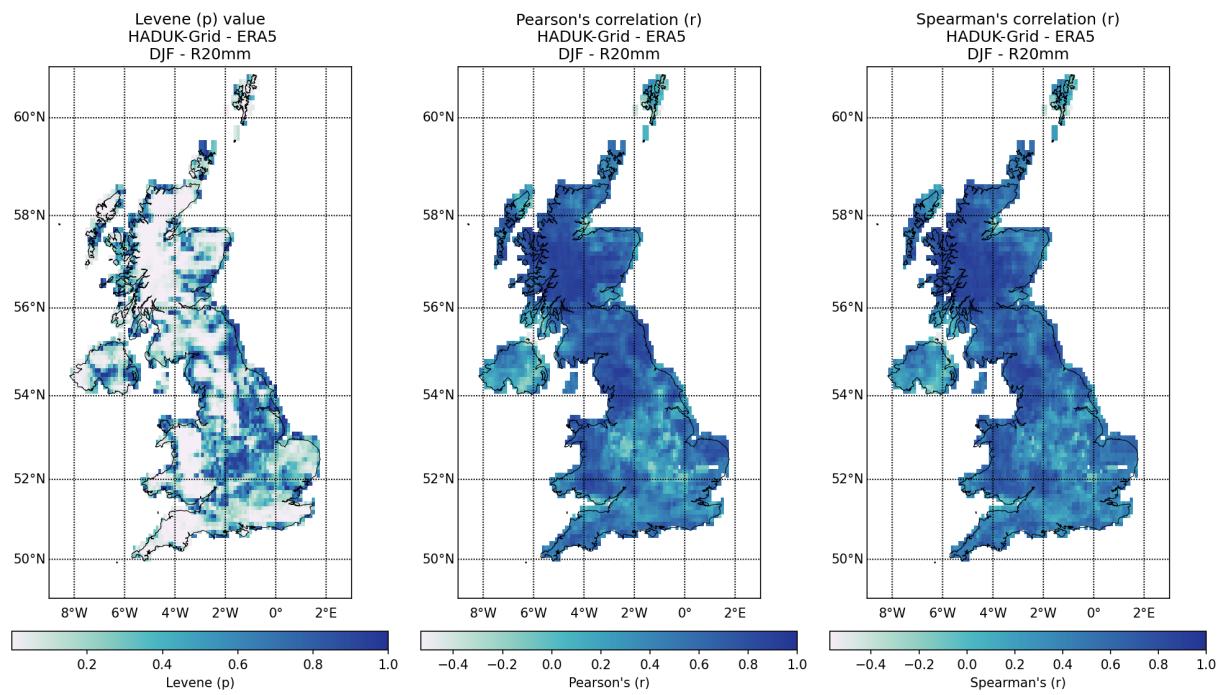


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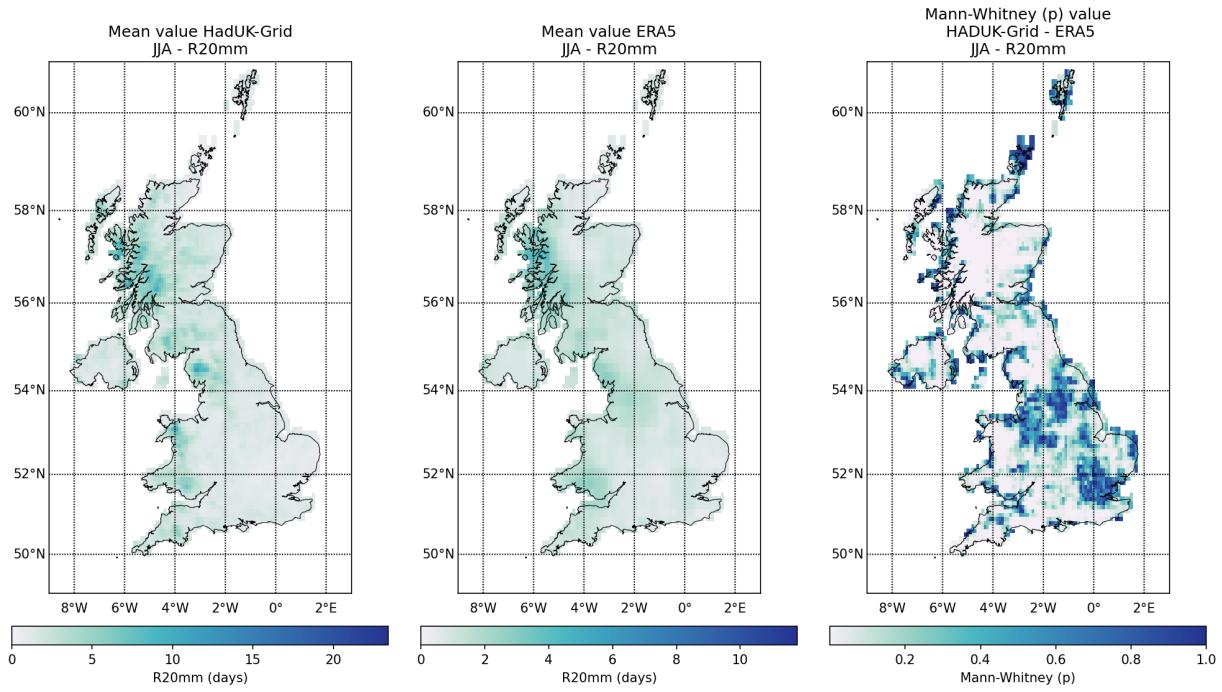


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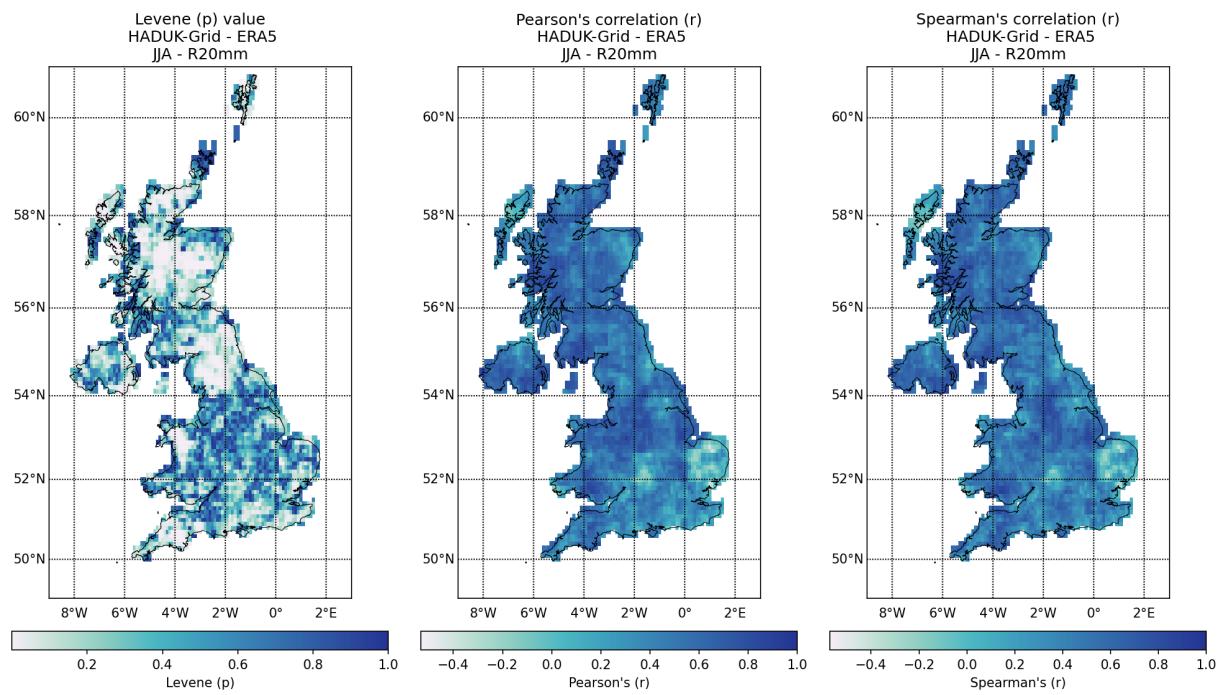


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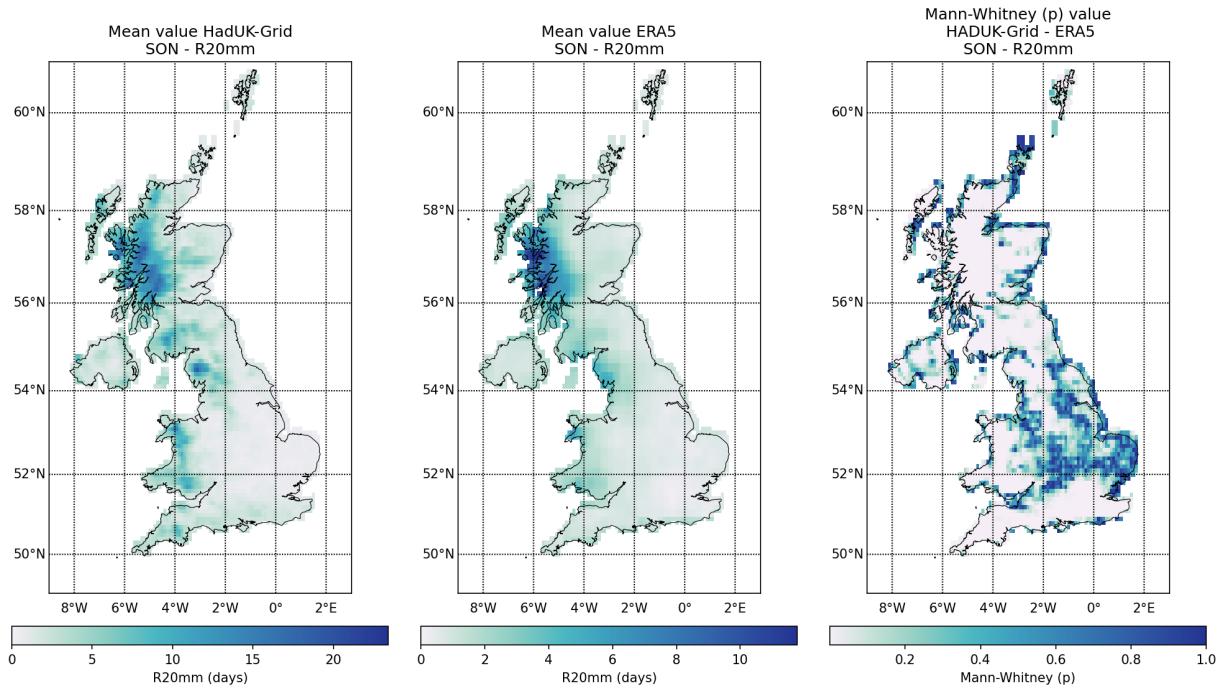


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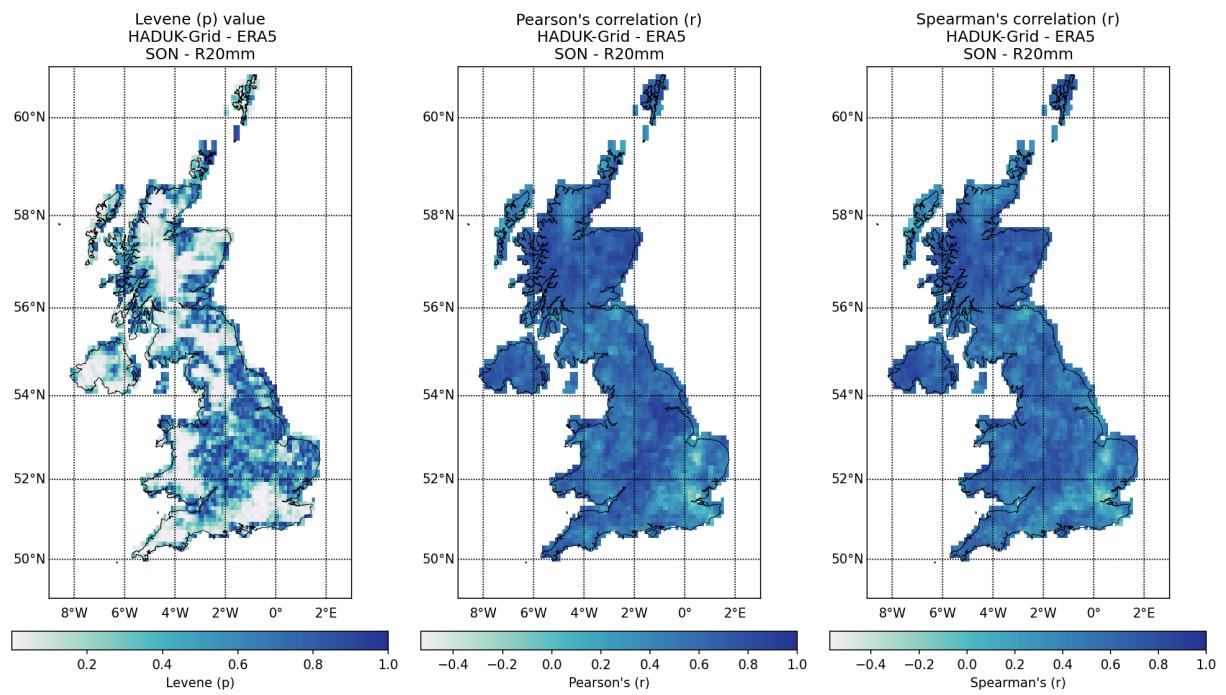


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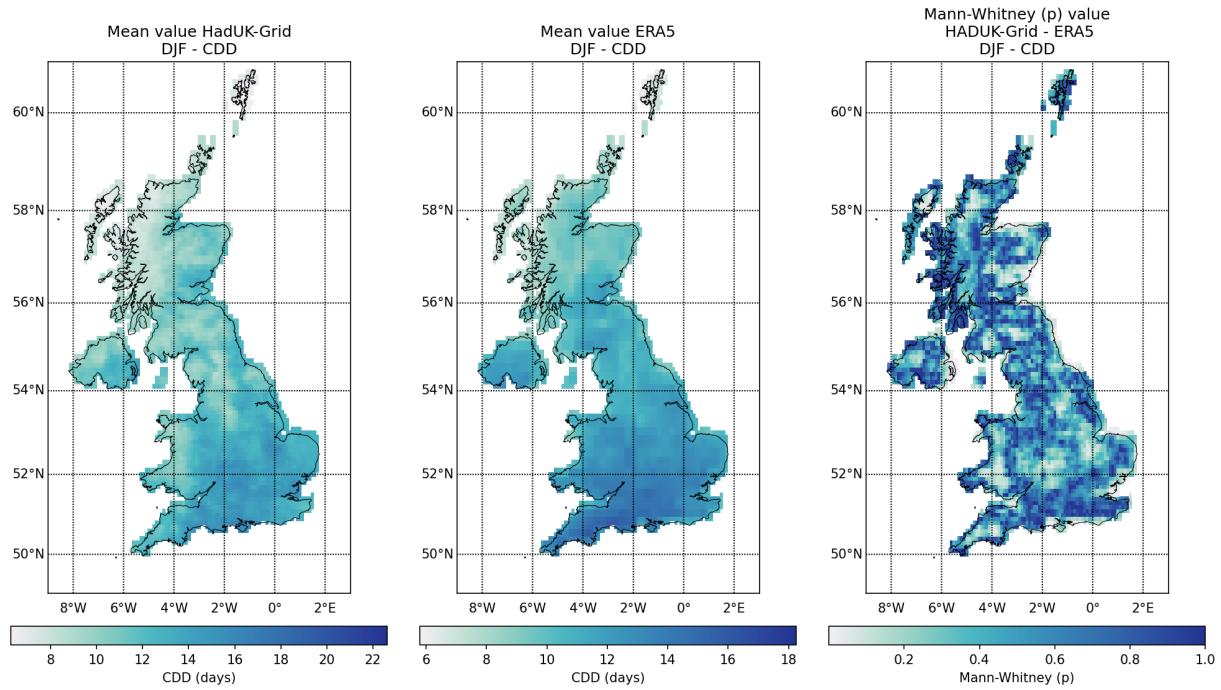


Figure 7: Spatial distribution of CDD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

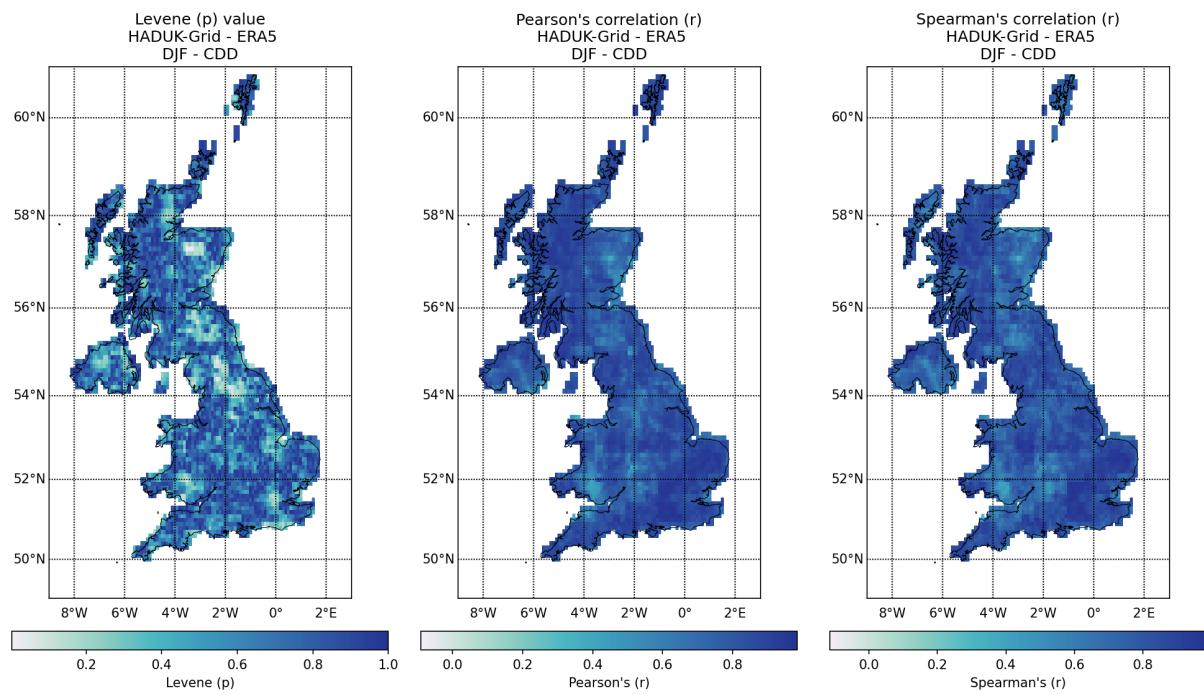


Figure 7: Spatial distribution of CDD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

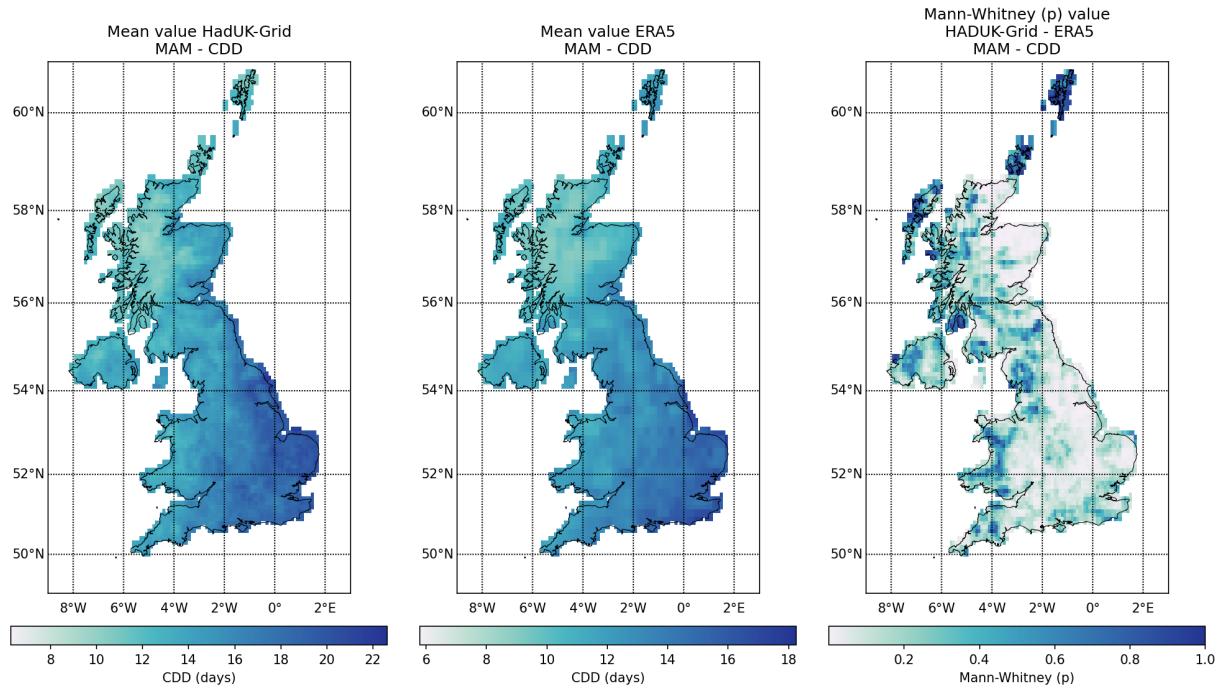


Figure 7: Spatial distribution of CDD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

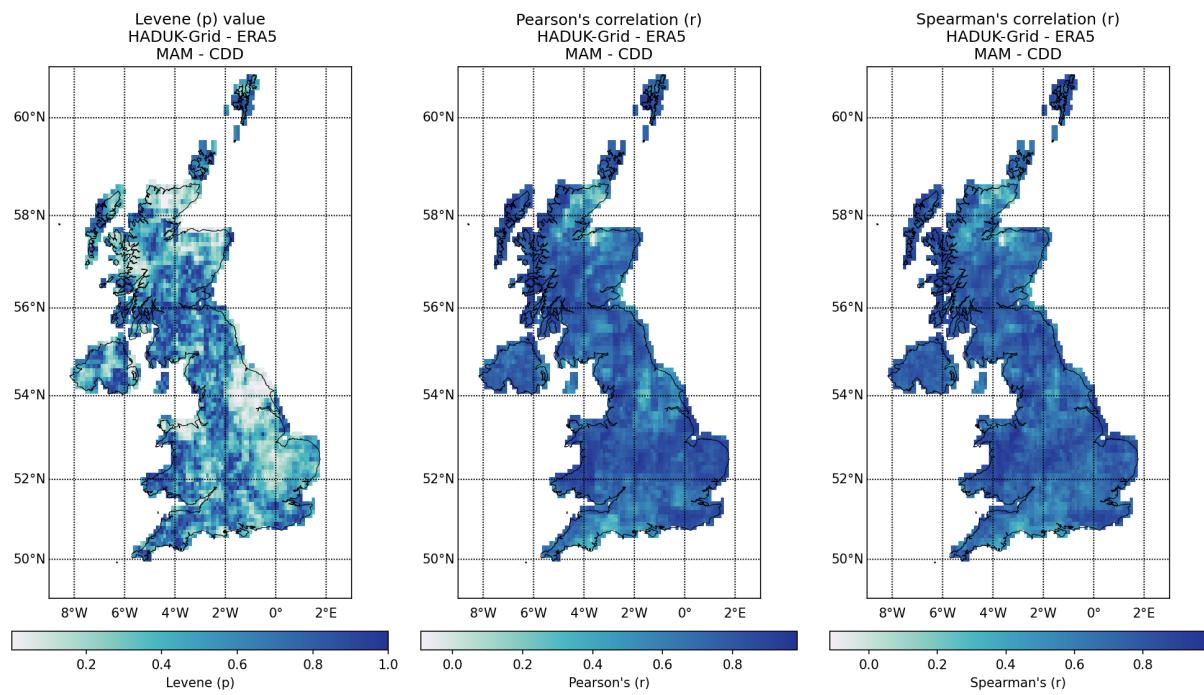


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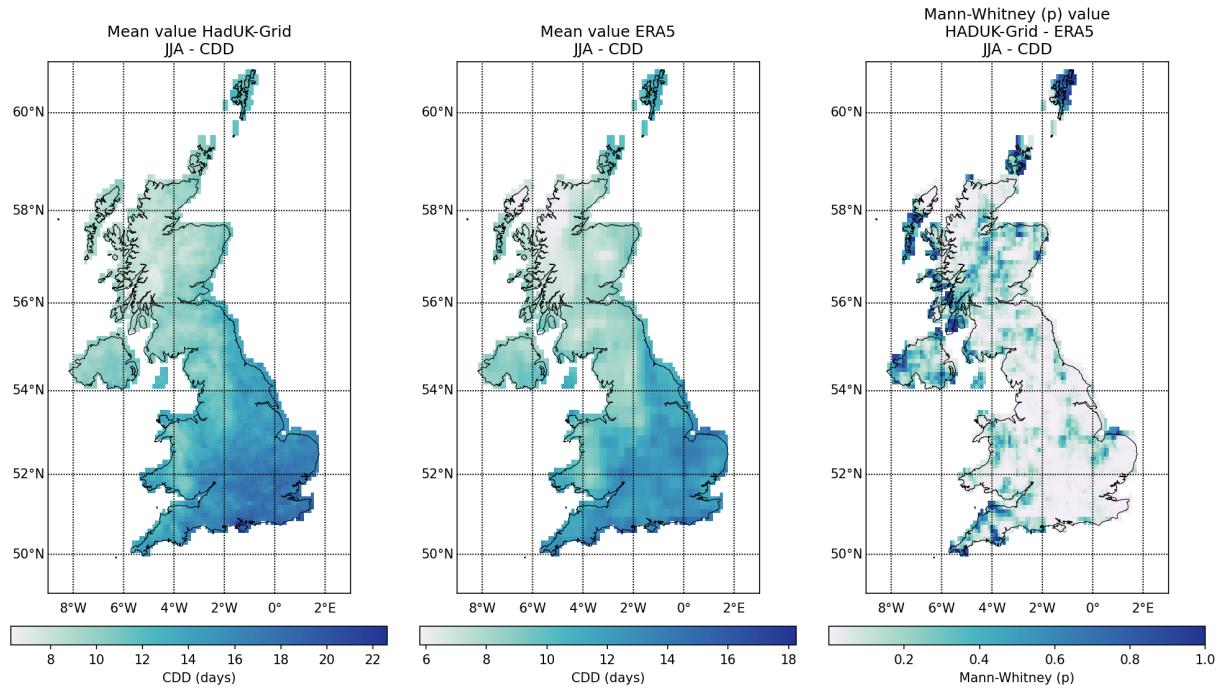


Figure 7: Spatial distribution of CDD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

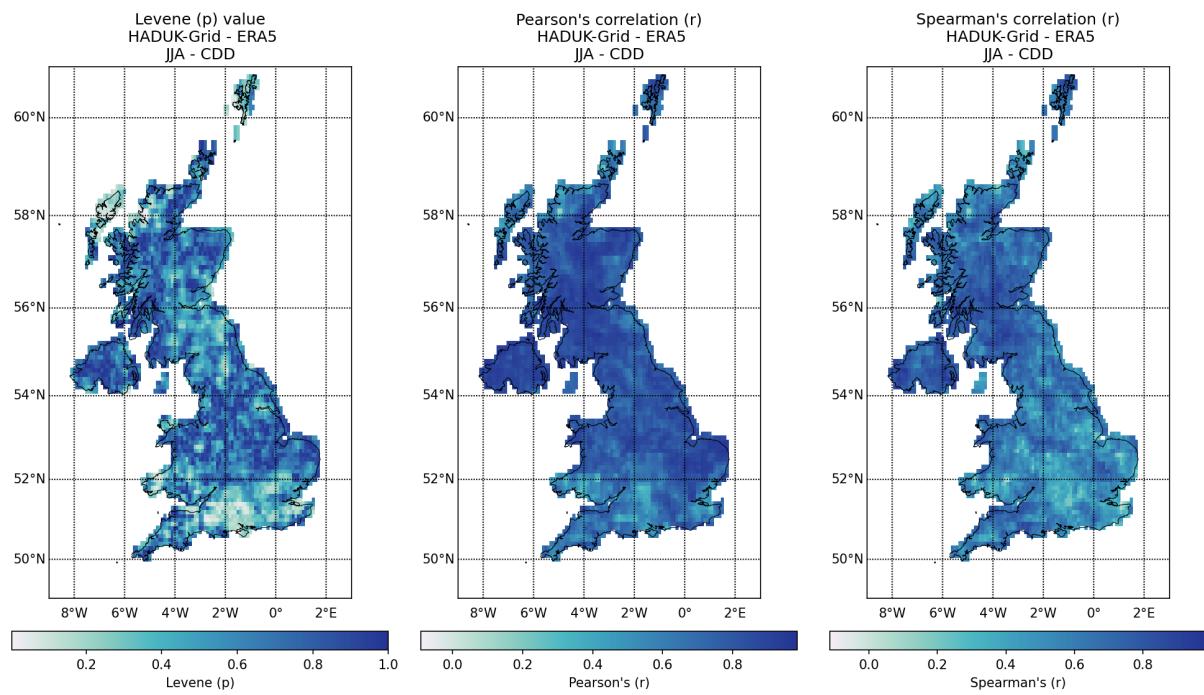


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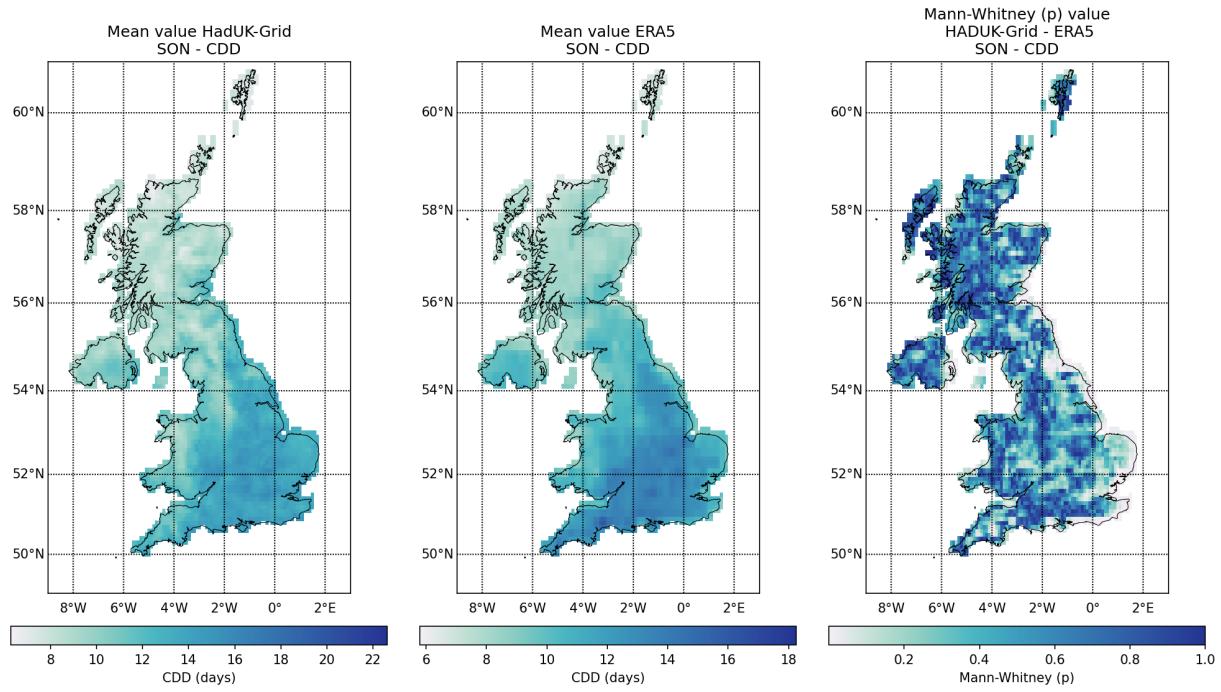


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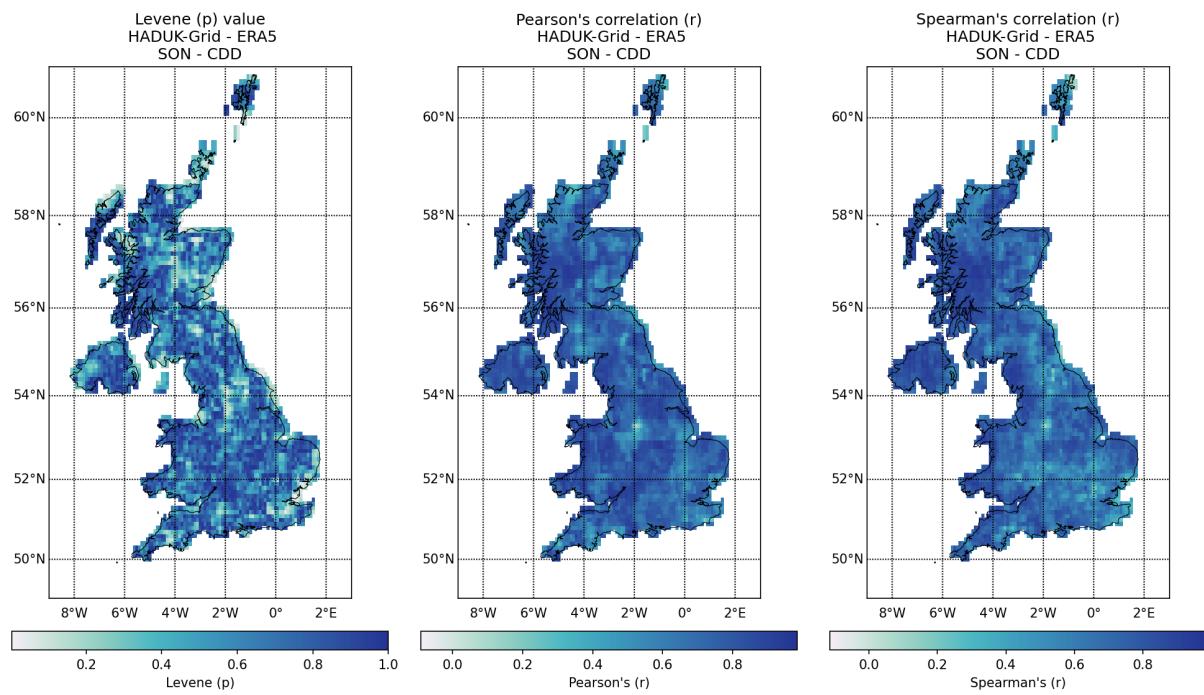


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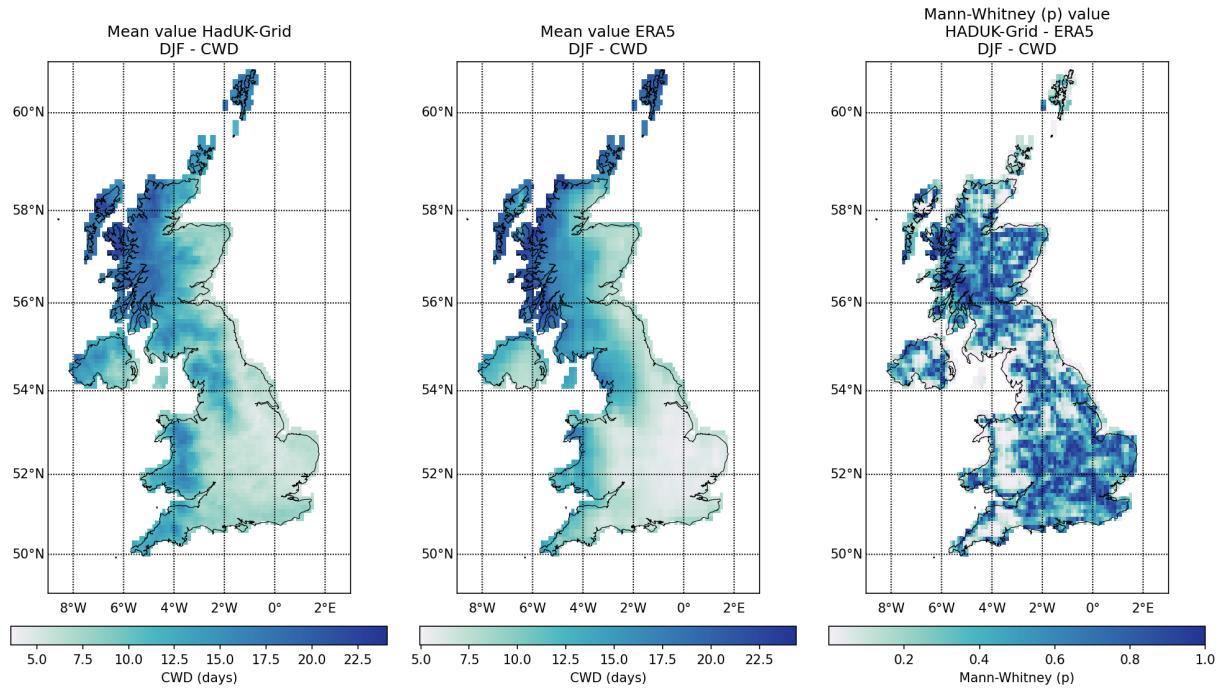


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

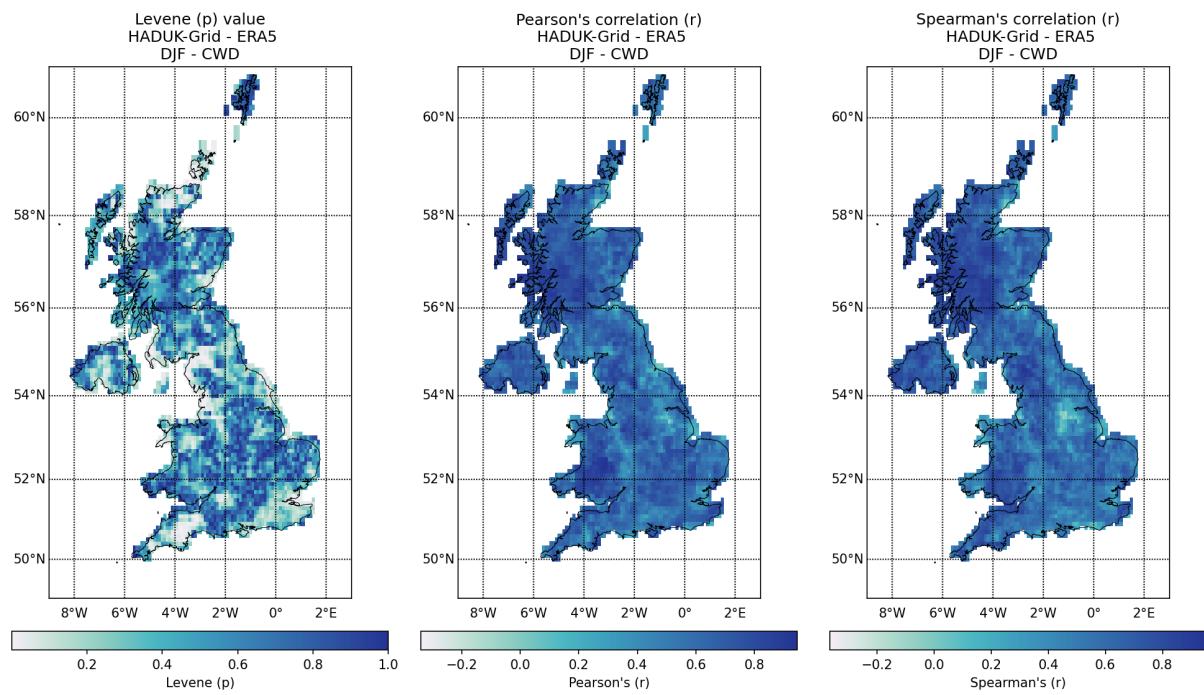


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

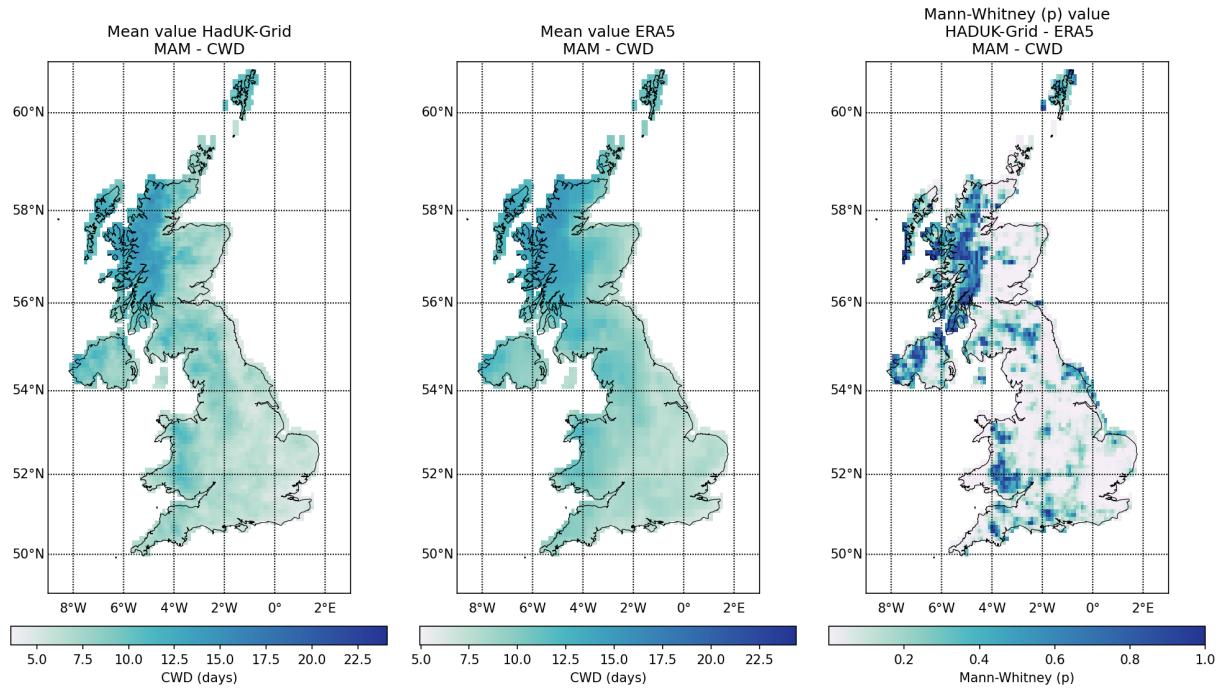


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

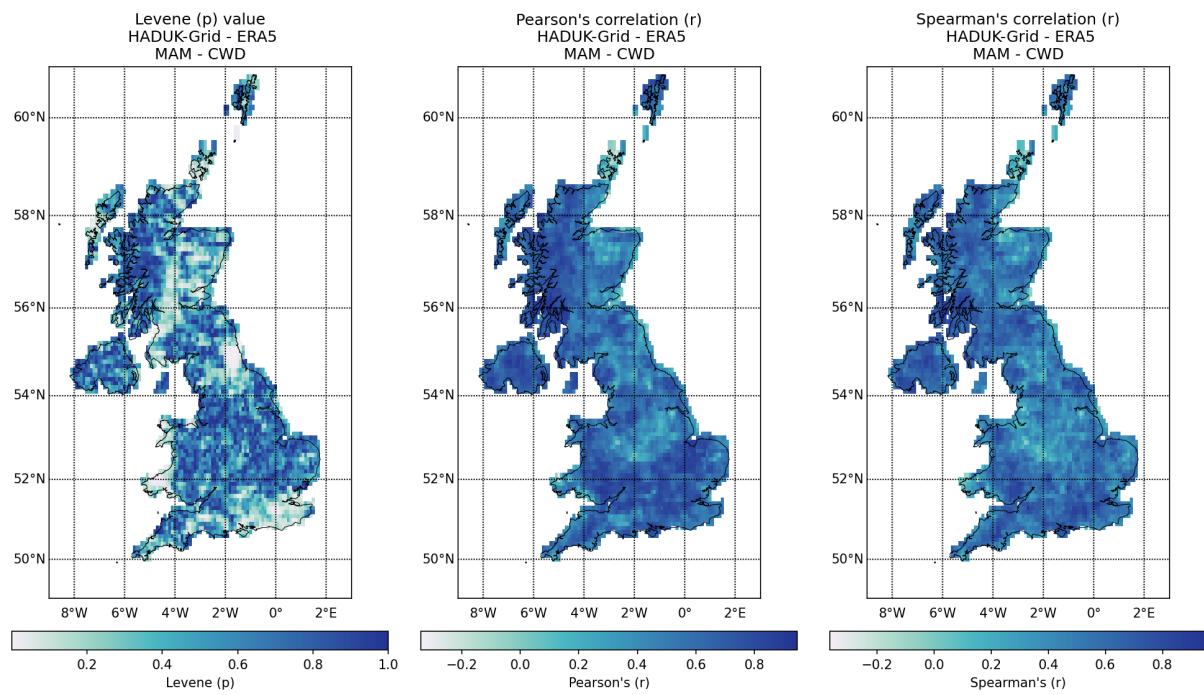


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

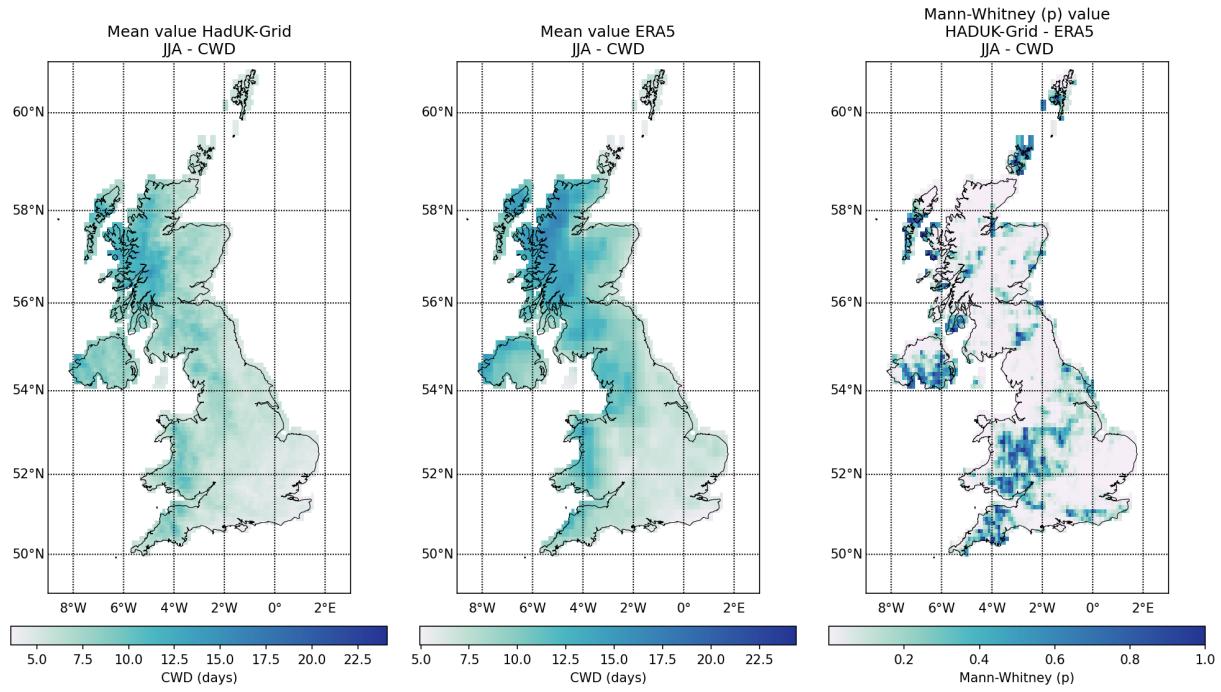


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

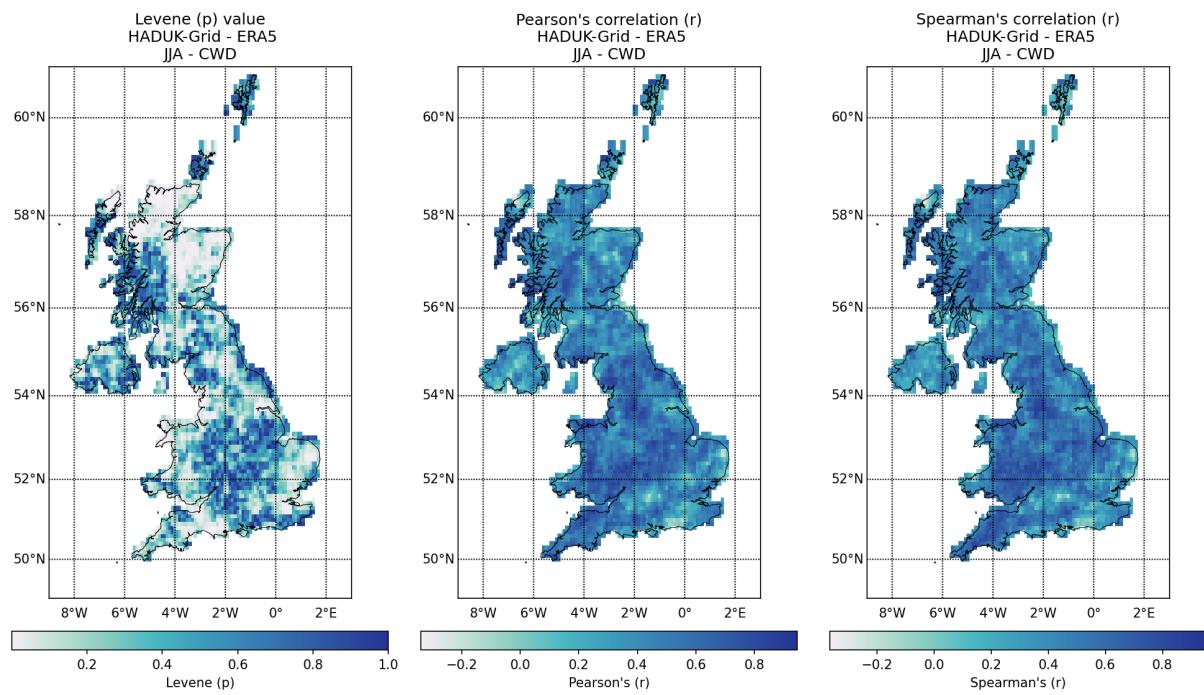


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

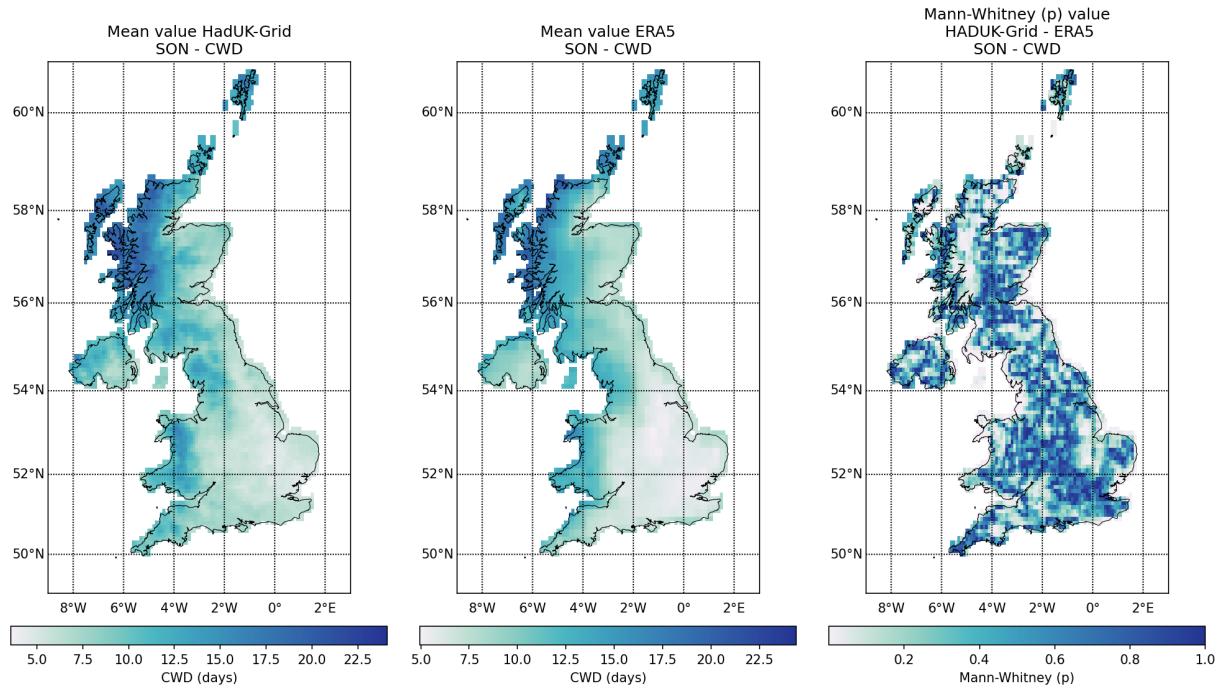


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

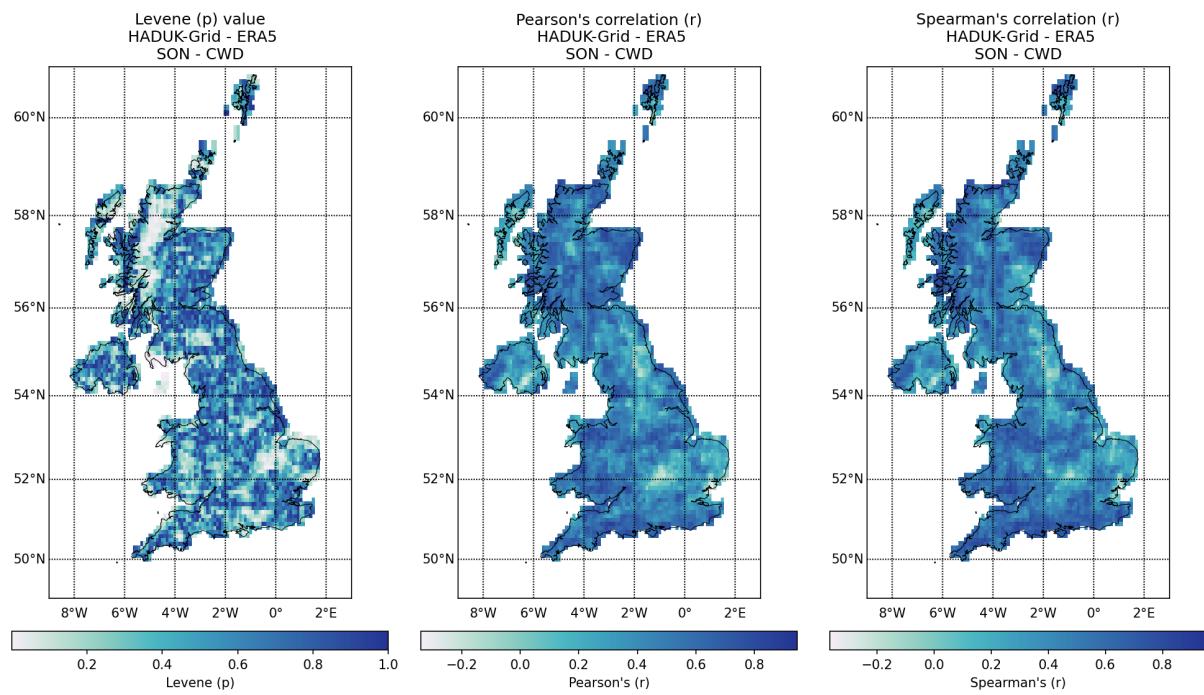


Figure 8: Spatial distribution of CWD values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

1.2 Indices based on station related thresholds - R95pTOT, R99TOT

1.2.1 IMERG DATA

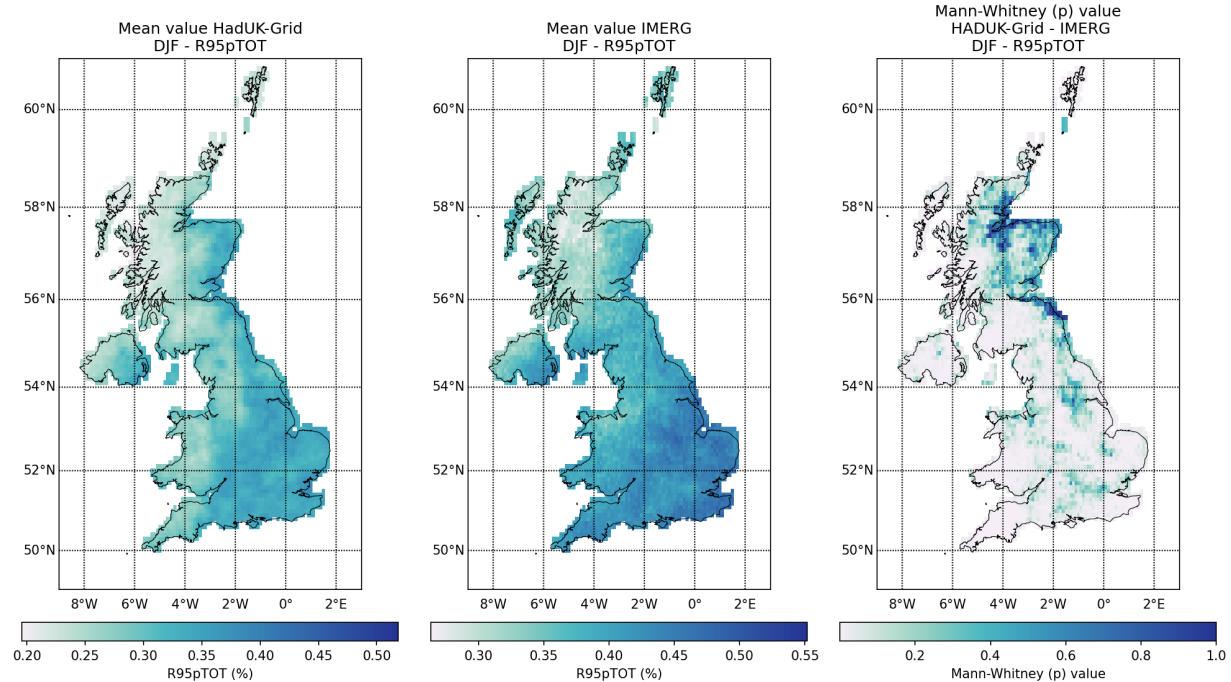


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

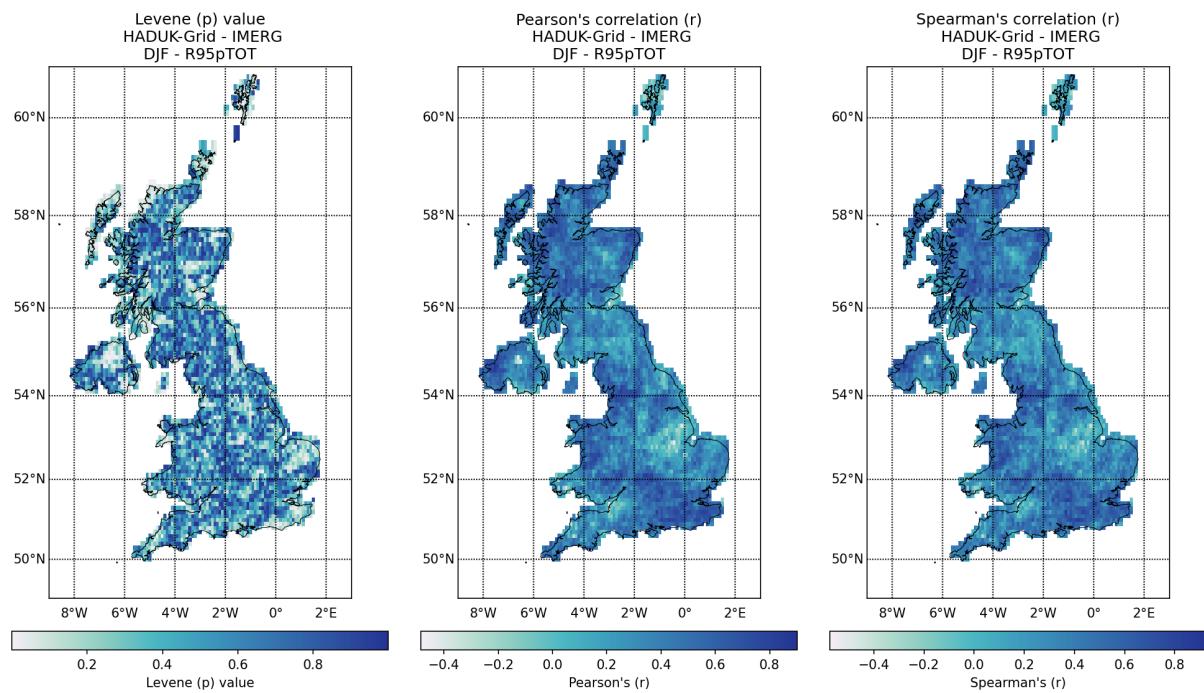


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

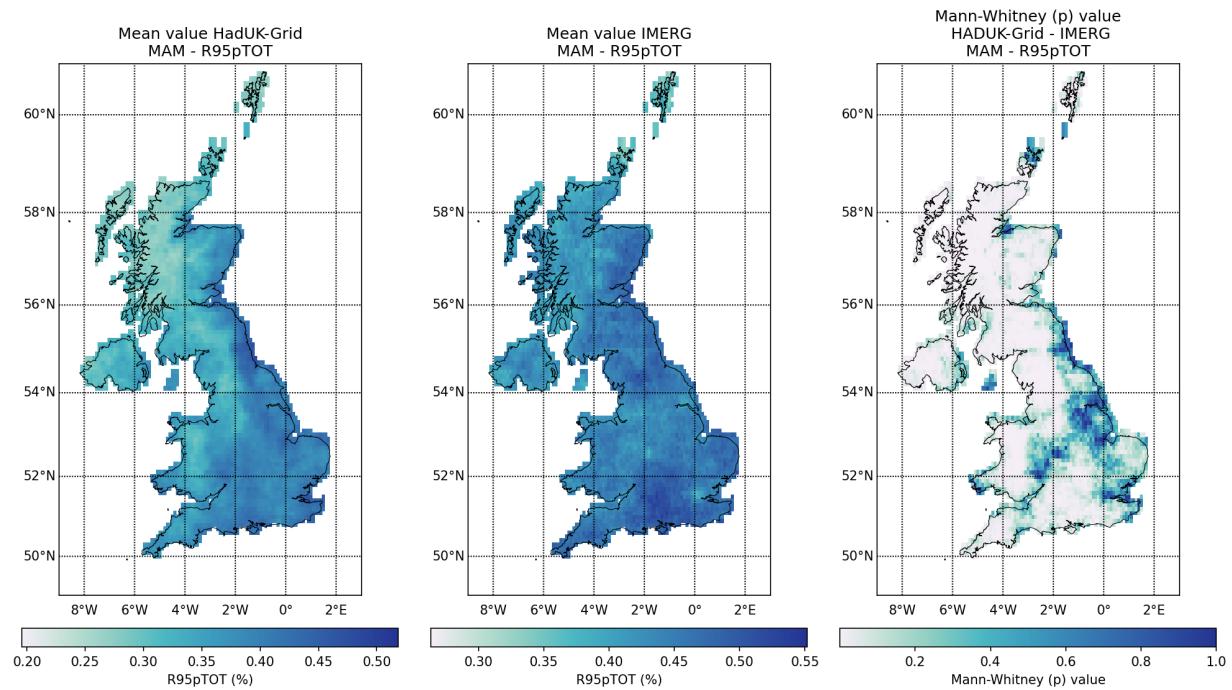


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

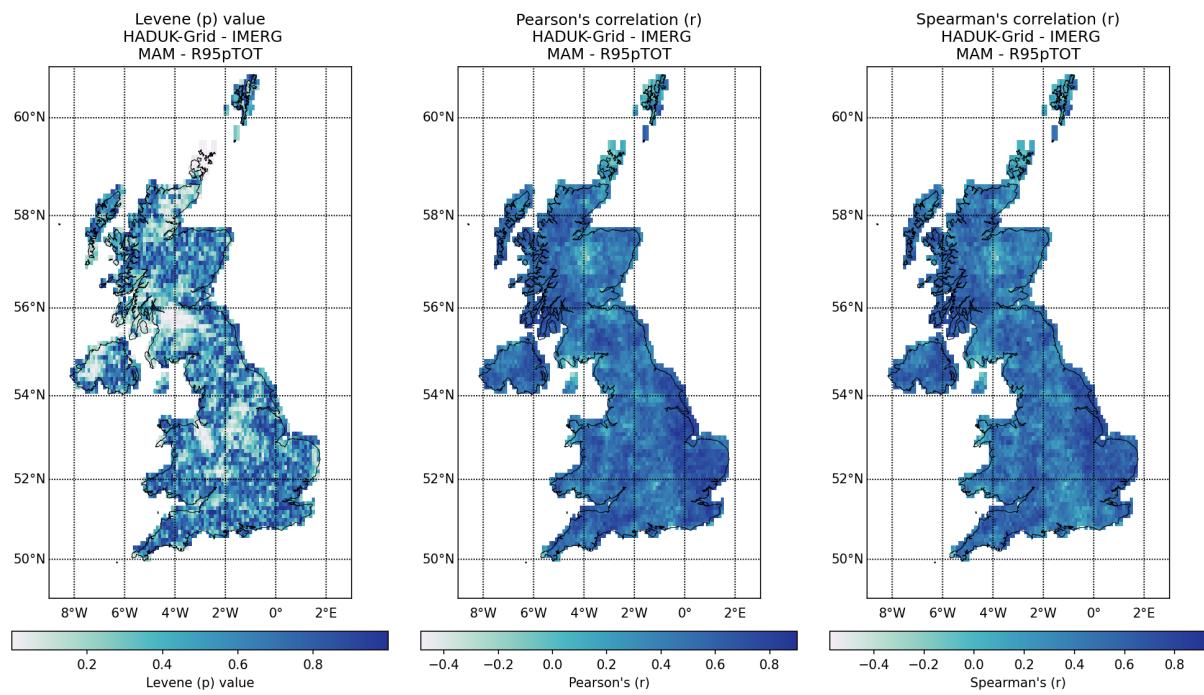


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

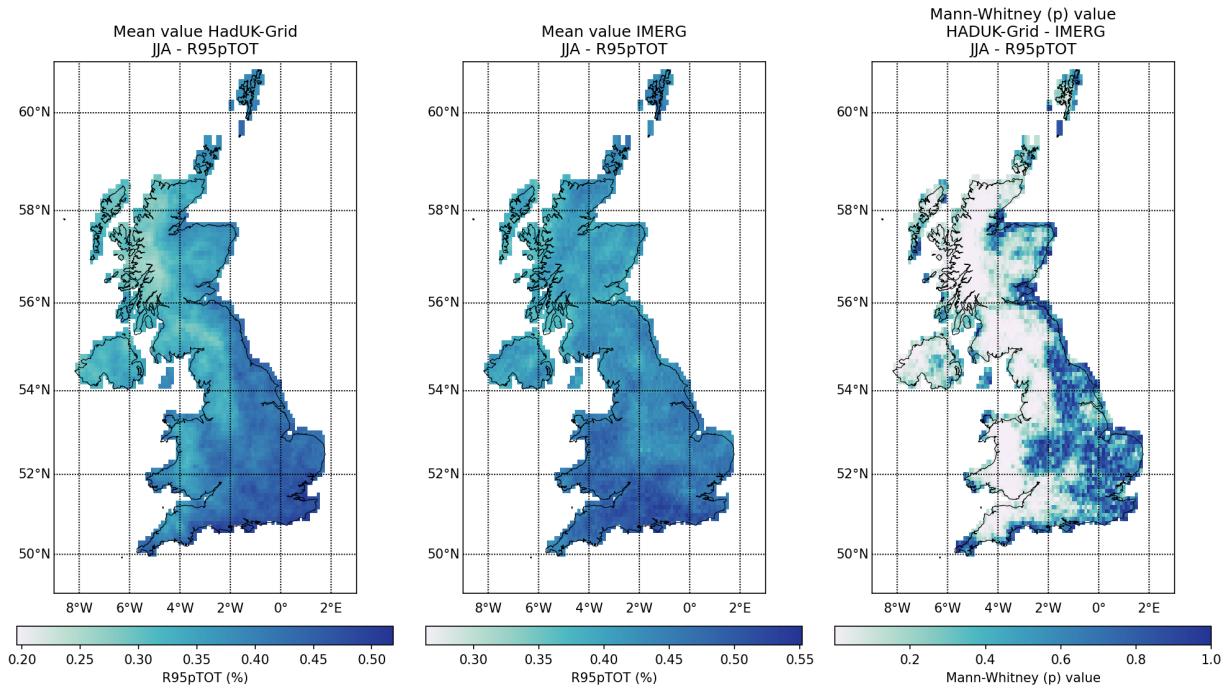


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

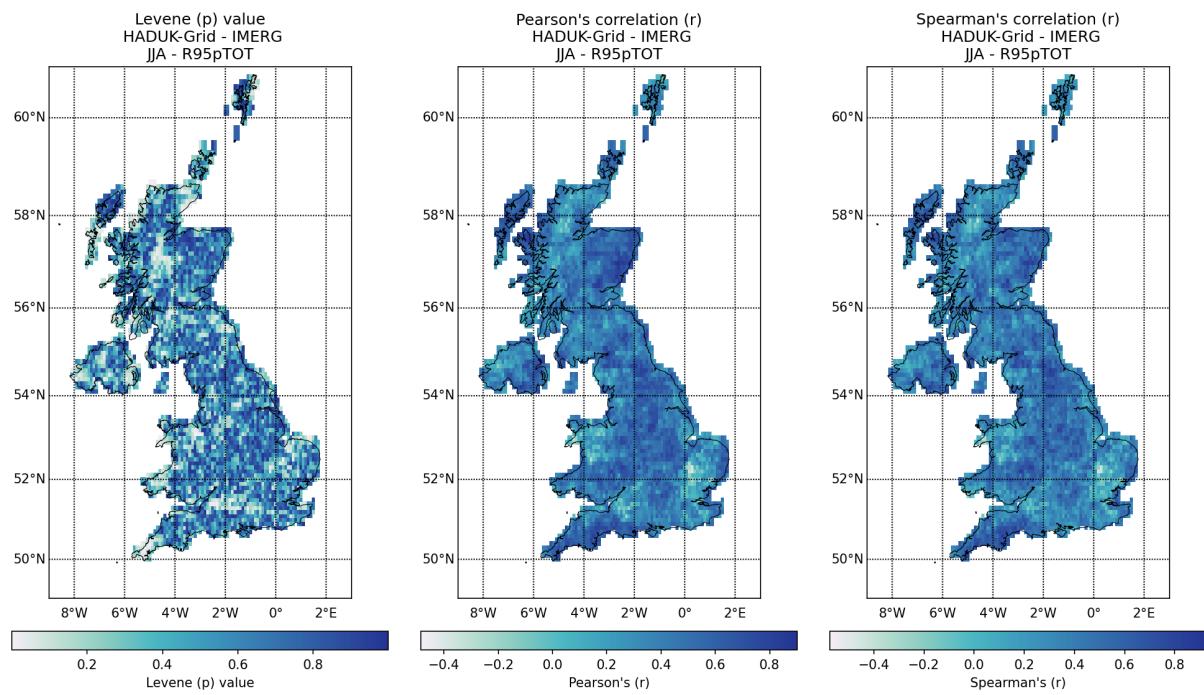


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

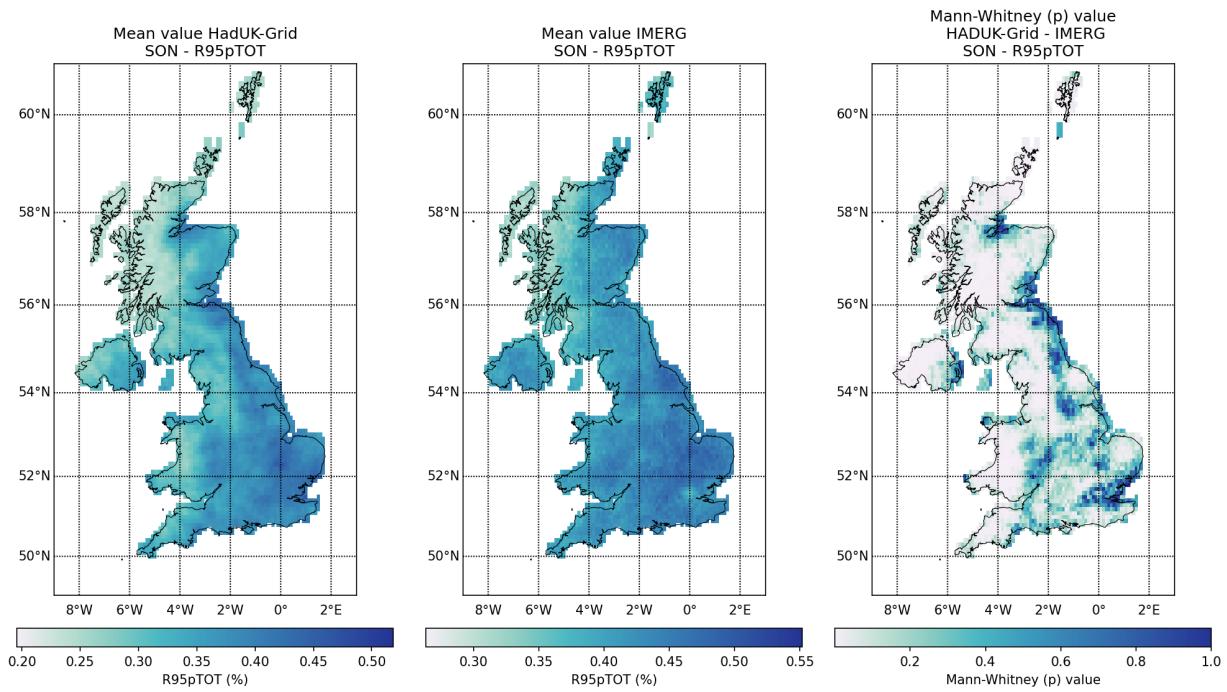


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

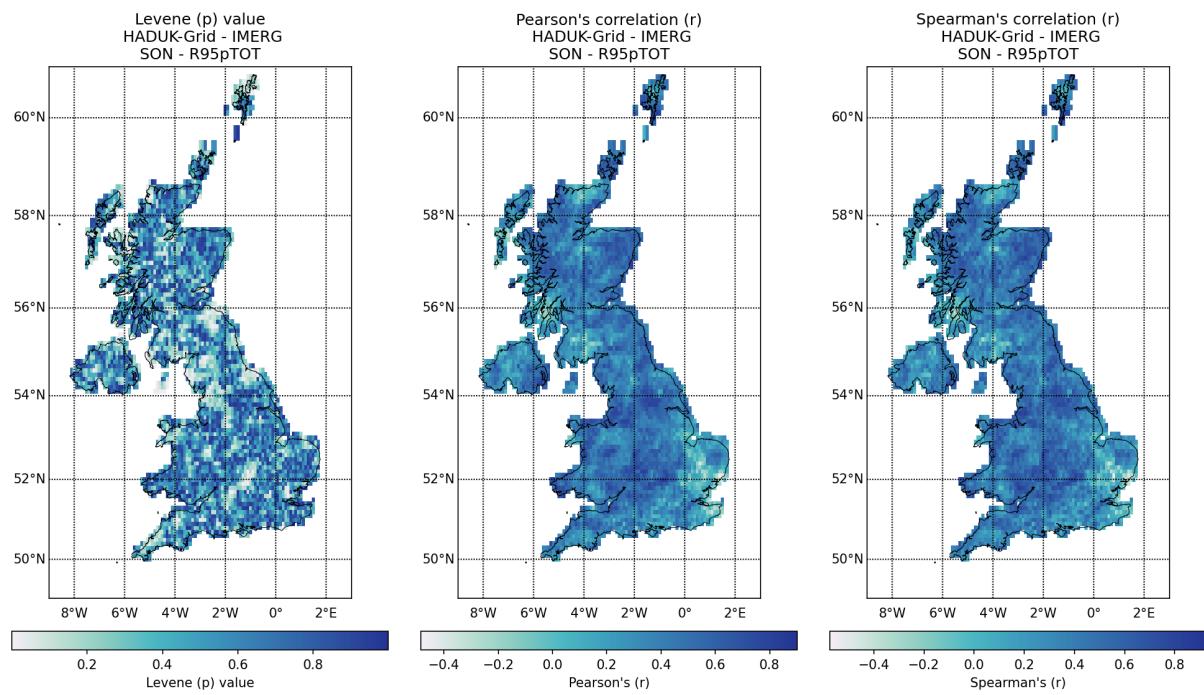


Figure 9: Spatial distribution of R95pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

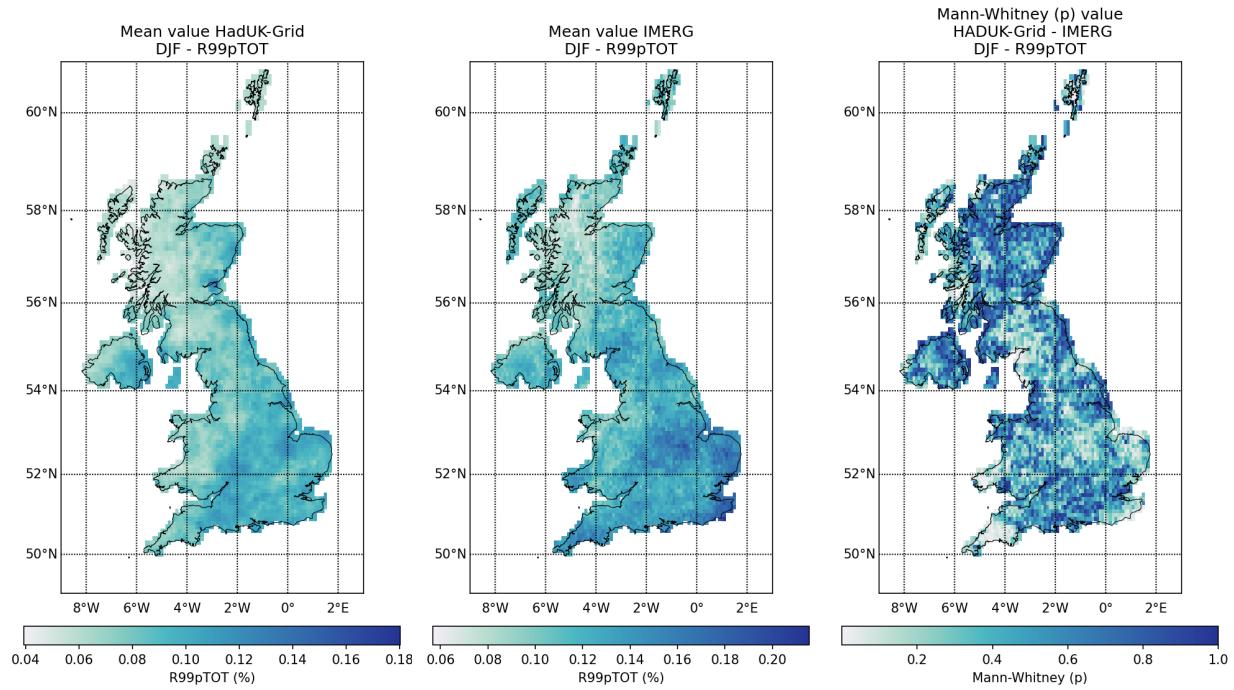


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

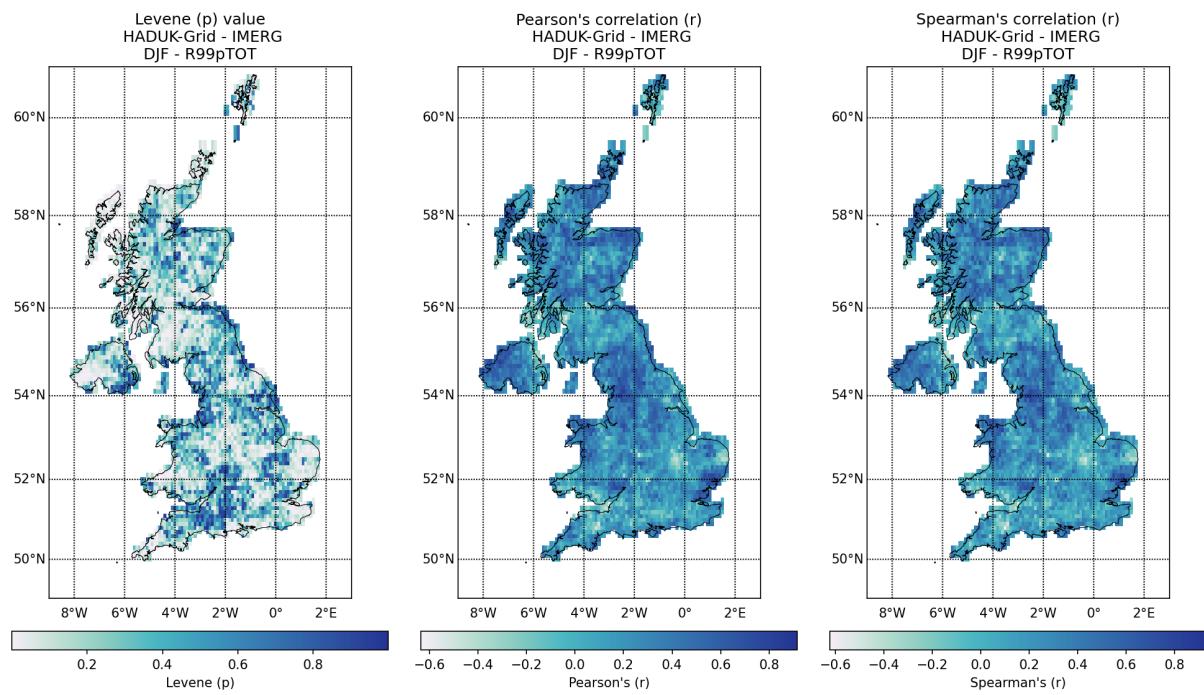


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

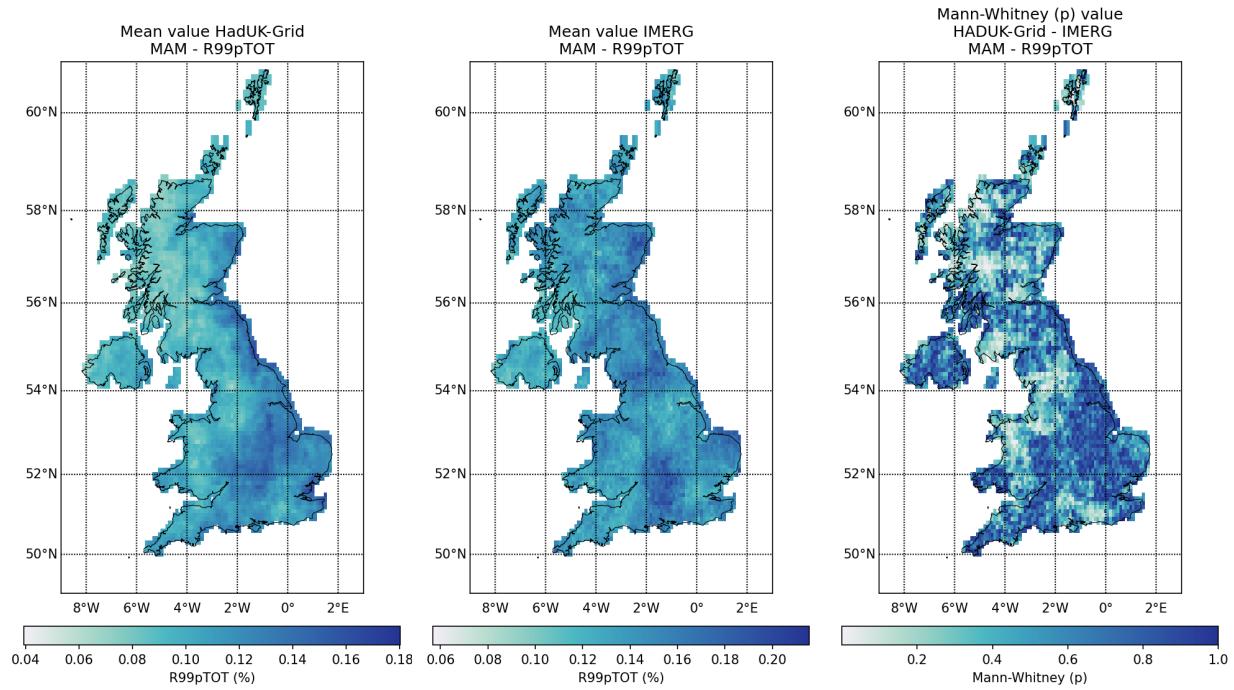


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

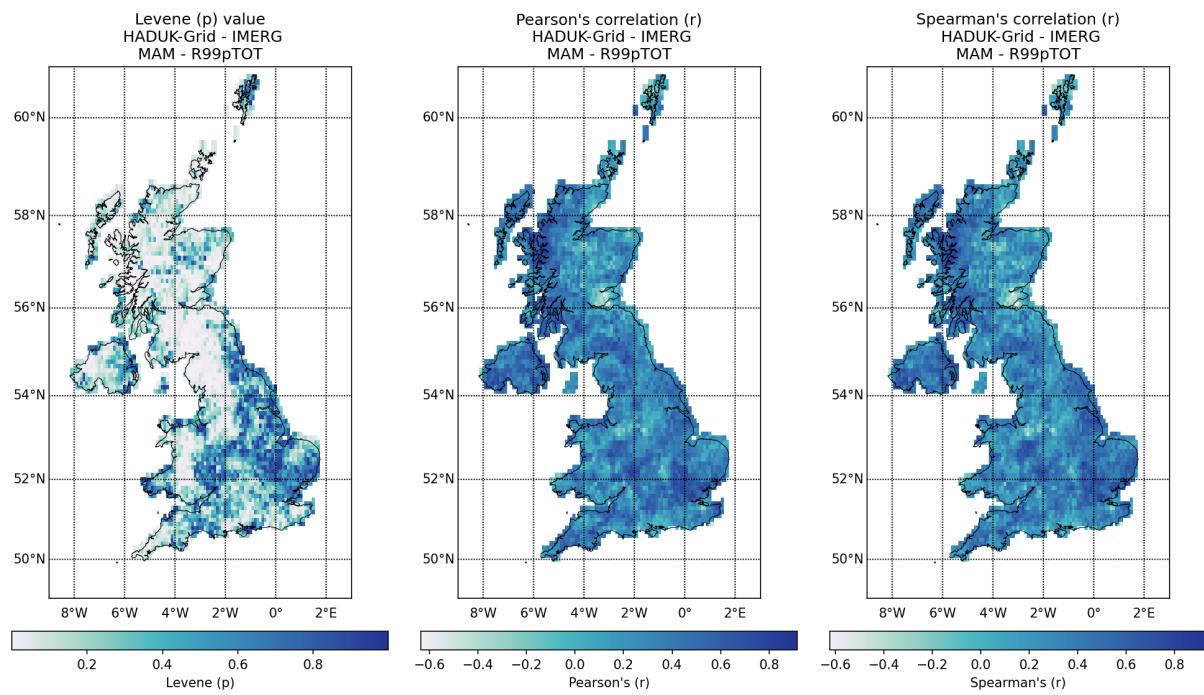


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

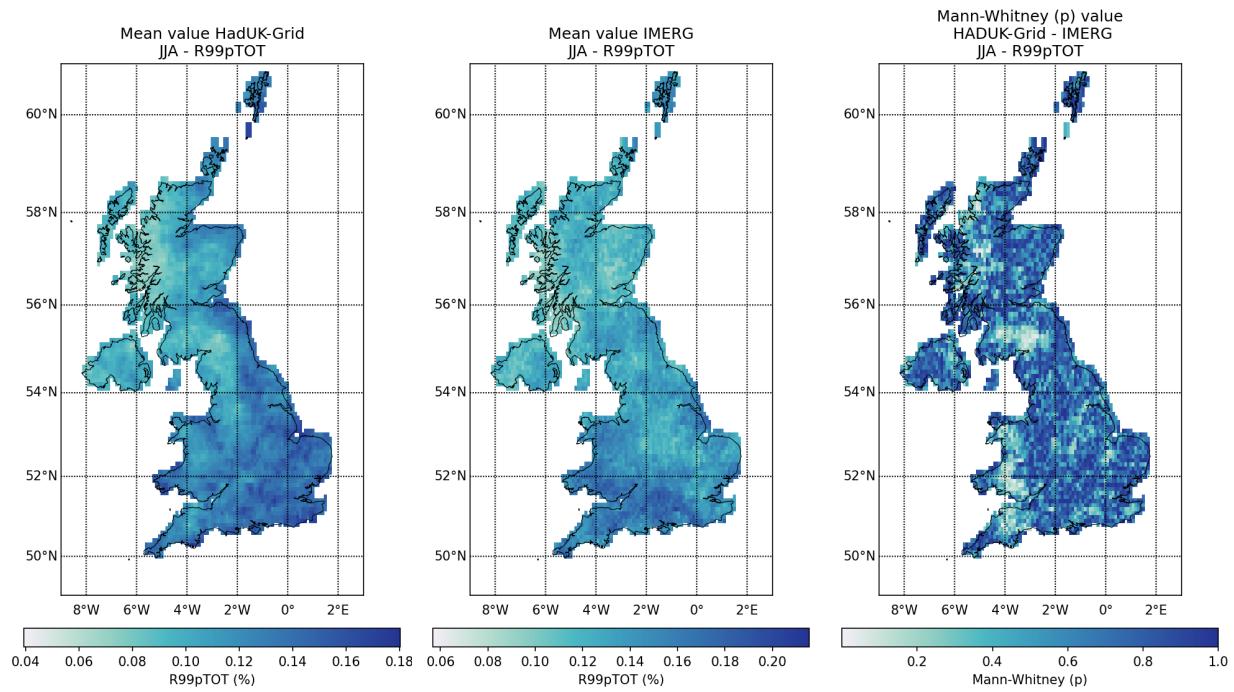


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

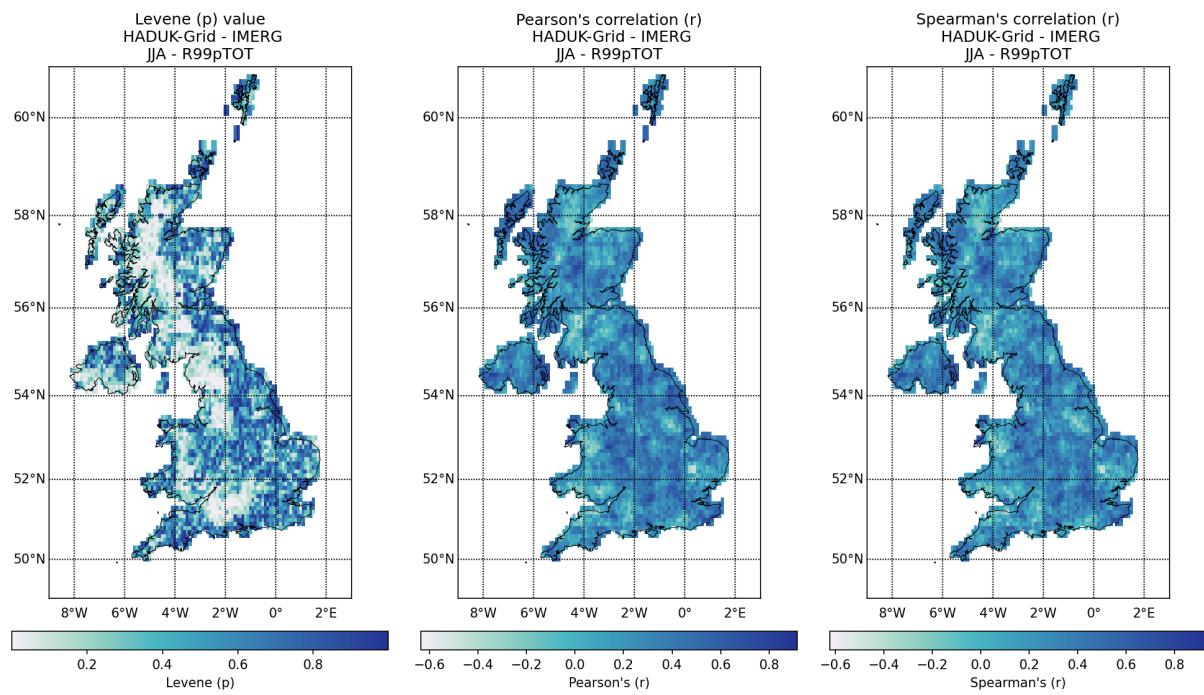


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

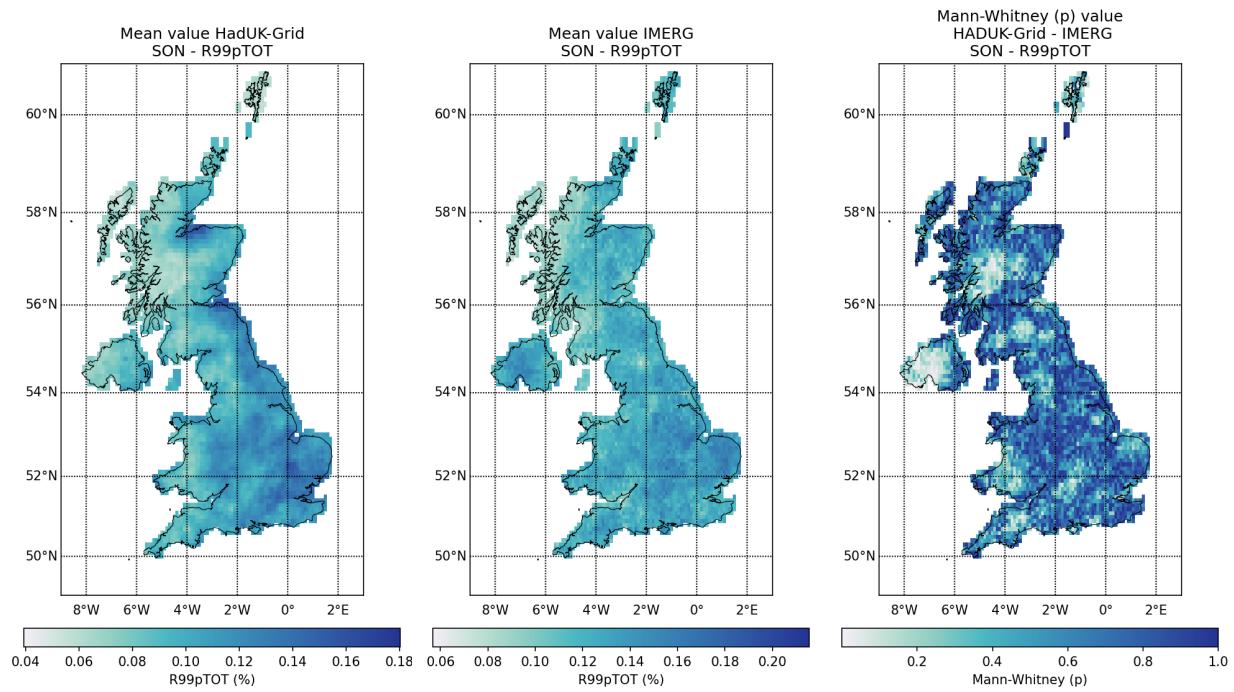


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

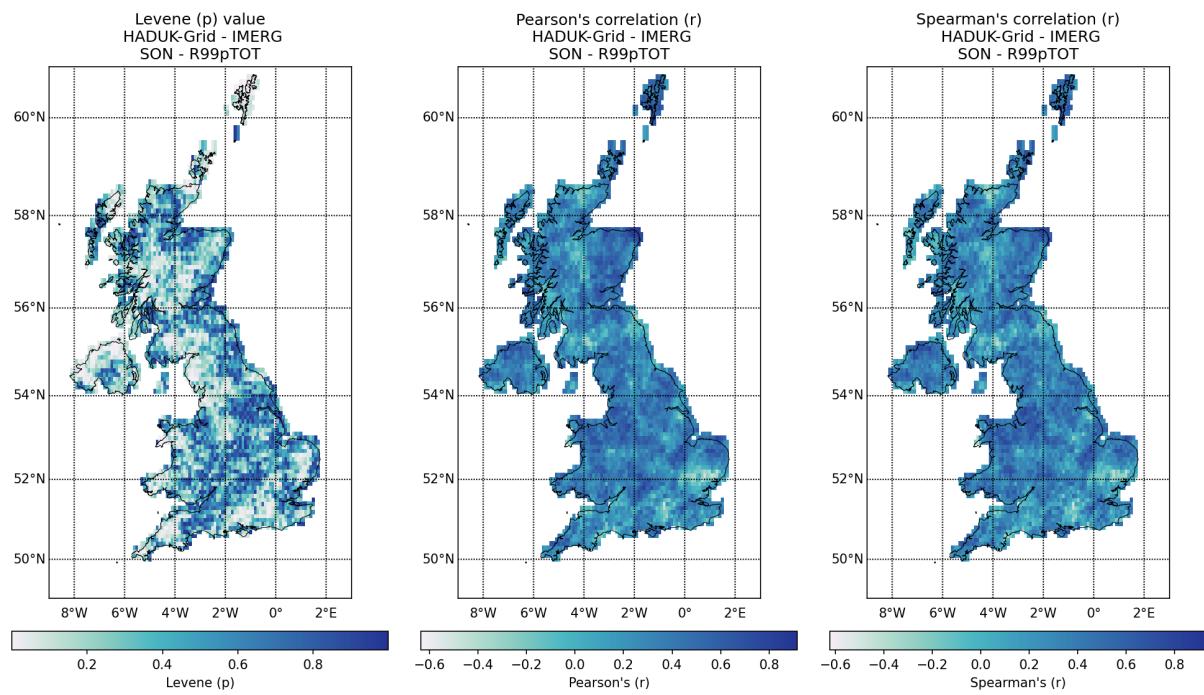


Figure 10: Spatial distribution of R99pTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

1.2.2 ERA5 DATA

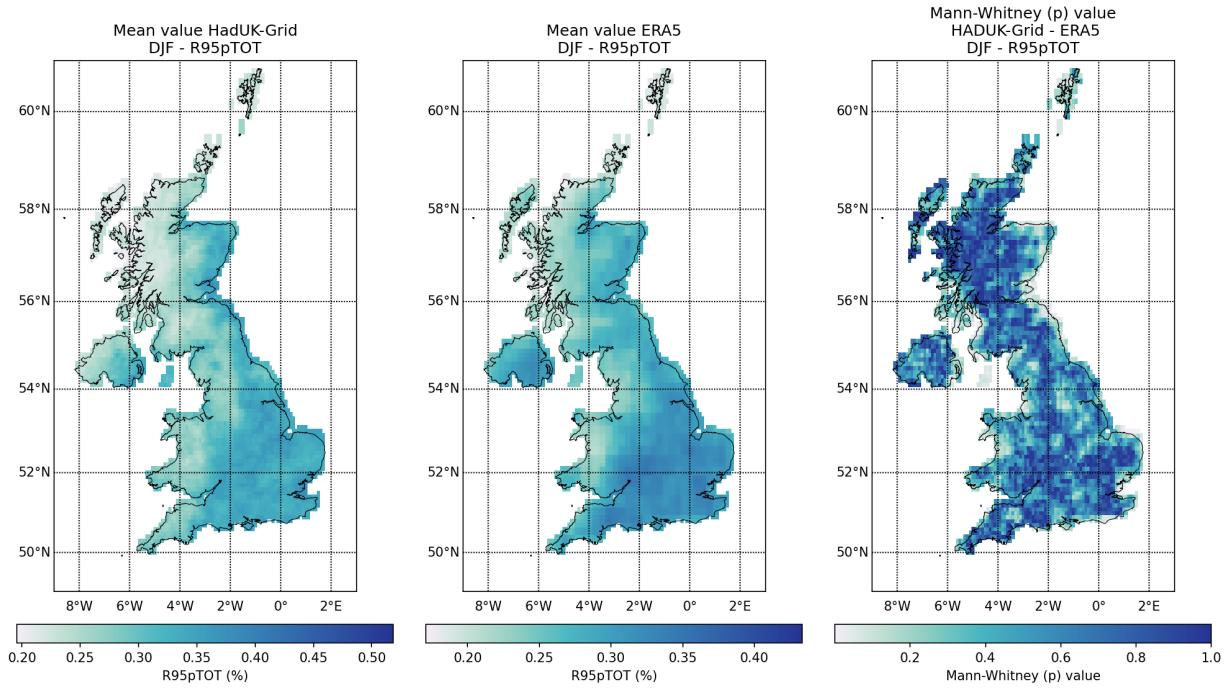


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

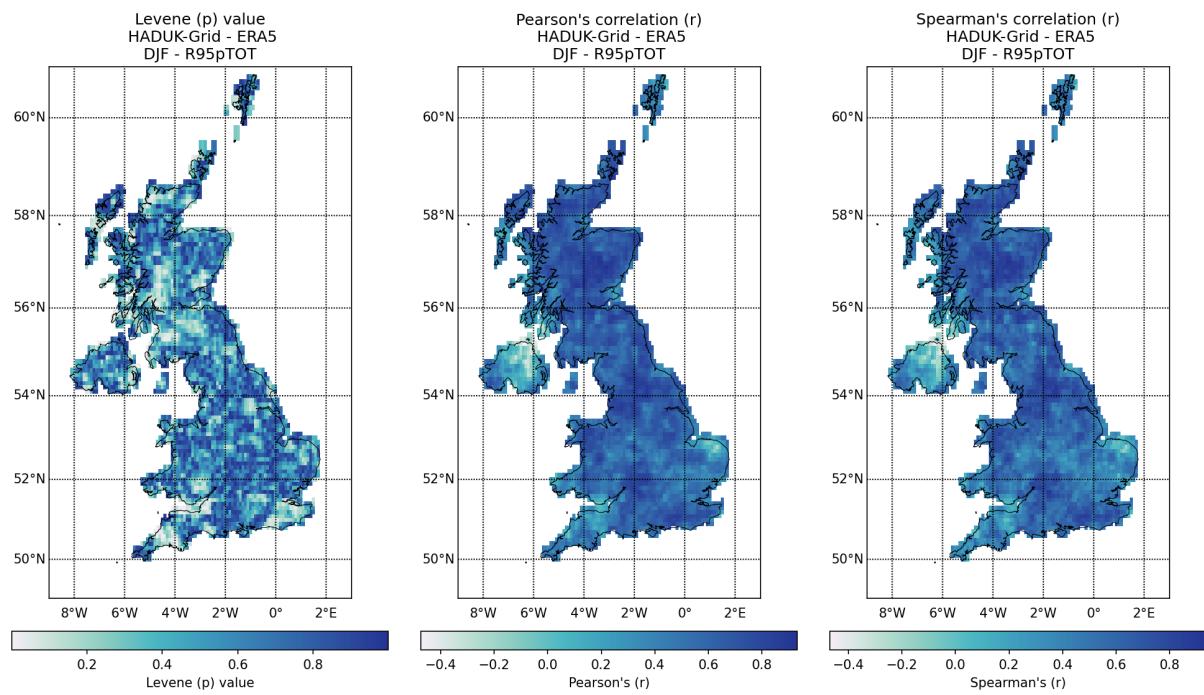


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

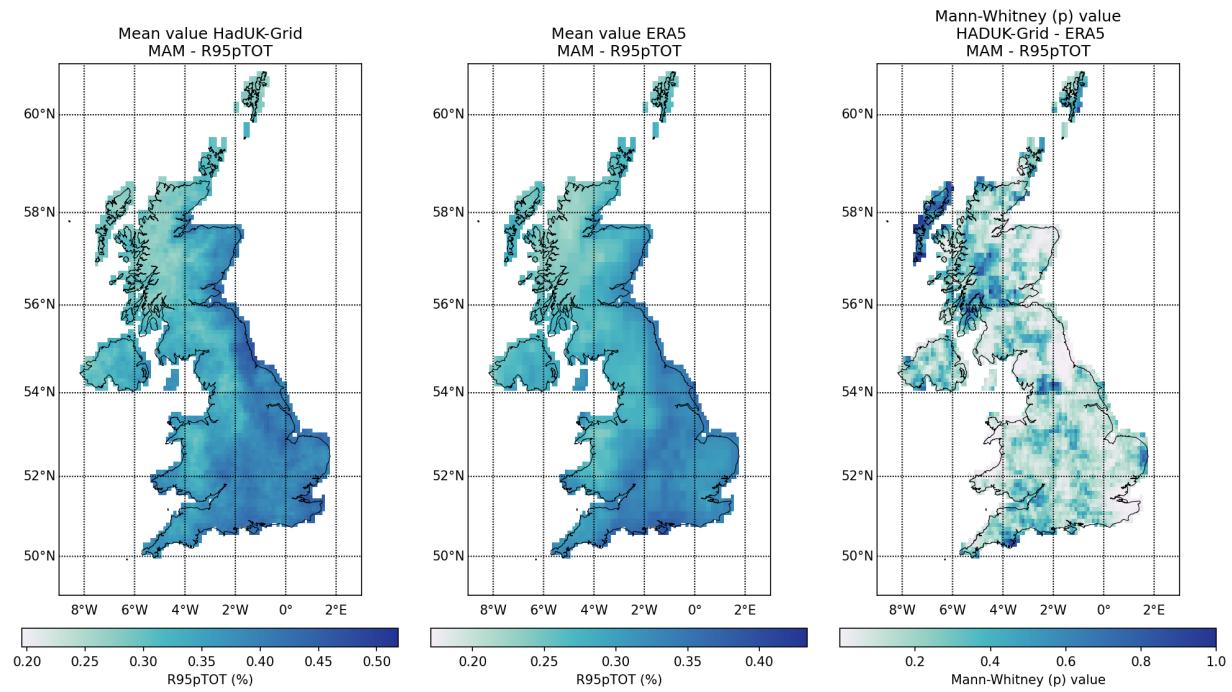


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

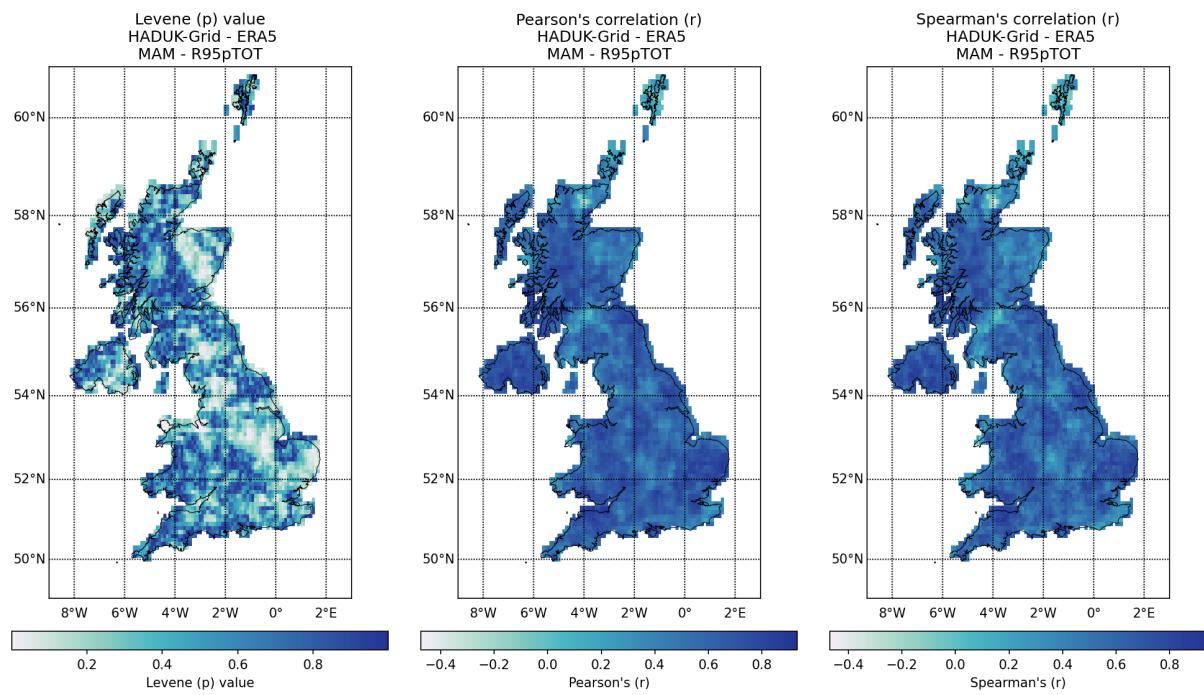


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

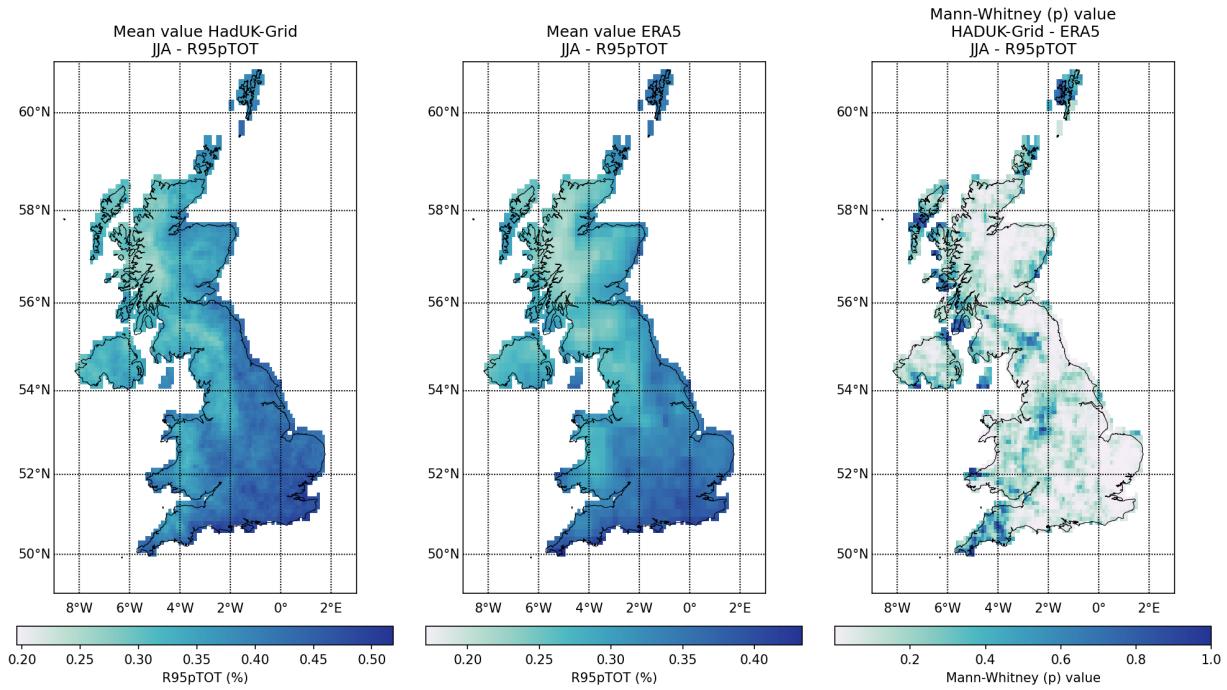


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

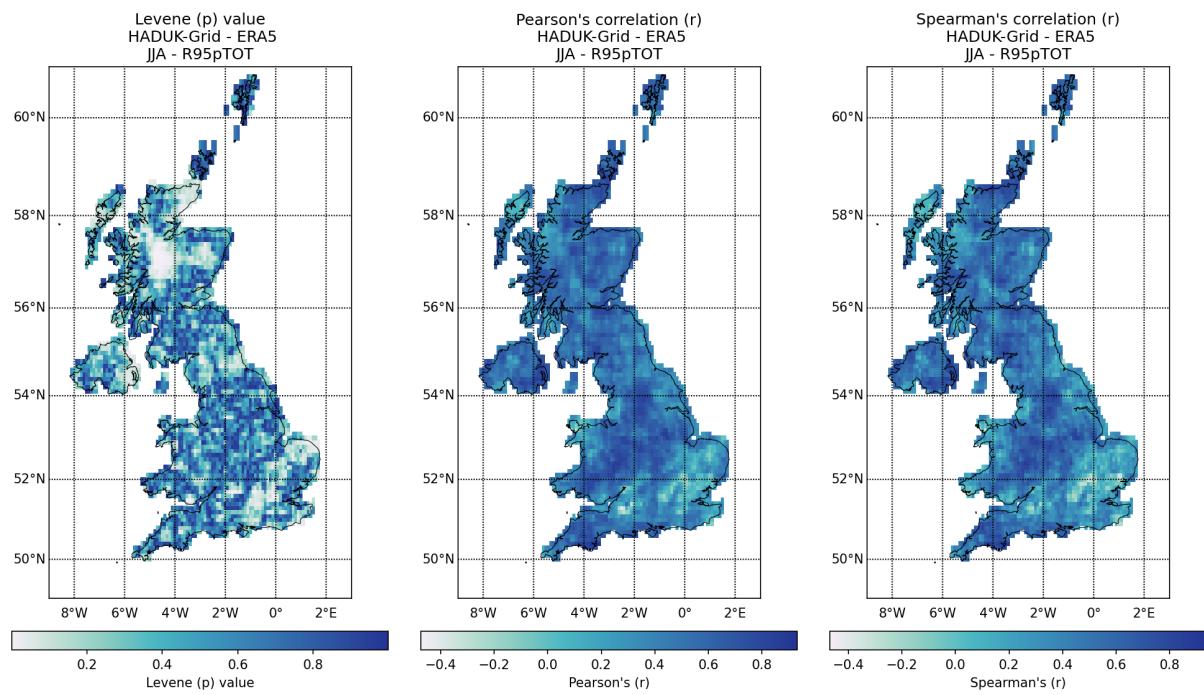


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

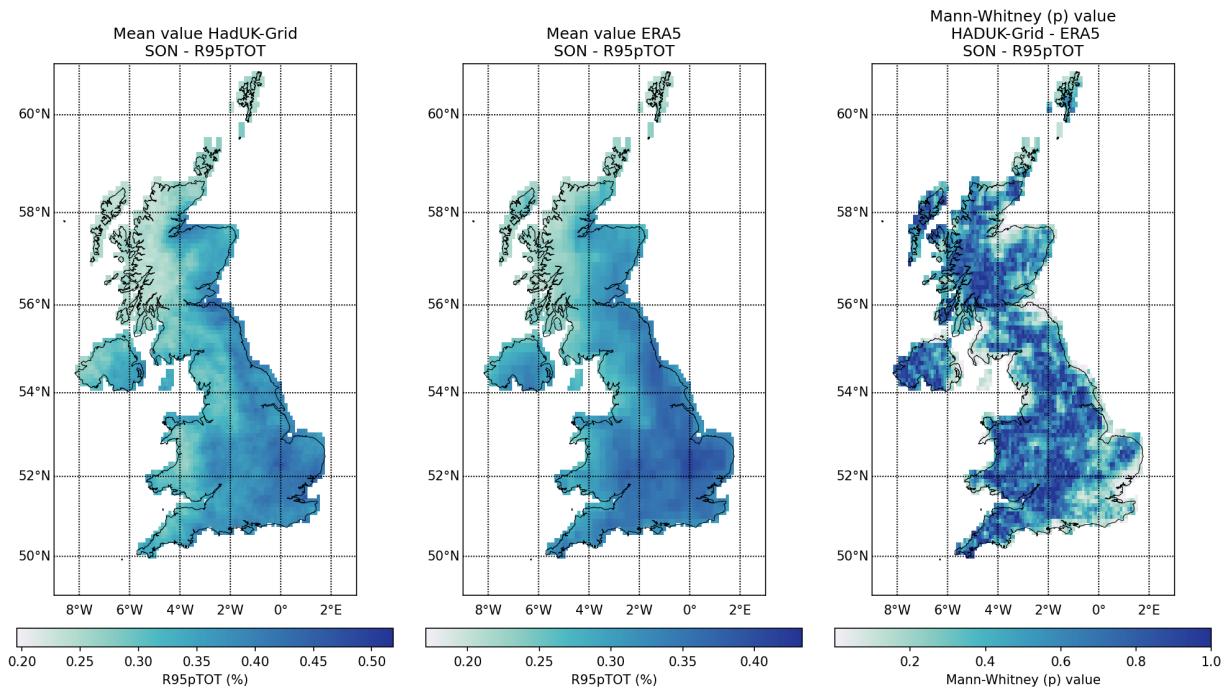


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

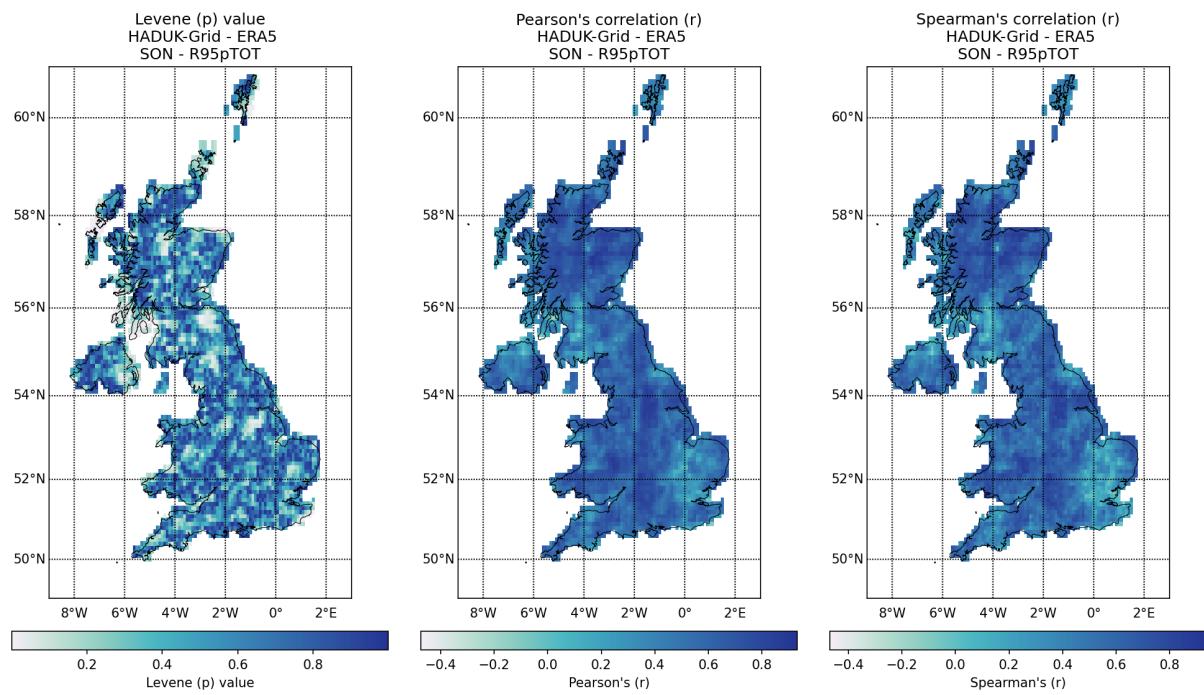


Figure 11: Spatial distribution of R95pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

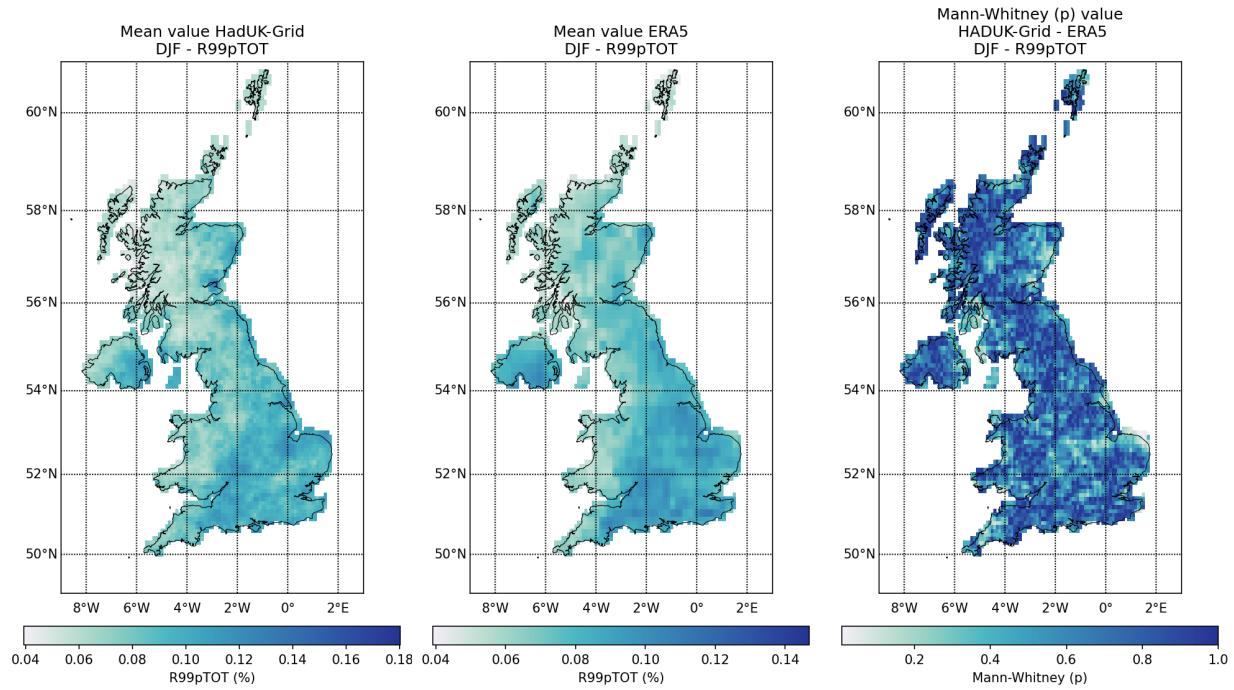


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

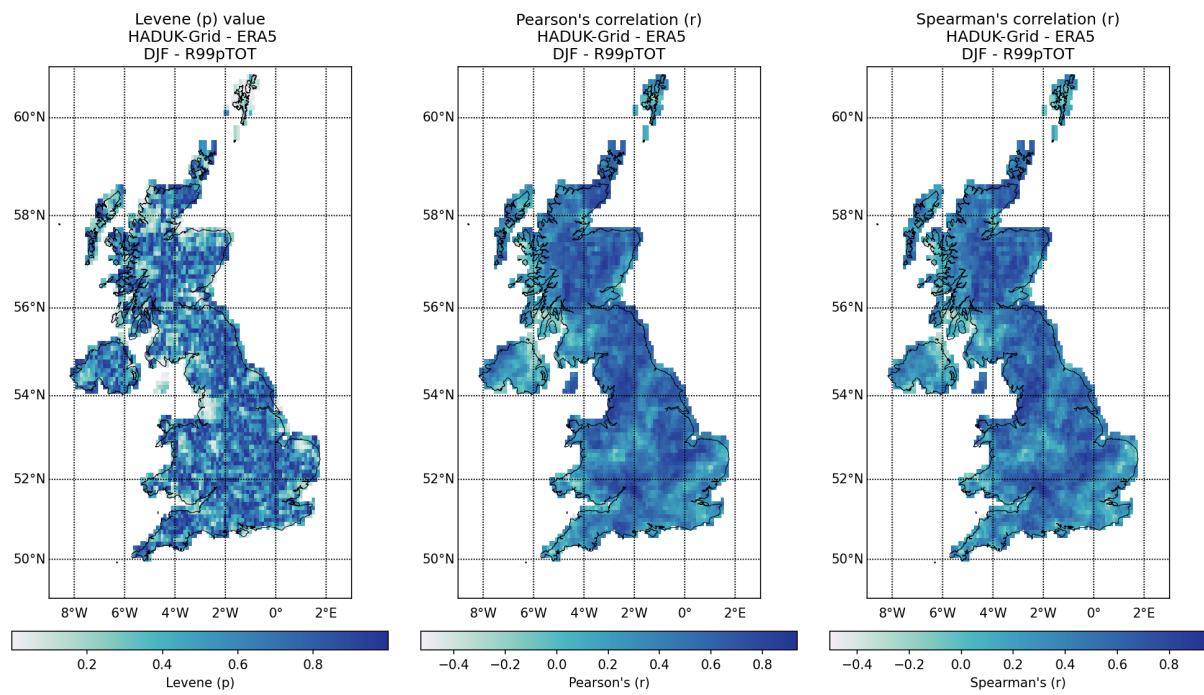


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

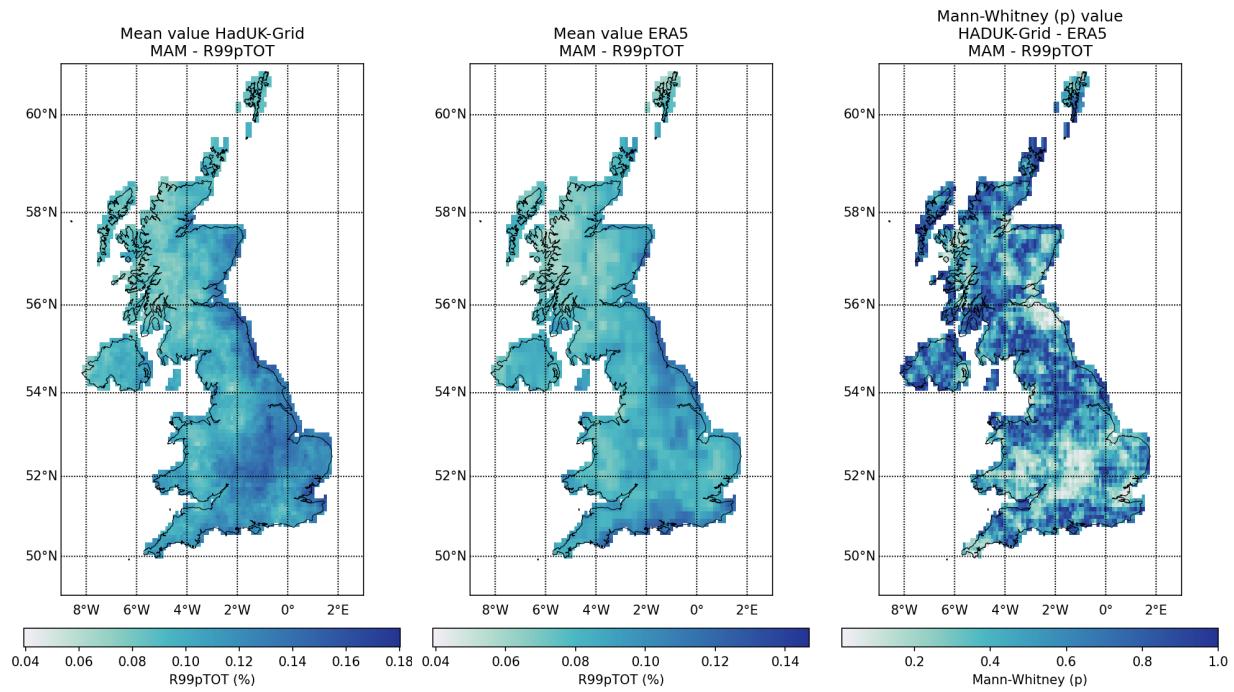


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

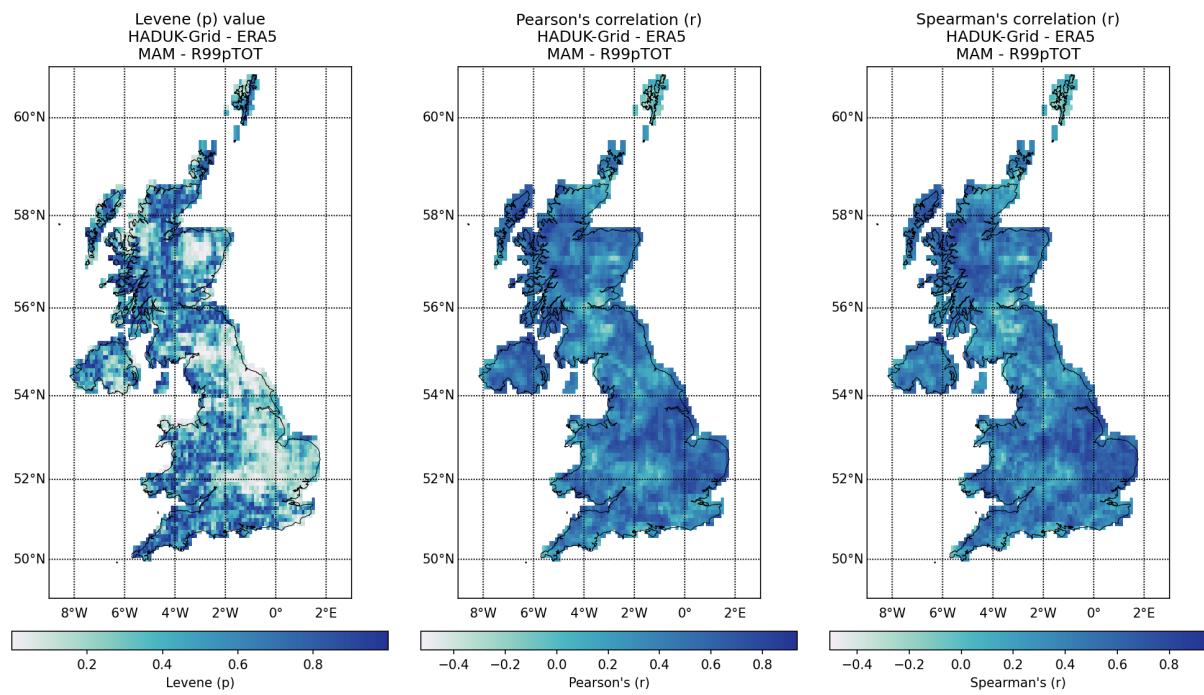


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

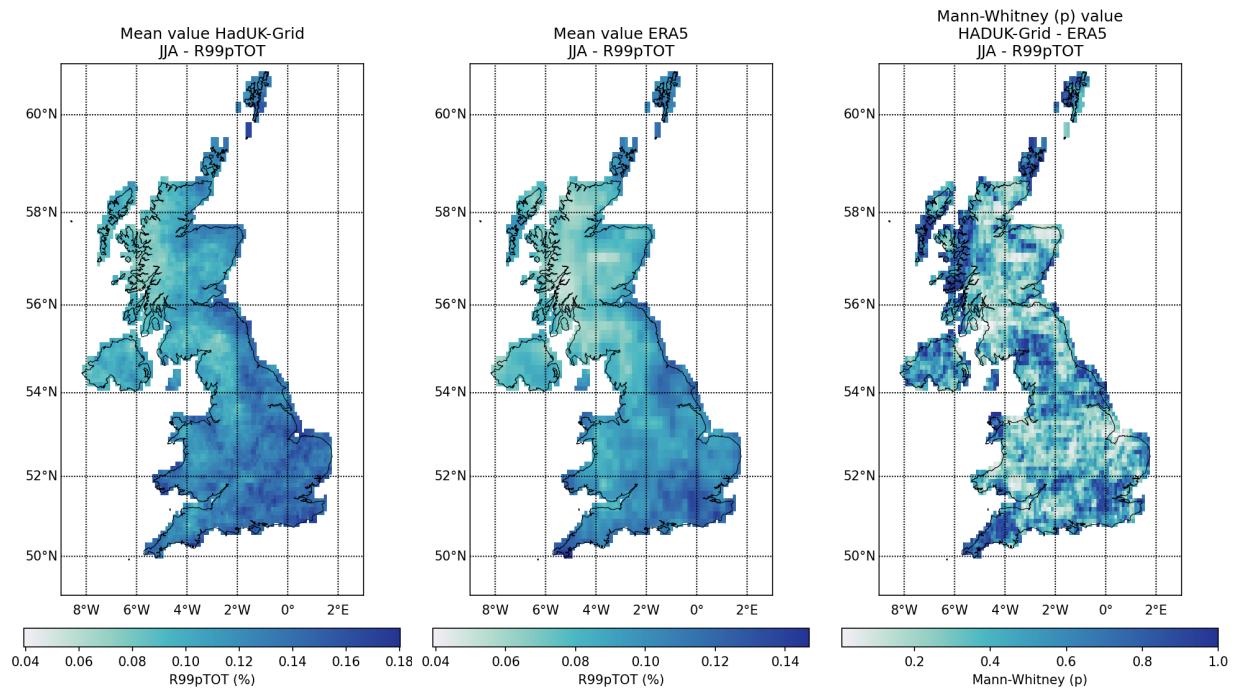


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

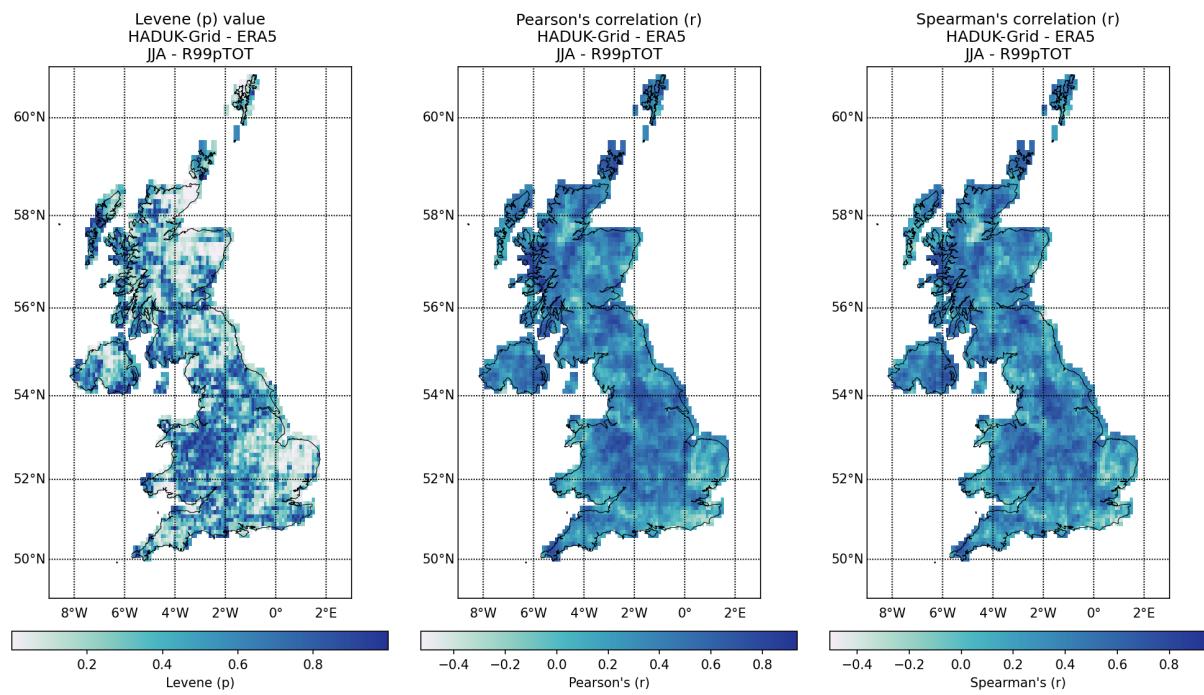


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

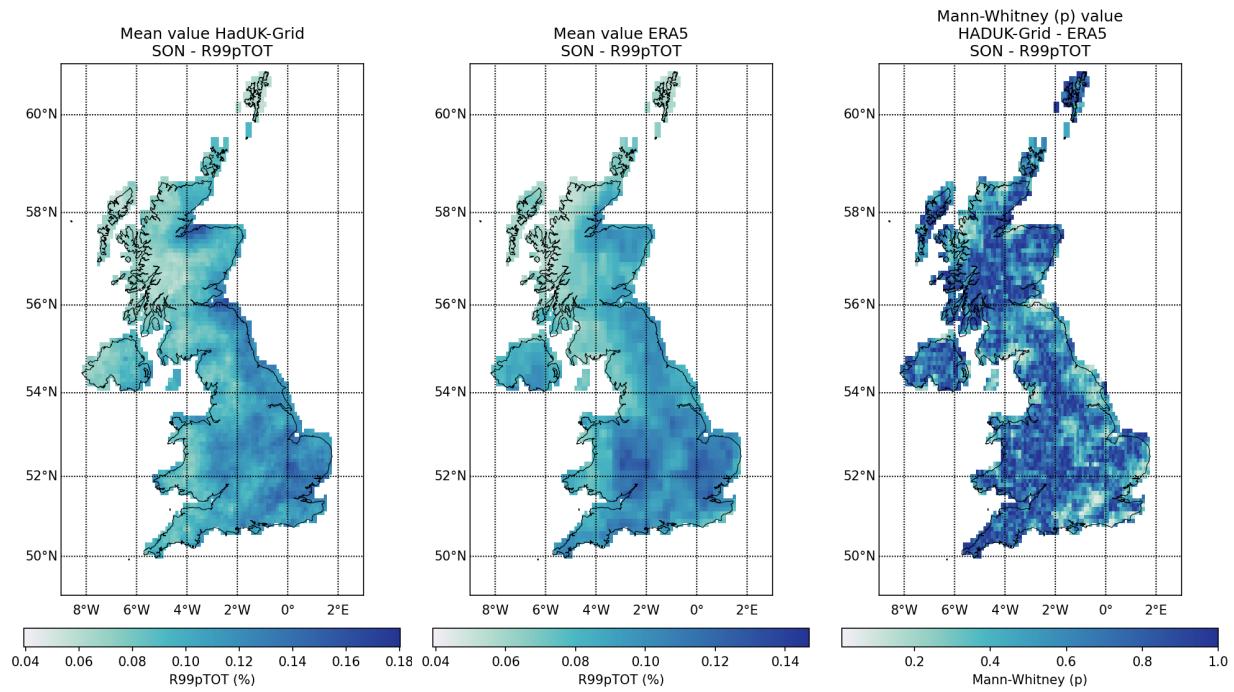


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

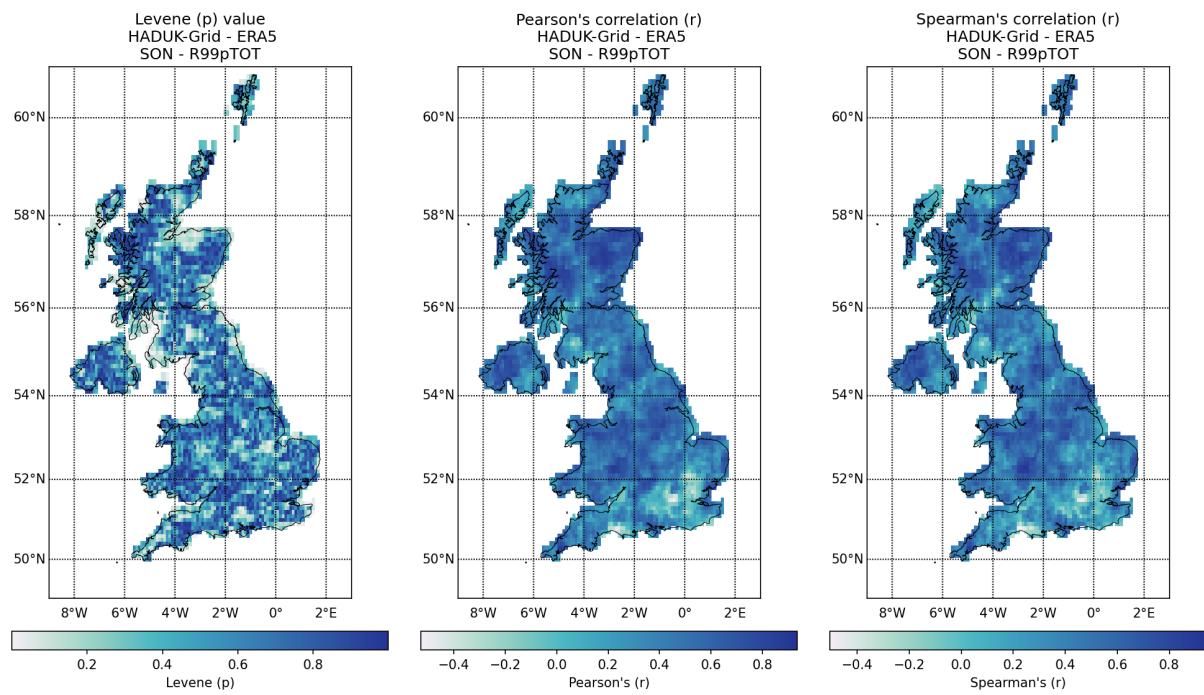


Figure 12: Spatial distribution of R99pTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

1.3 Non-Threshold Indices - PRCPTOT, RX1day, RX5day, SDII

1.3.1 IMERG DATA

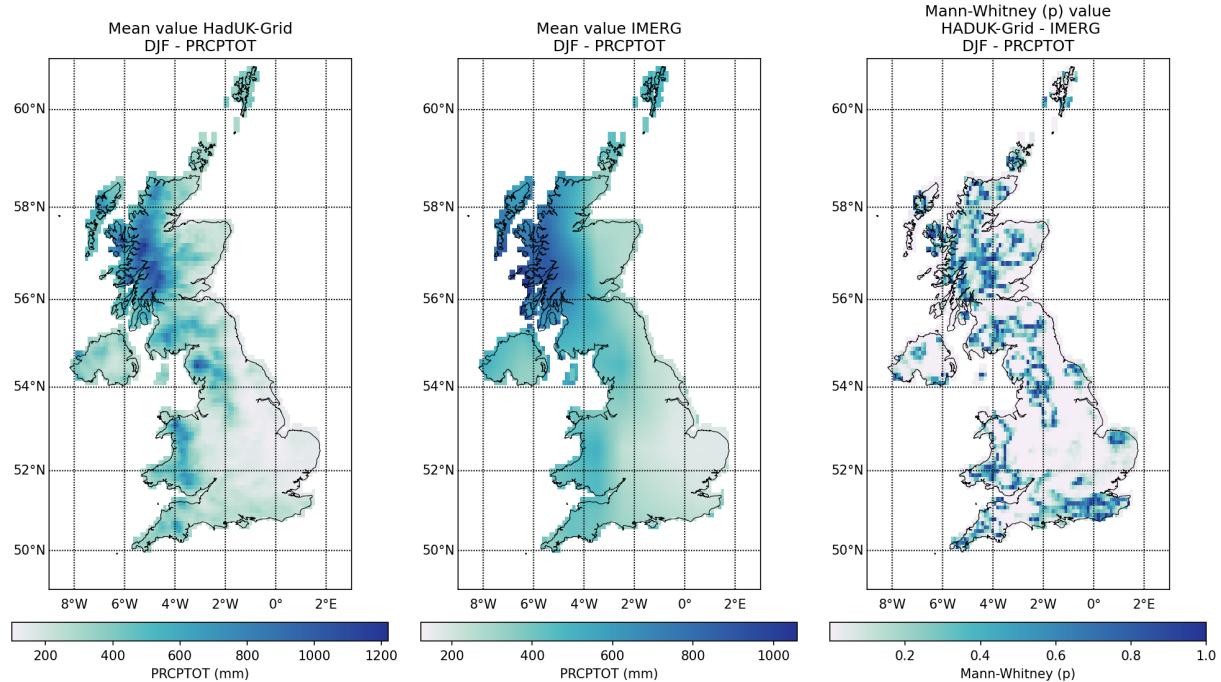


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

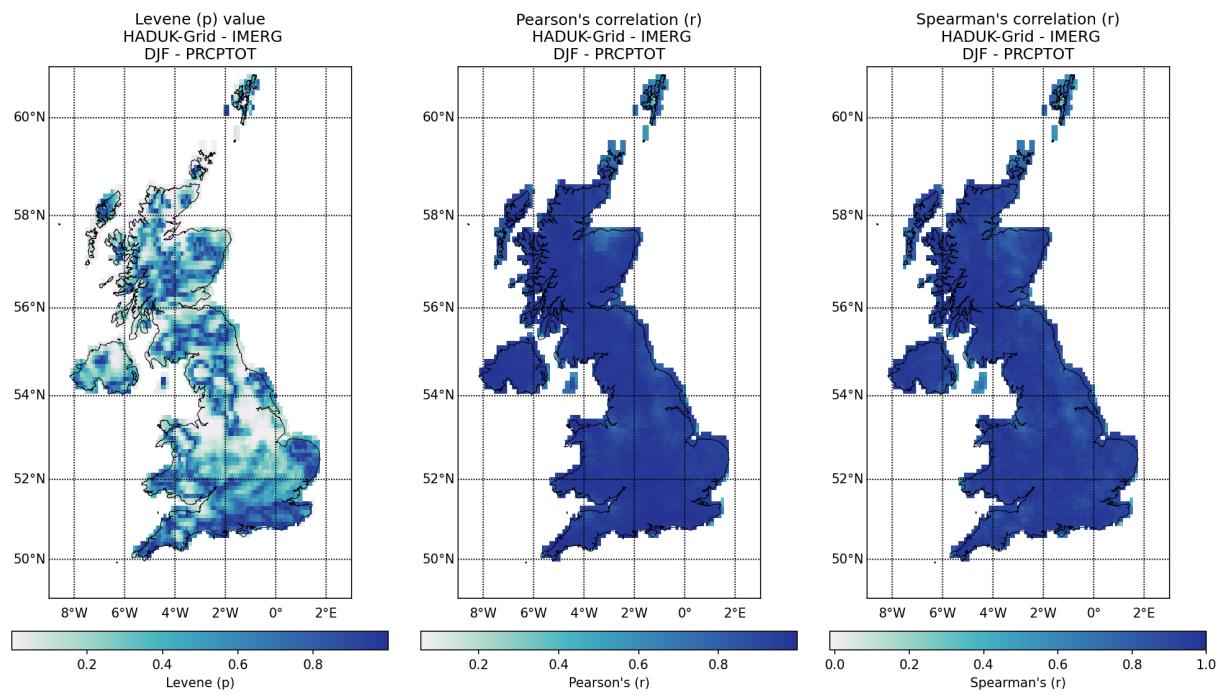


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

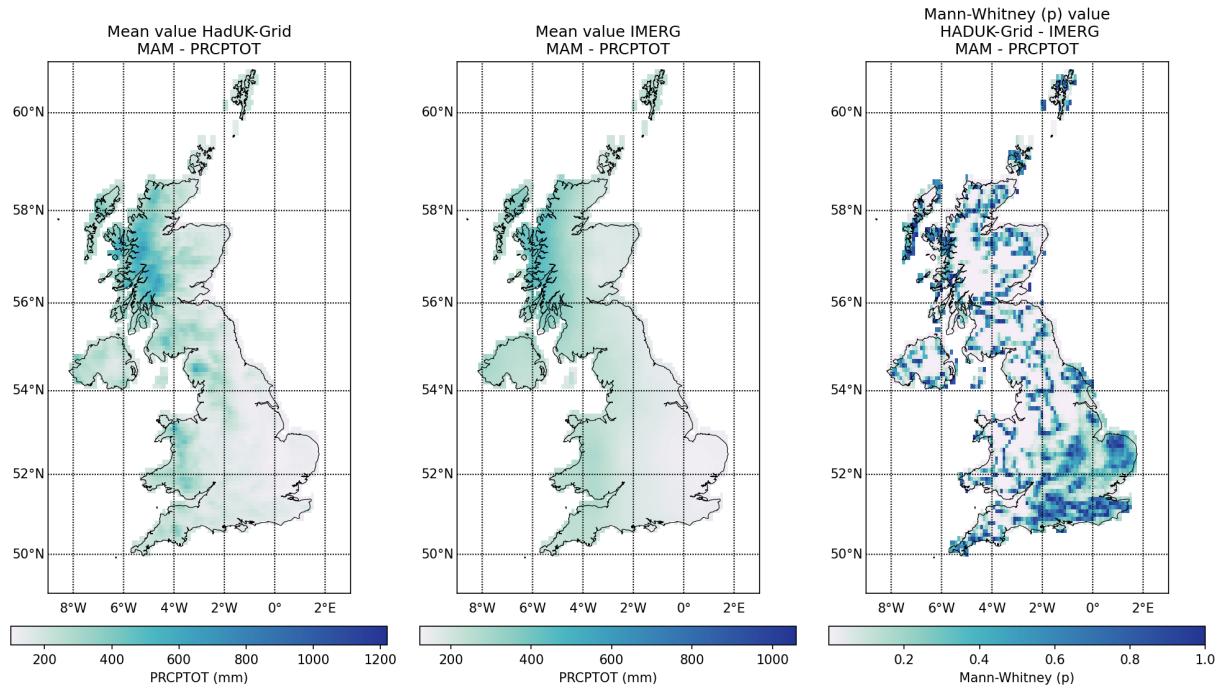


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

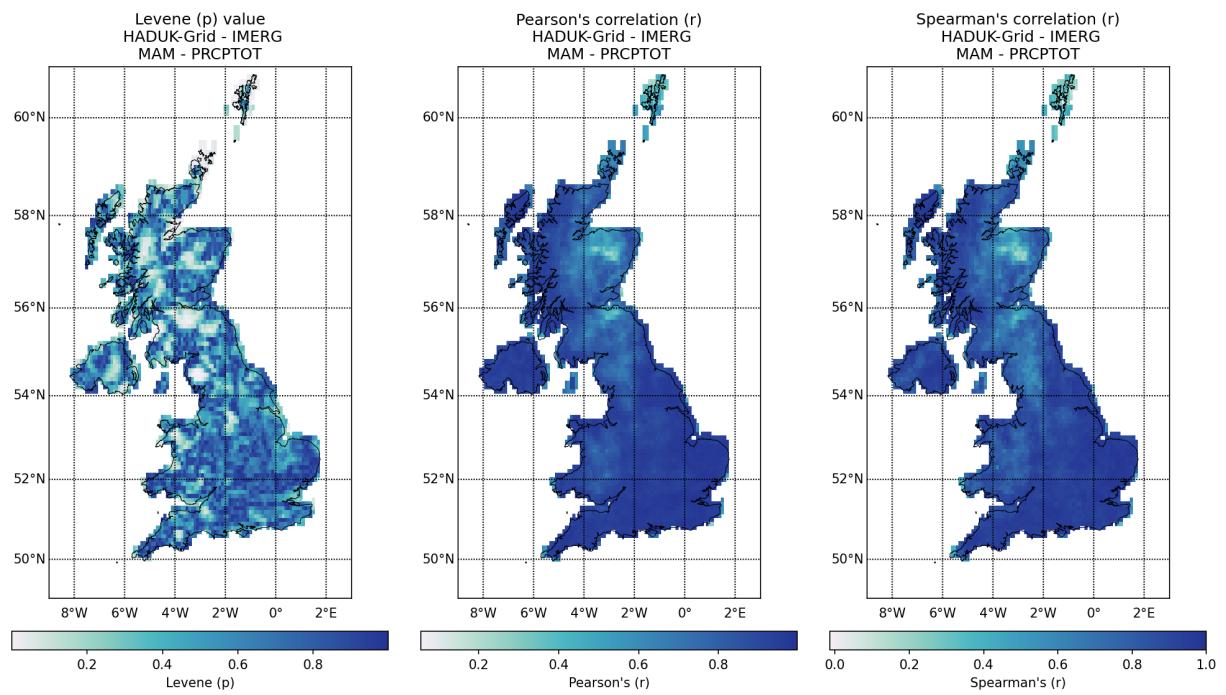


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

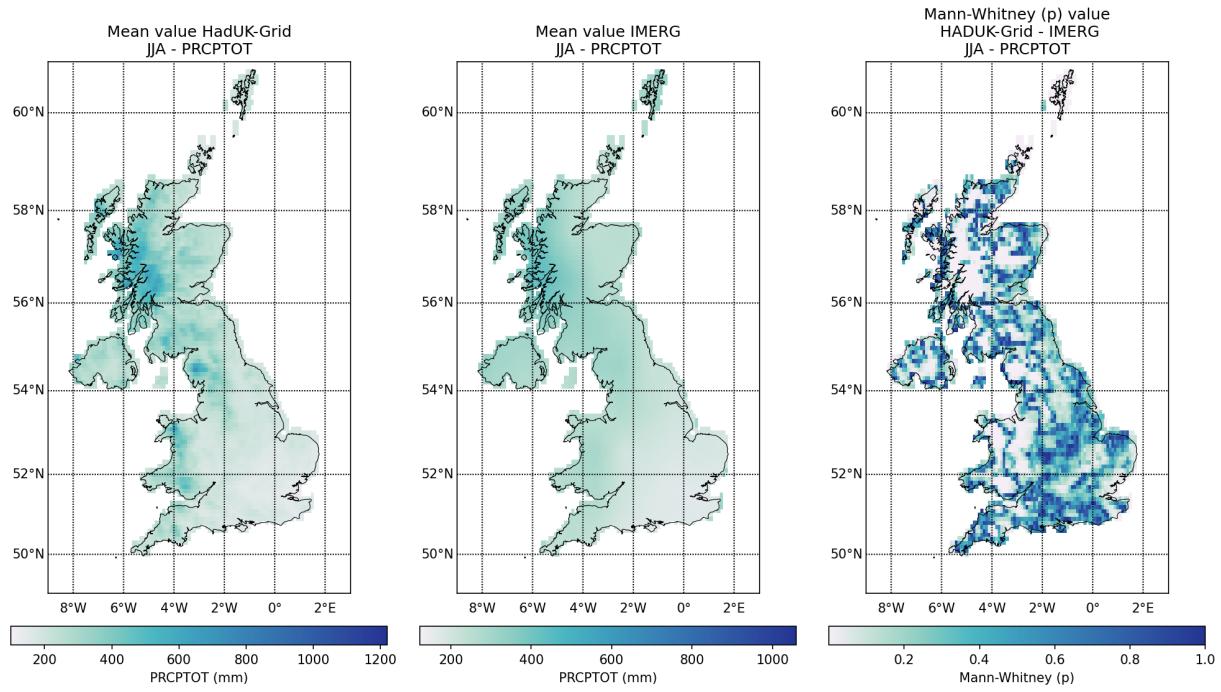


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

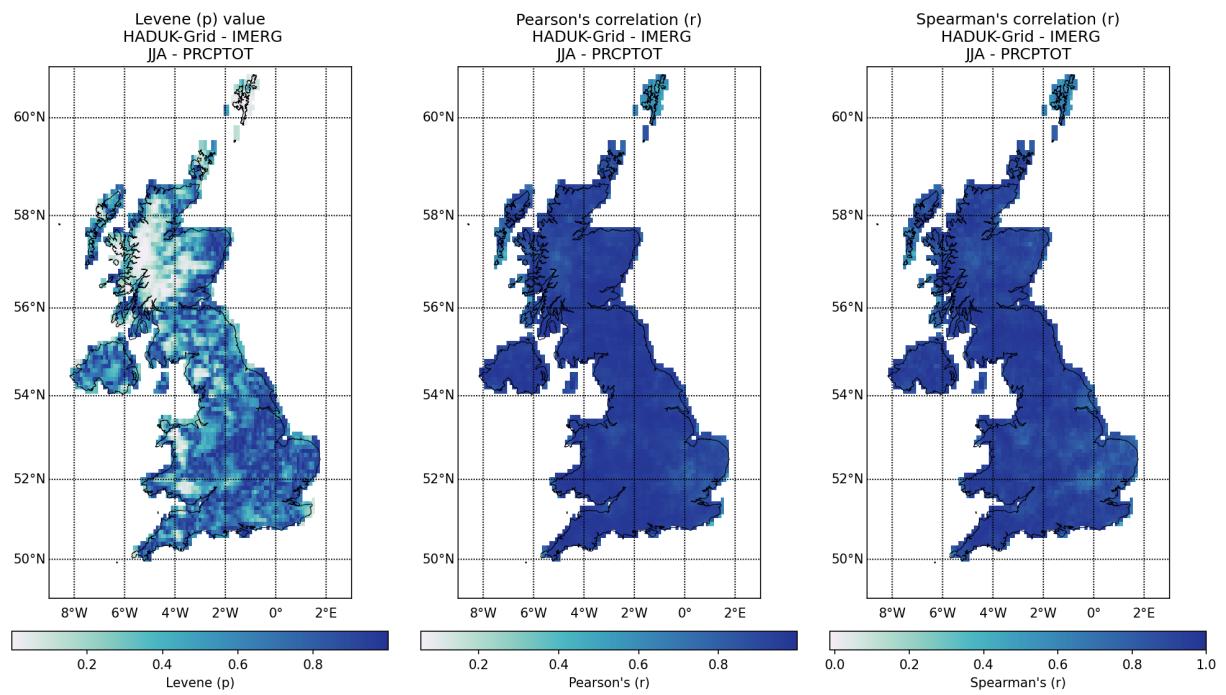


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

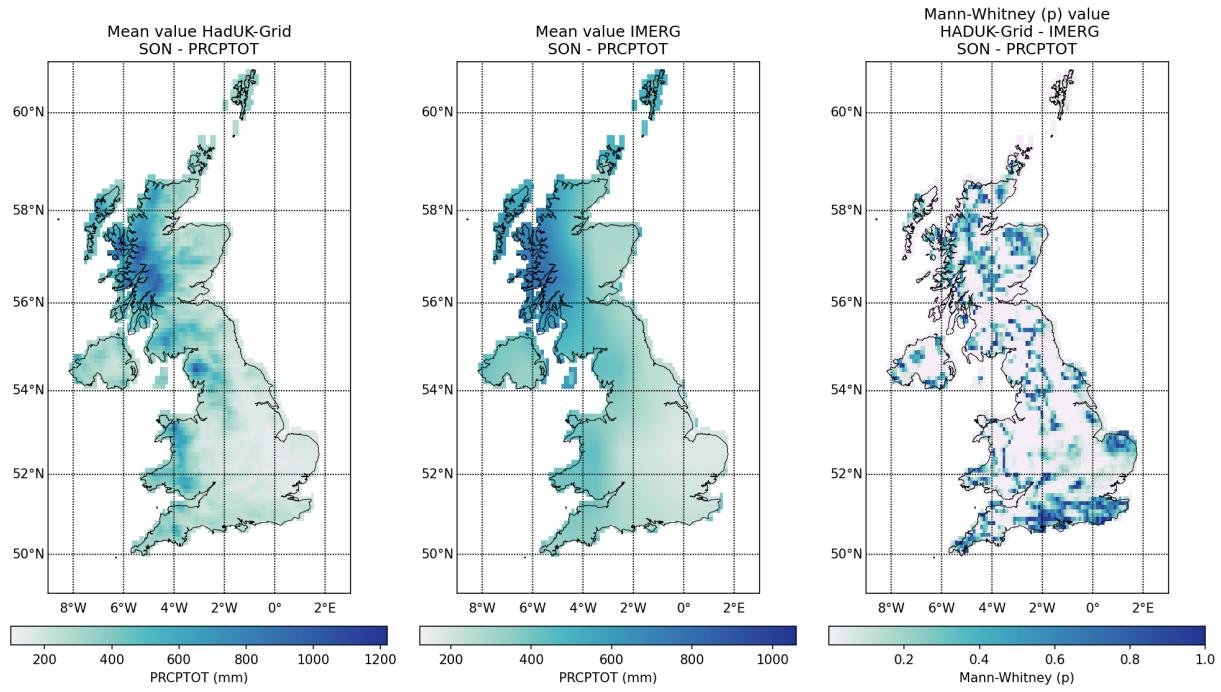


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

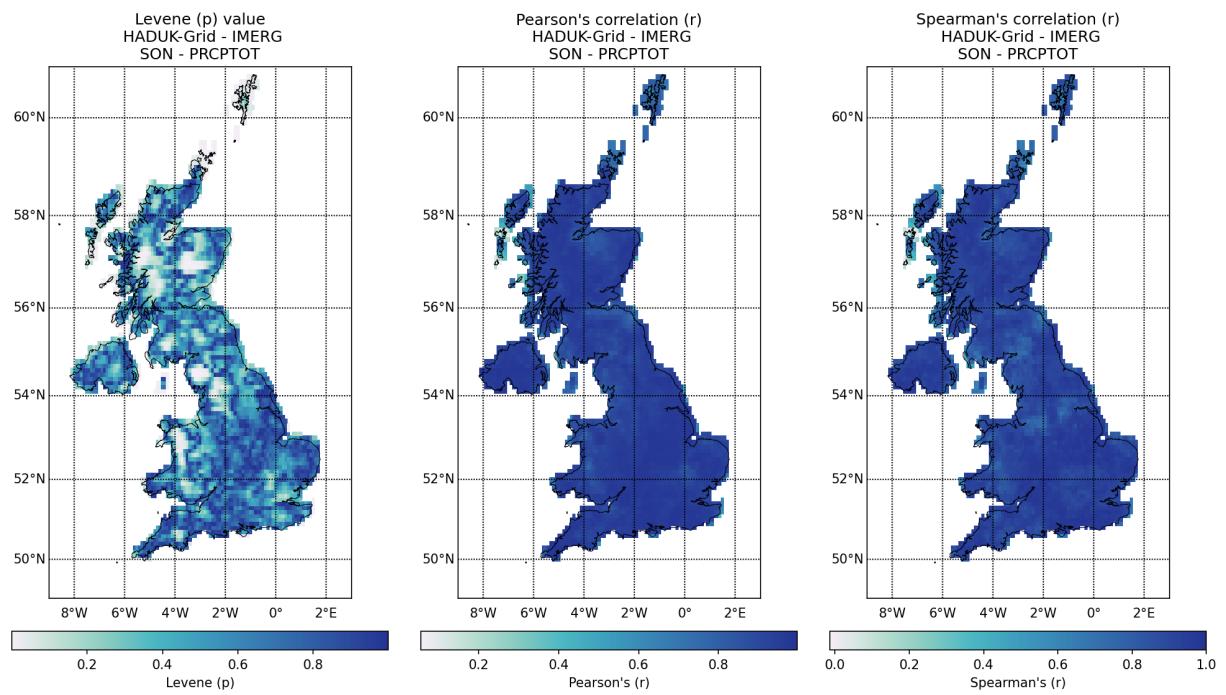


Figure 13: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

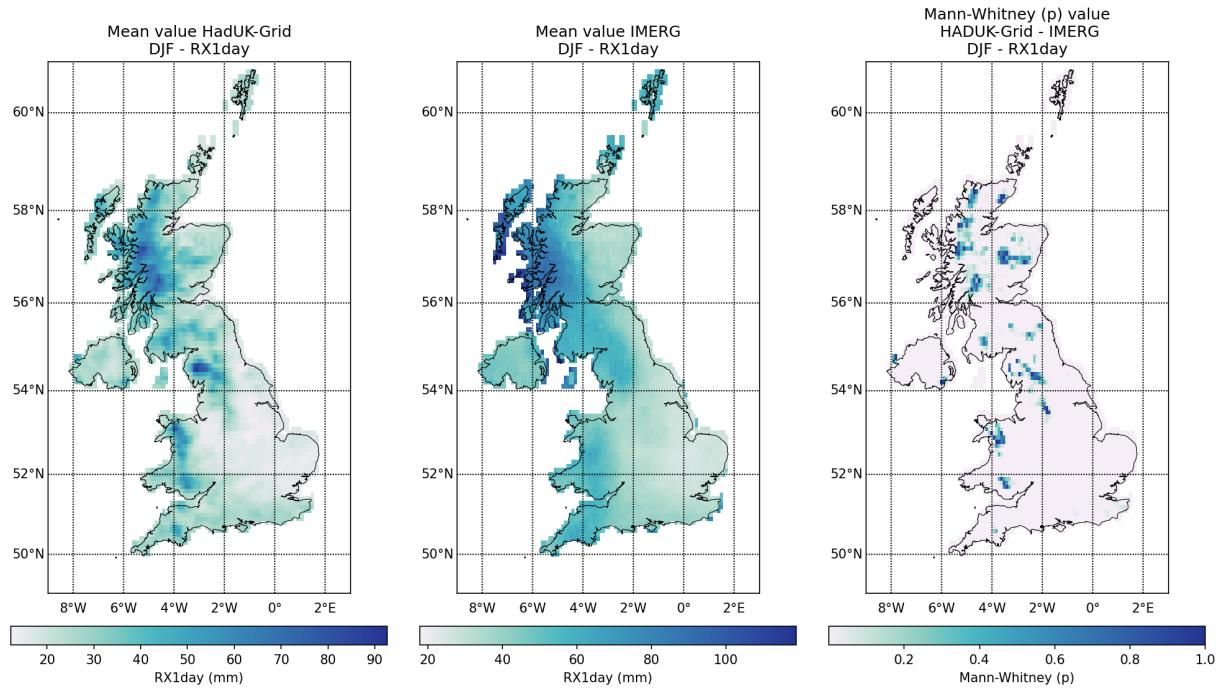


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

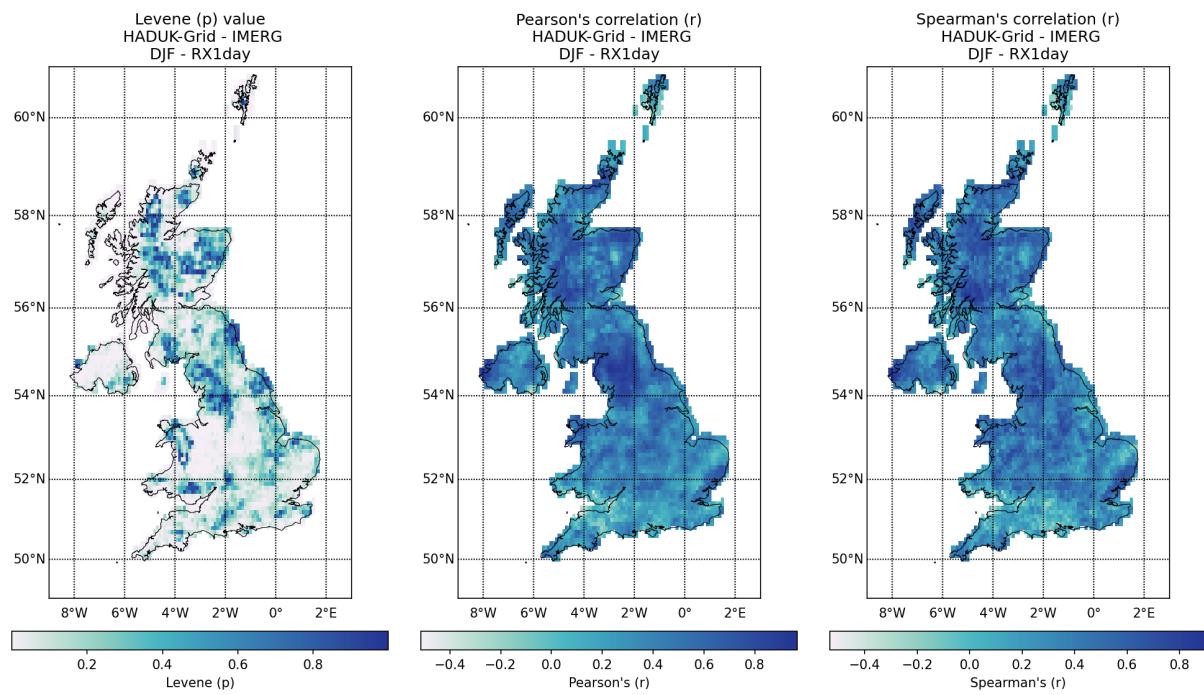


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

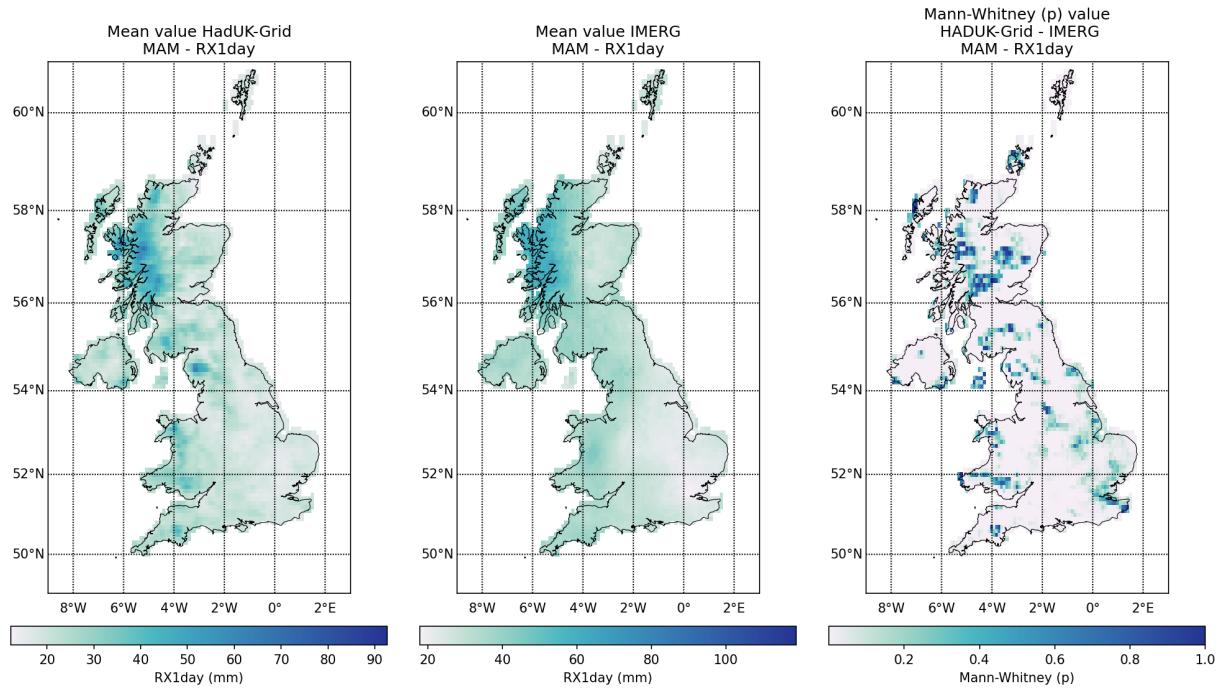


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

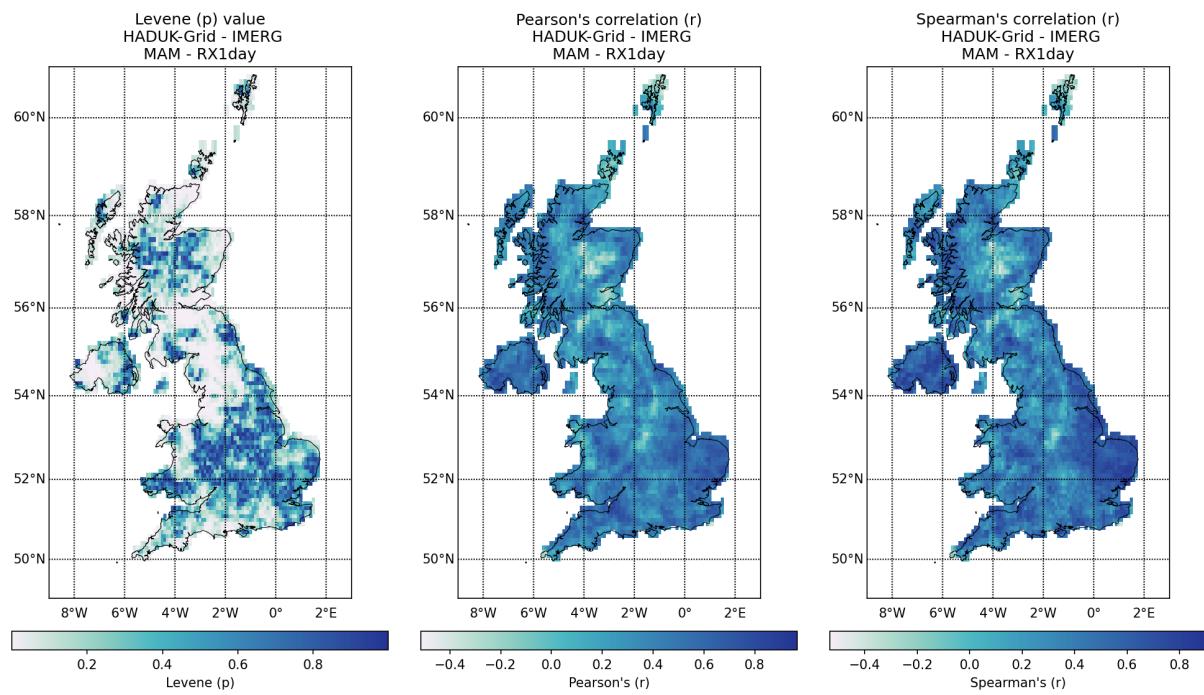


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

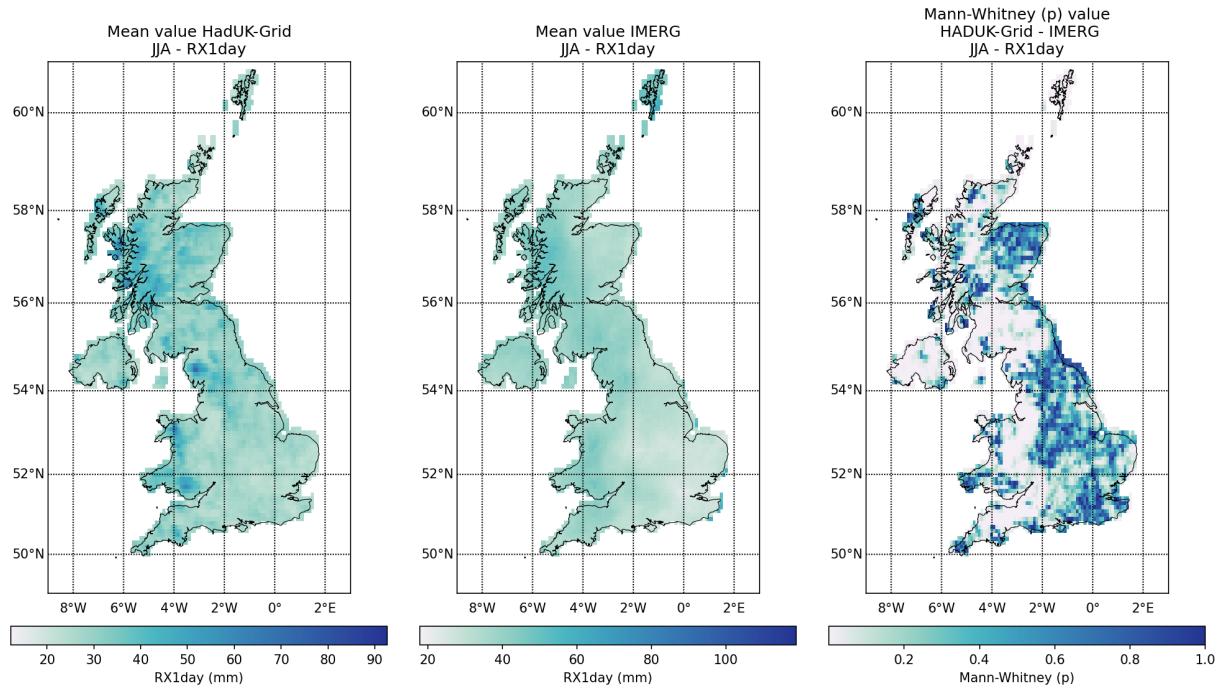


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

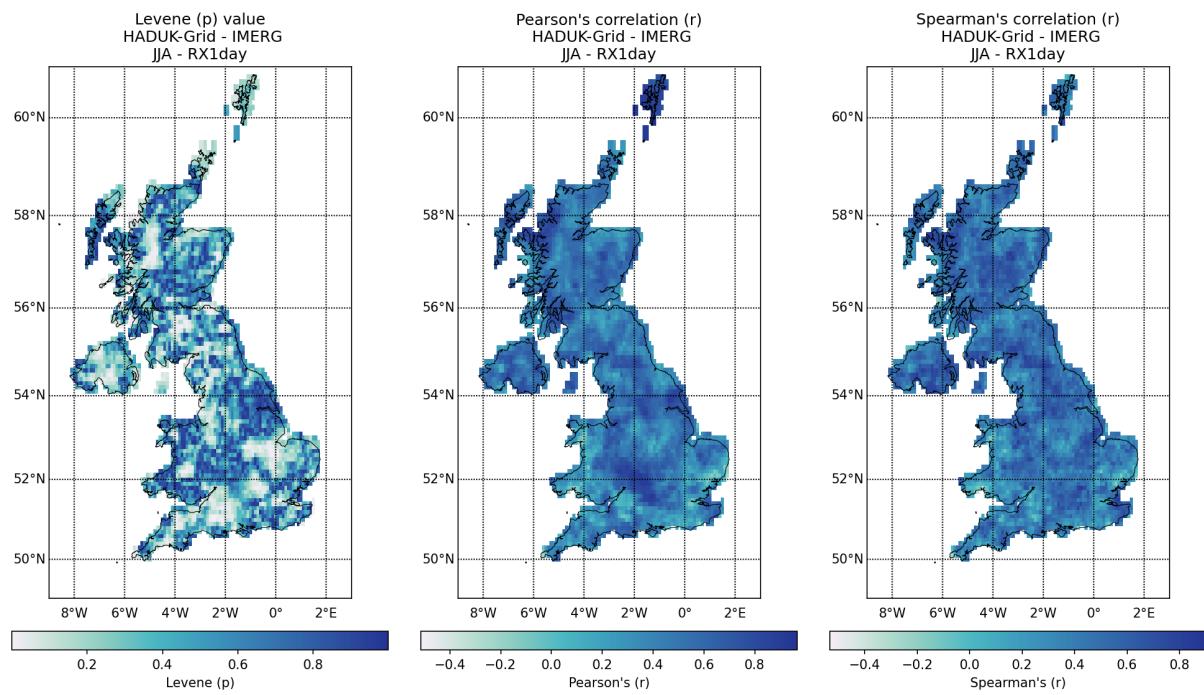


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

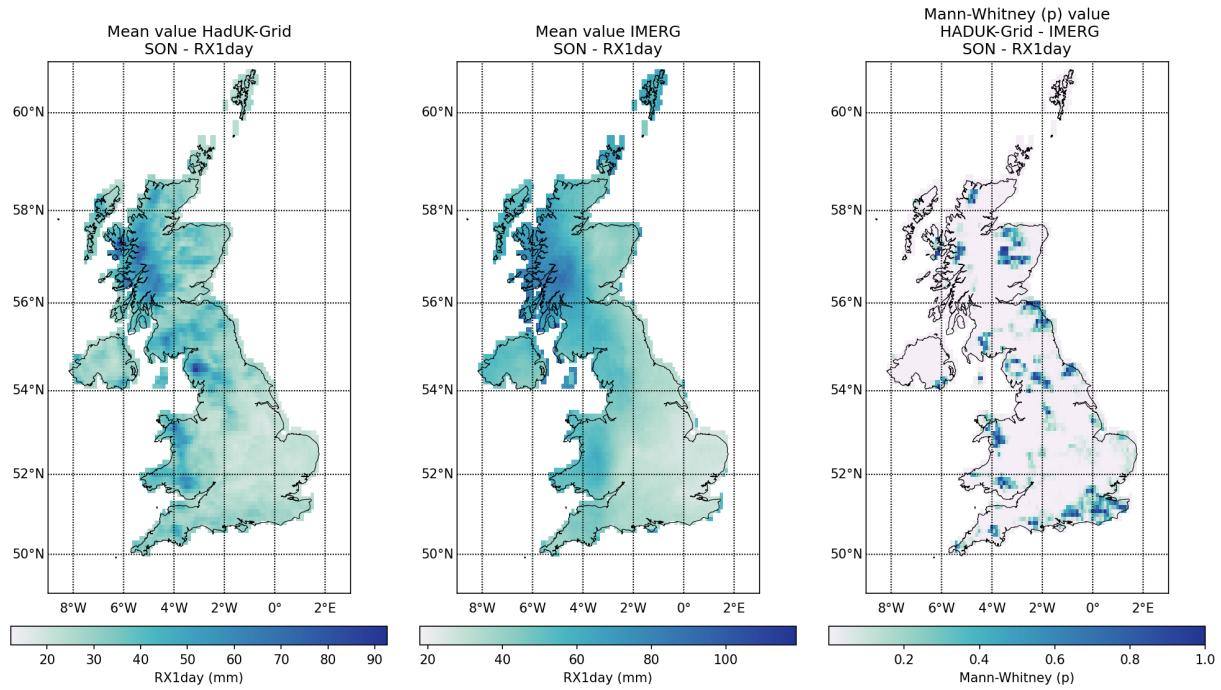


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

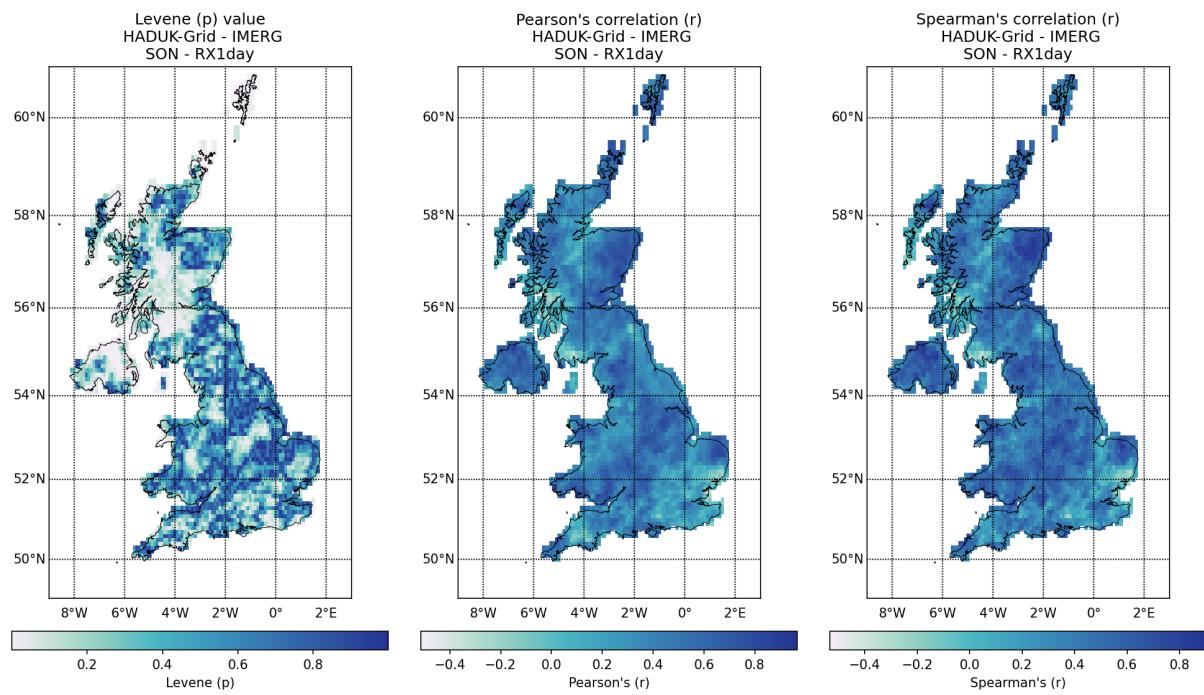


Figure 14: Spatial distribution of RX1day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

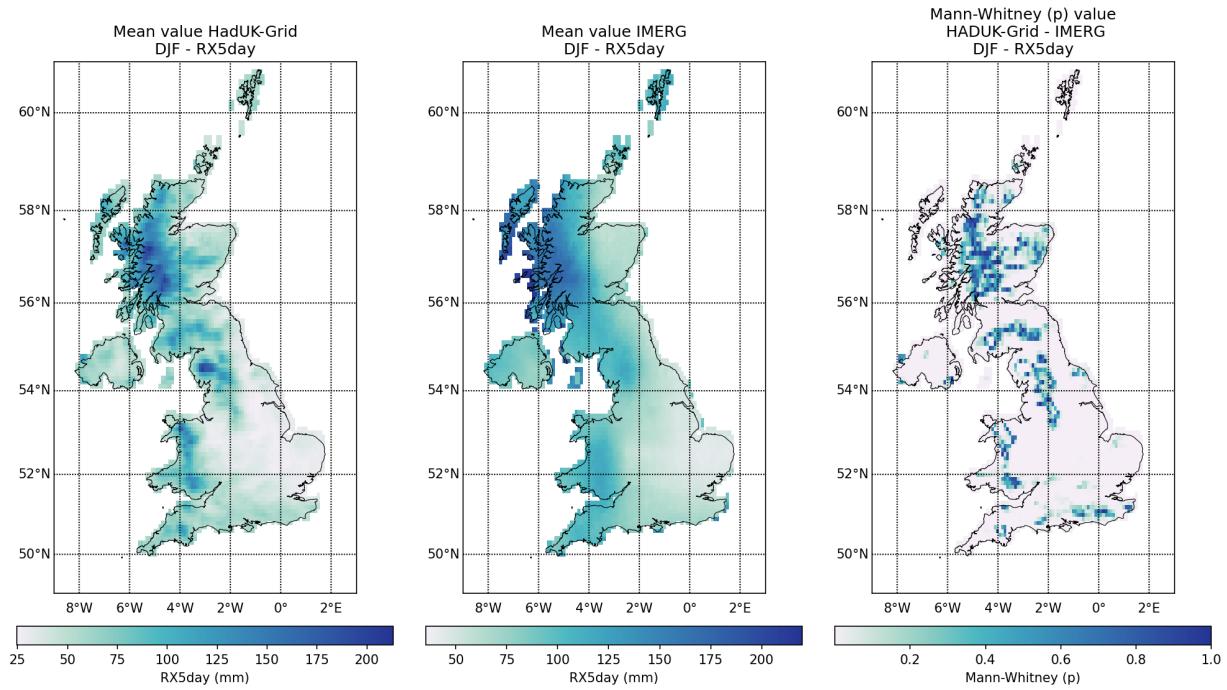


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

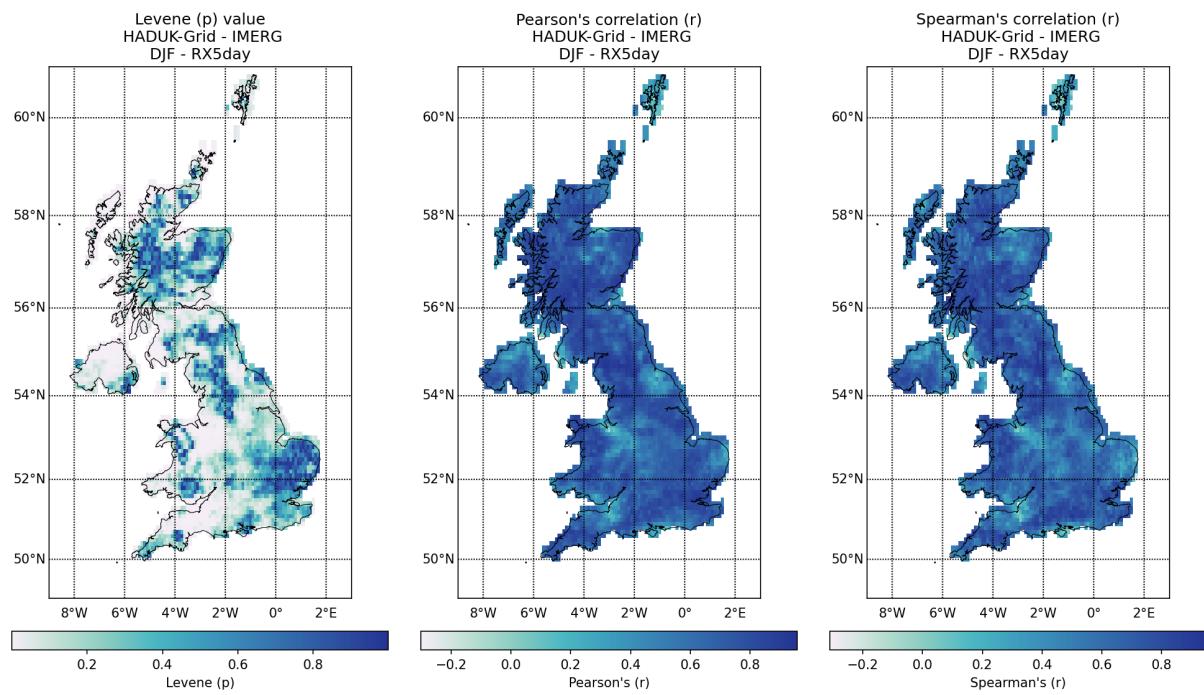


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

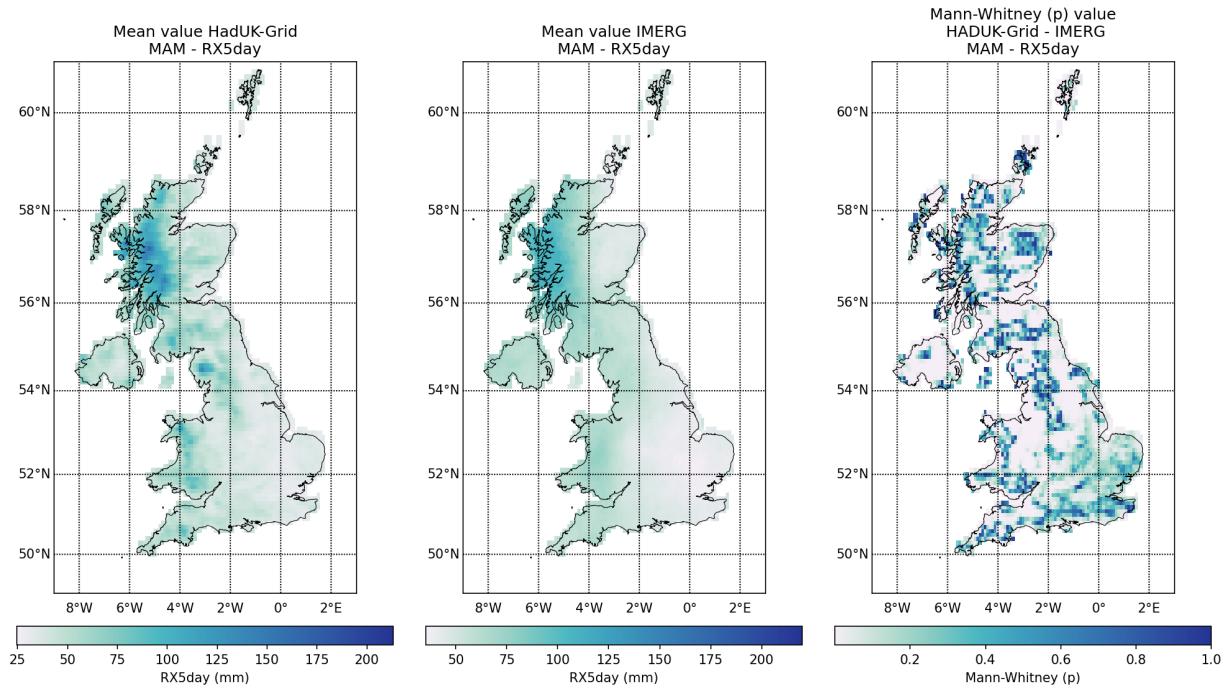


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

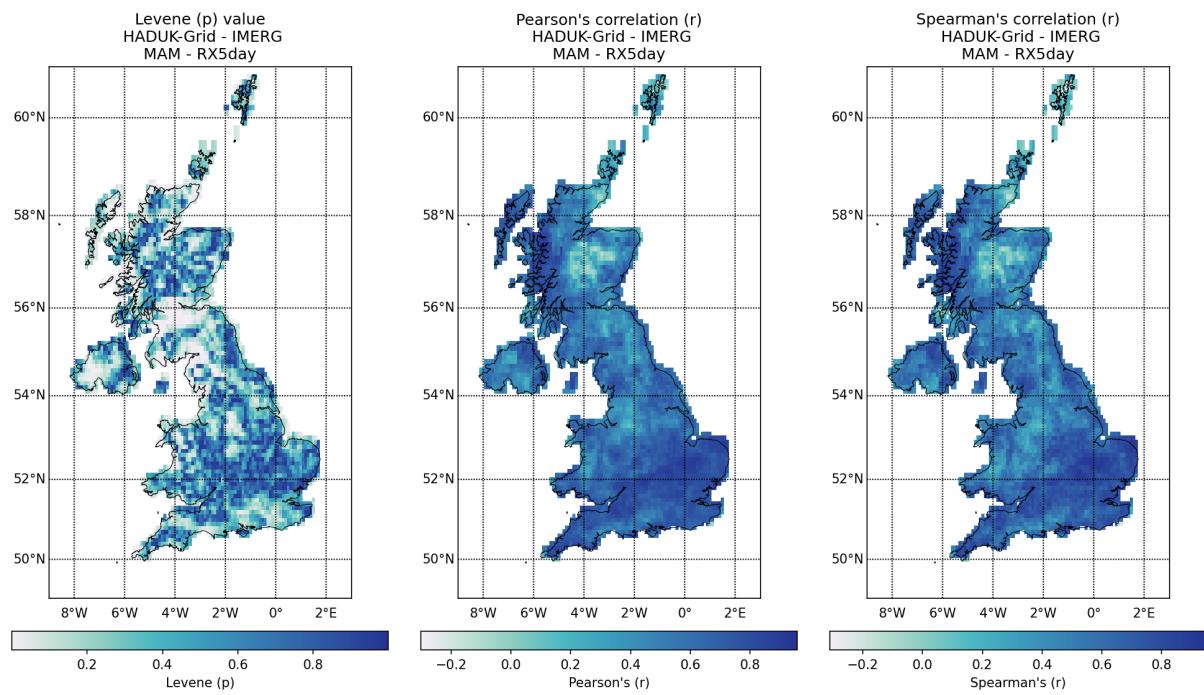


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

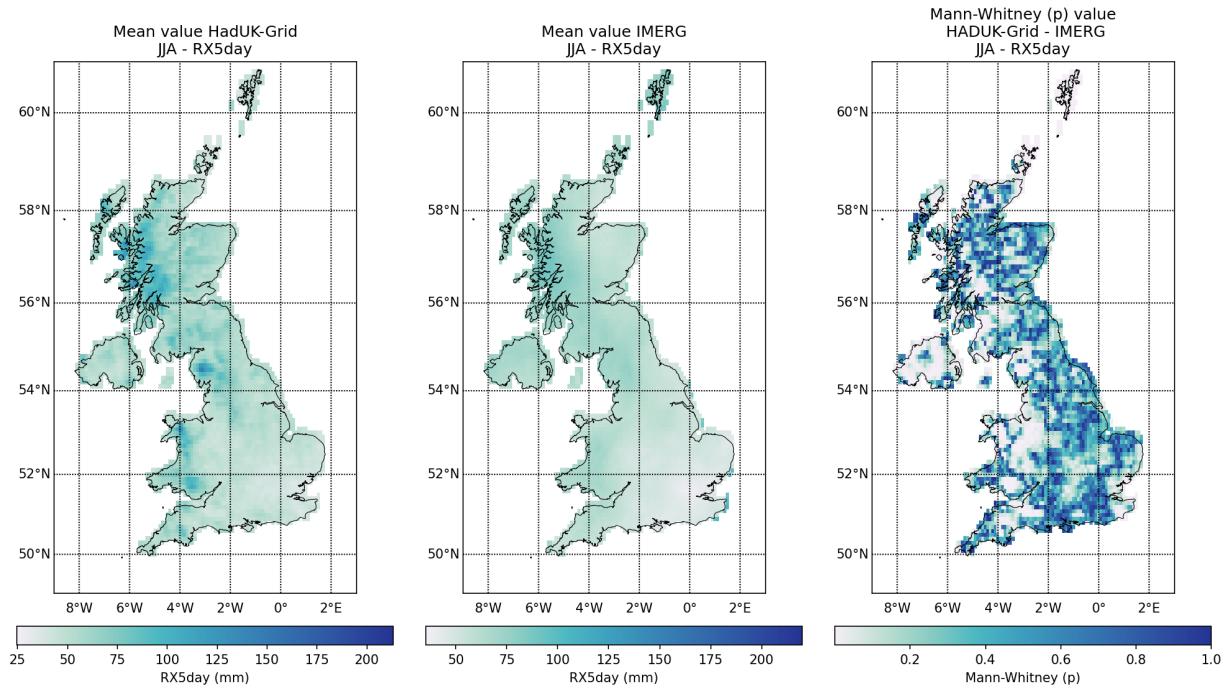


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

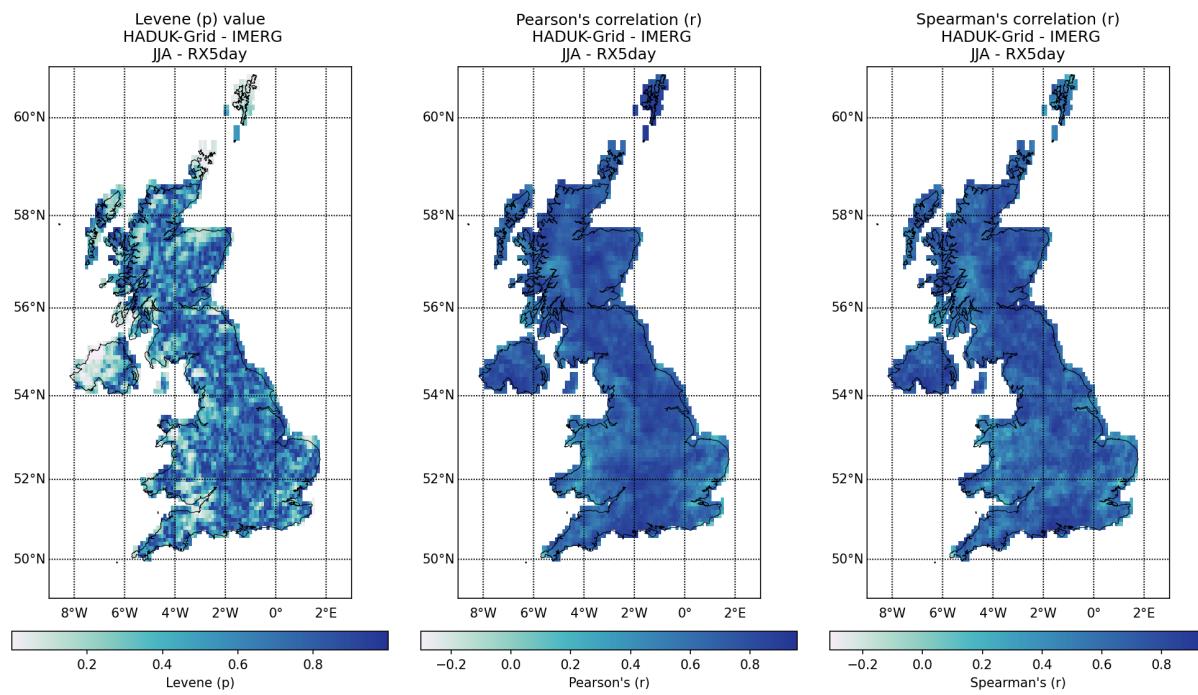


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

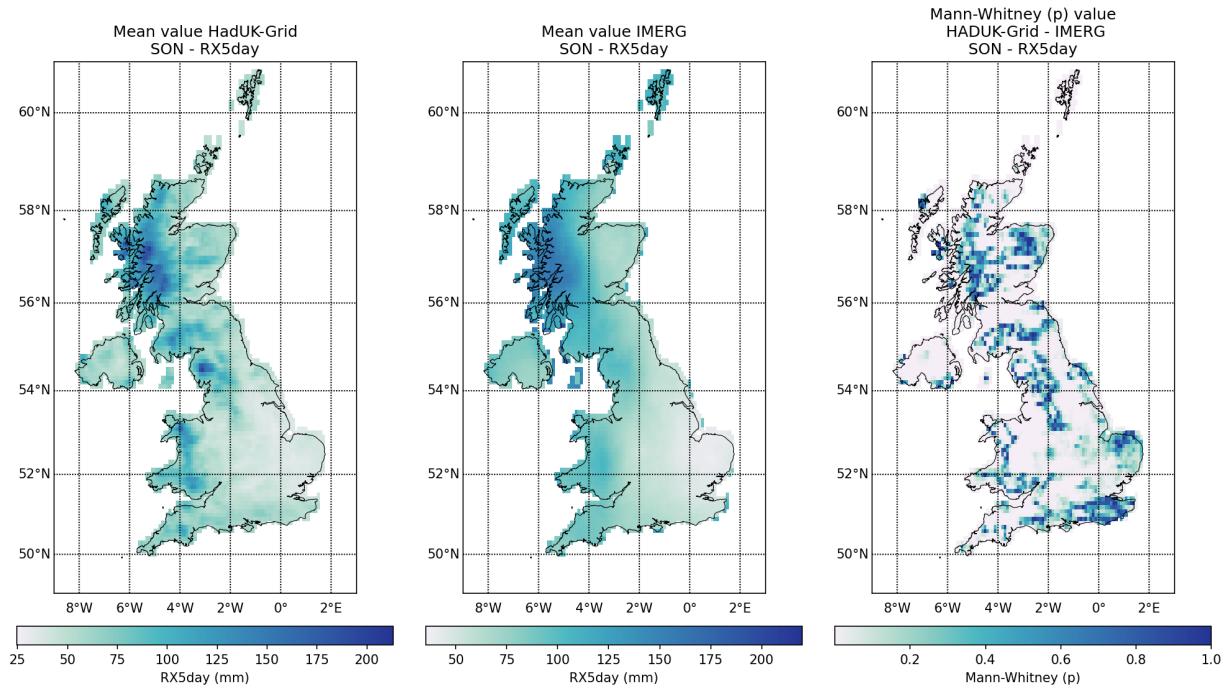


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

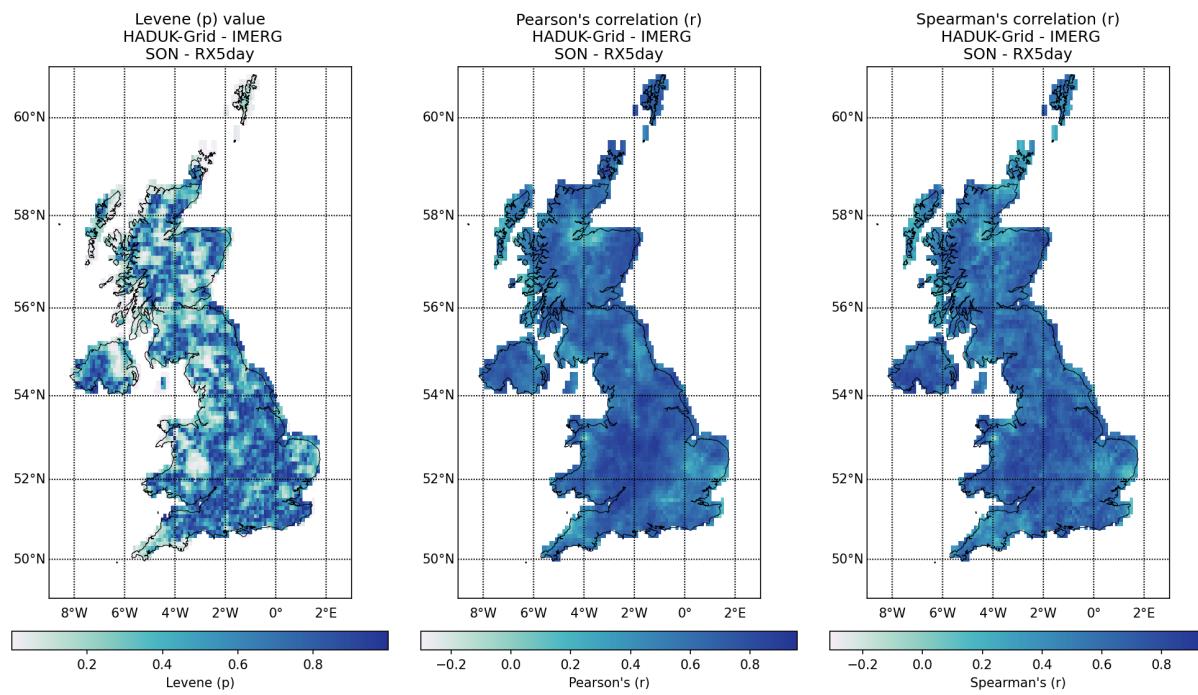


Figure 15: Spatial distribution of RX5day values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

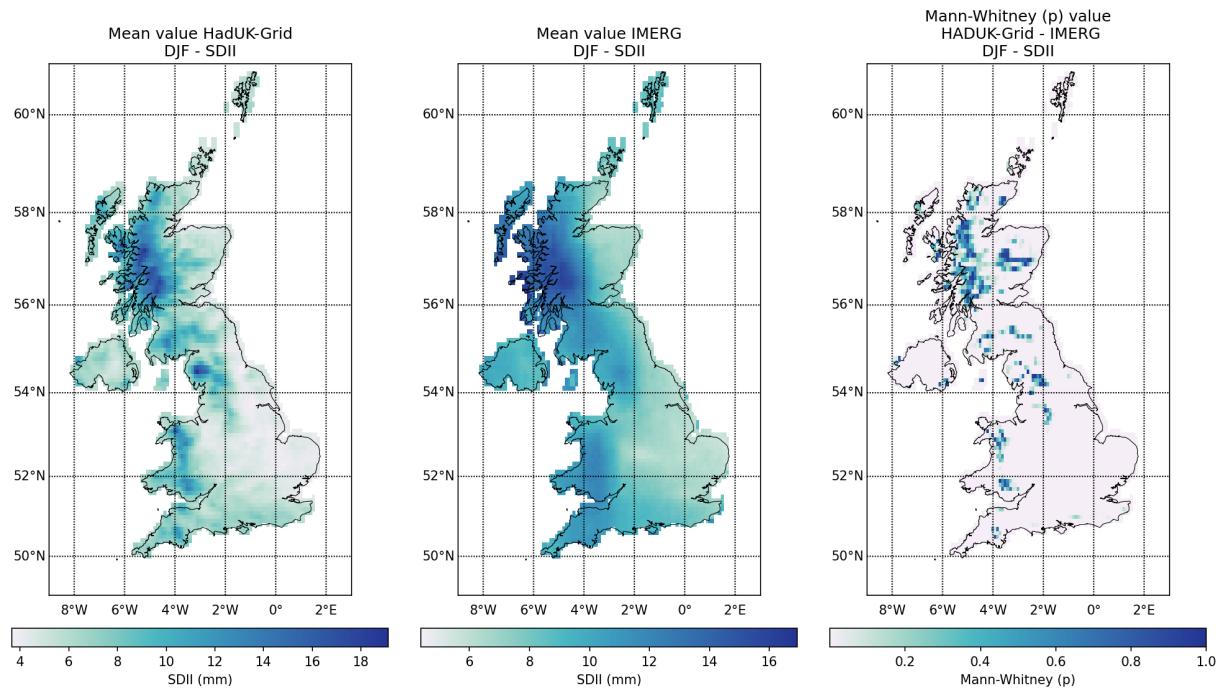


Figure 16: Spatial distribution of SDII values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

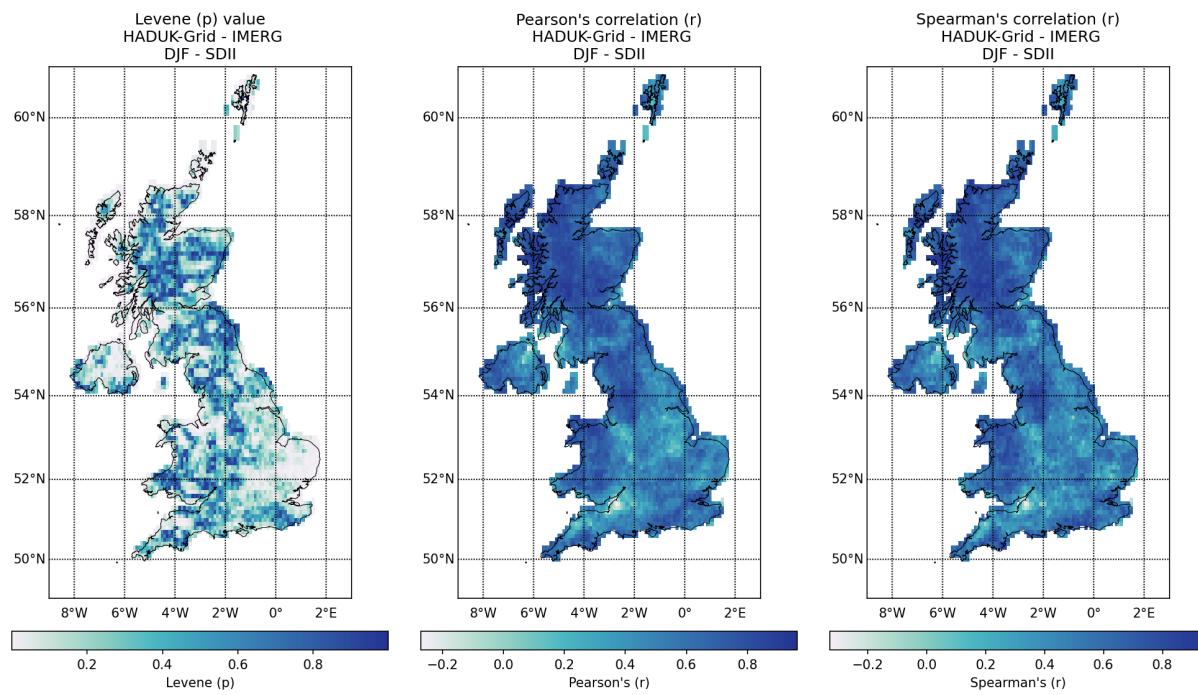


Figure 16: Spatial distribution of SDII values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

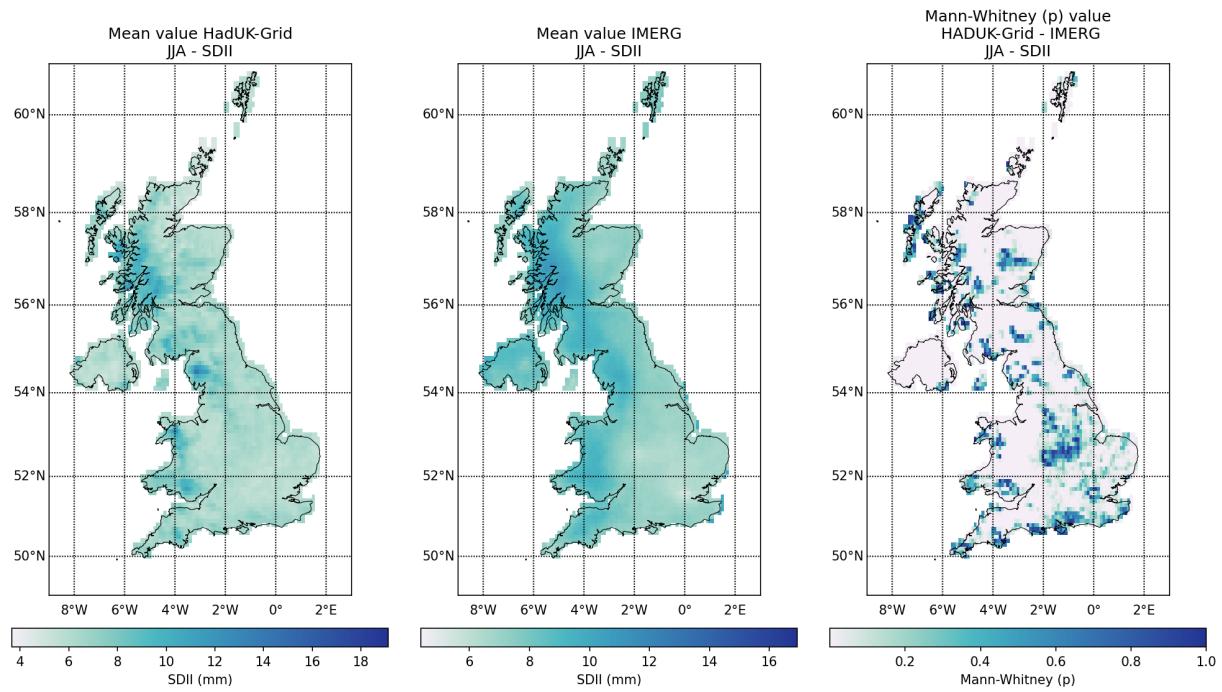


Figure 16: Spatial distribution of SDII values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

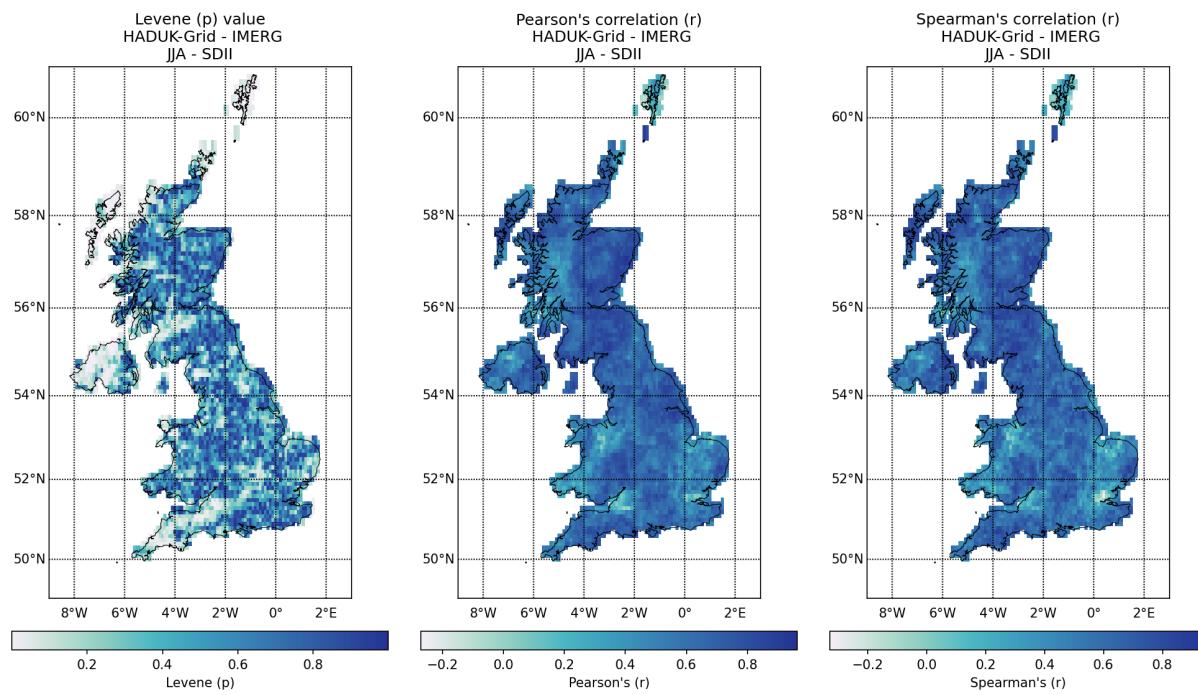


Figure 16: Spatial distribution of SDII values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

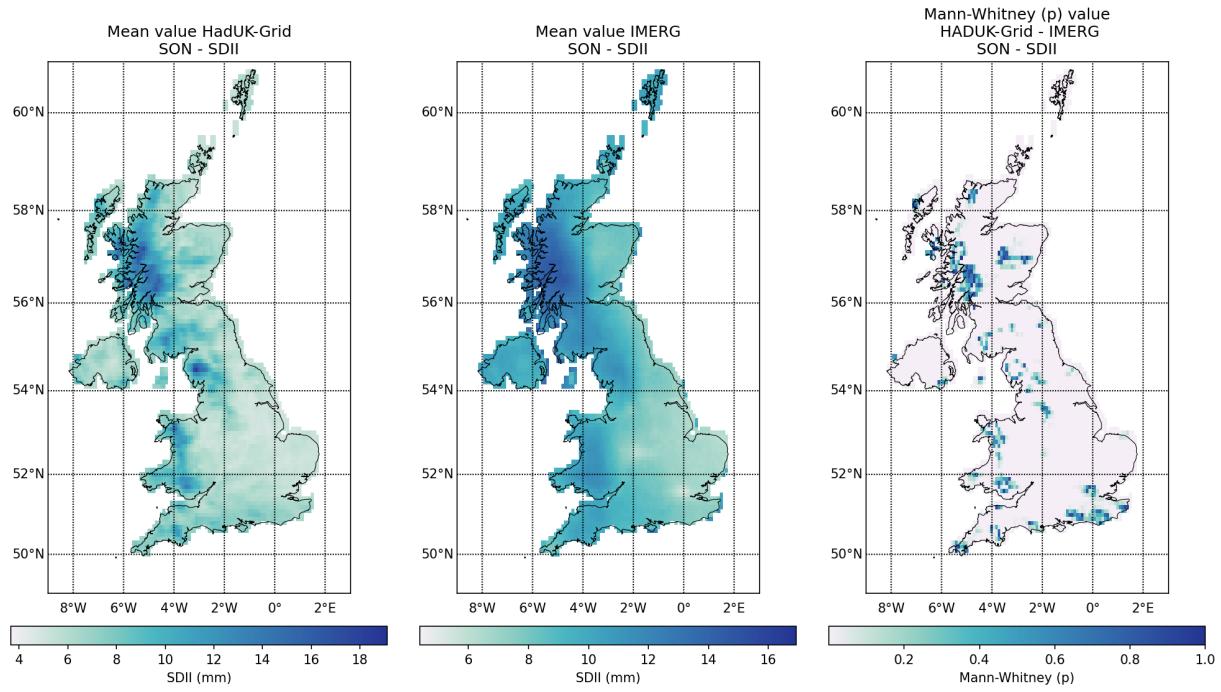


Figure 16: Spatial distribution of SDII values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

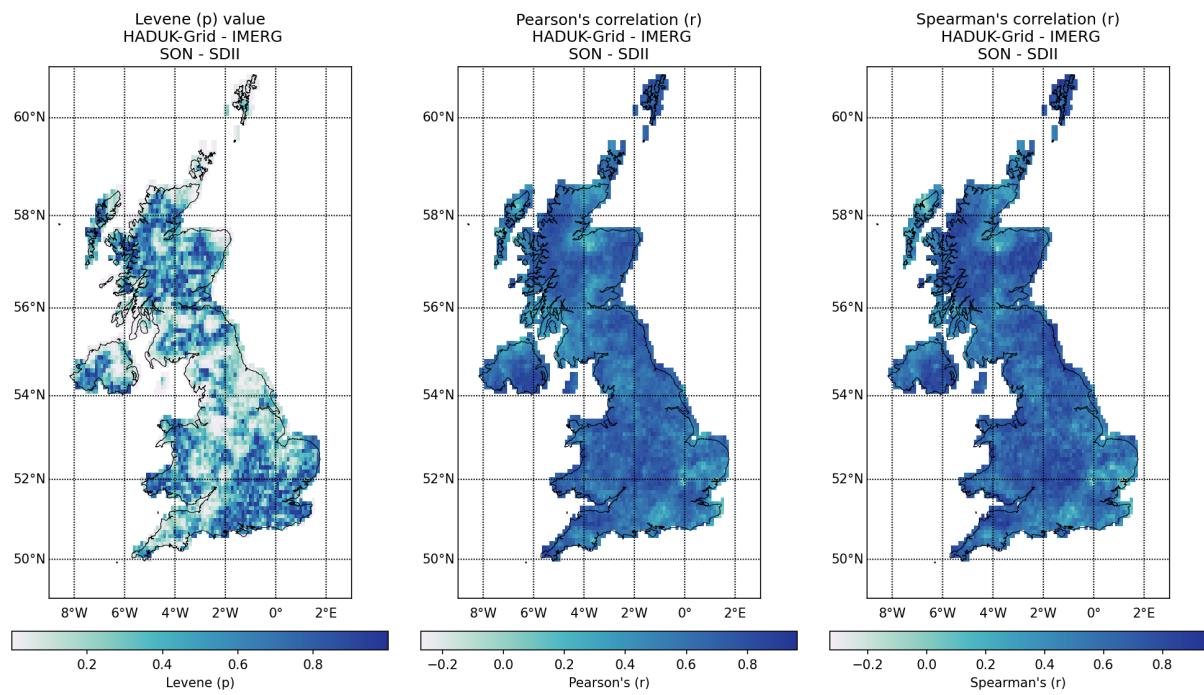


Figure 16: Spatial distribution of SDII values obtained from HadUK-Grid and IMERG with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

1.3.2 ERA5 DATA

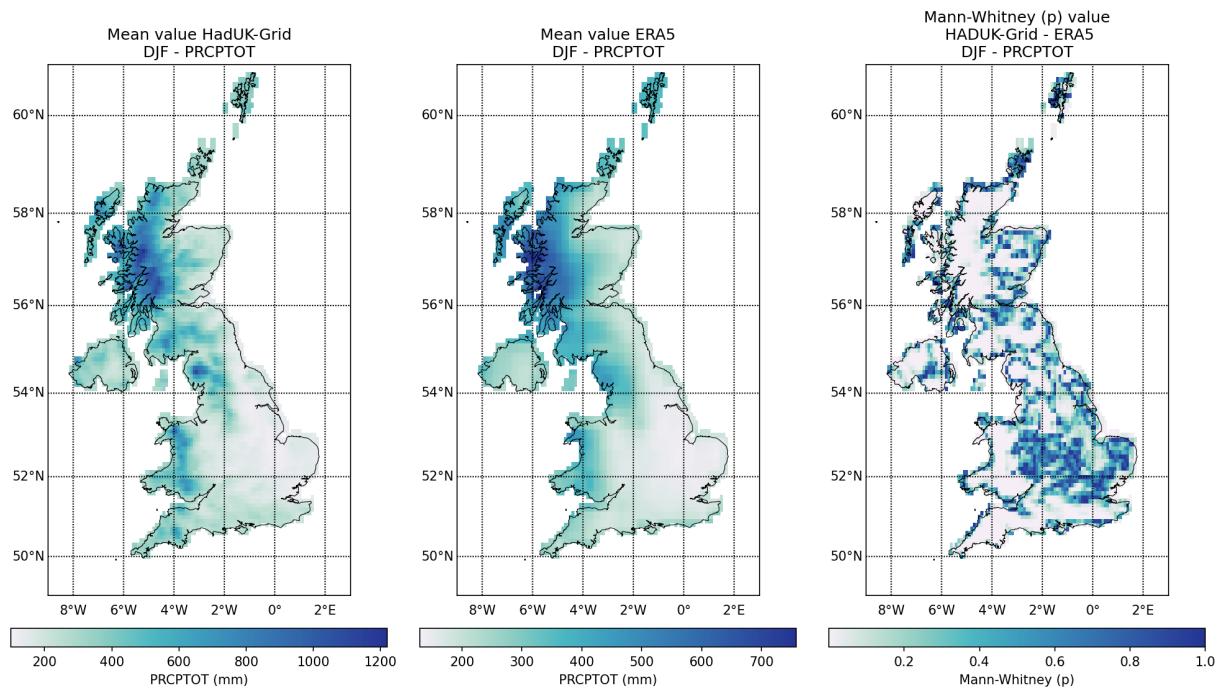


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

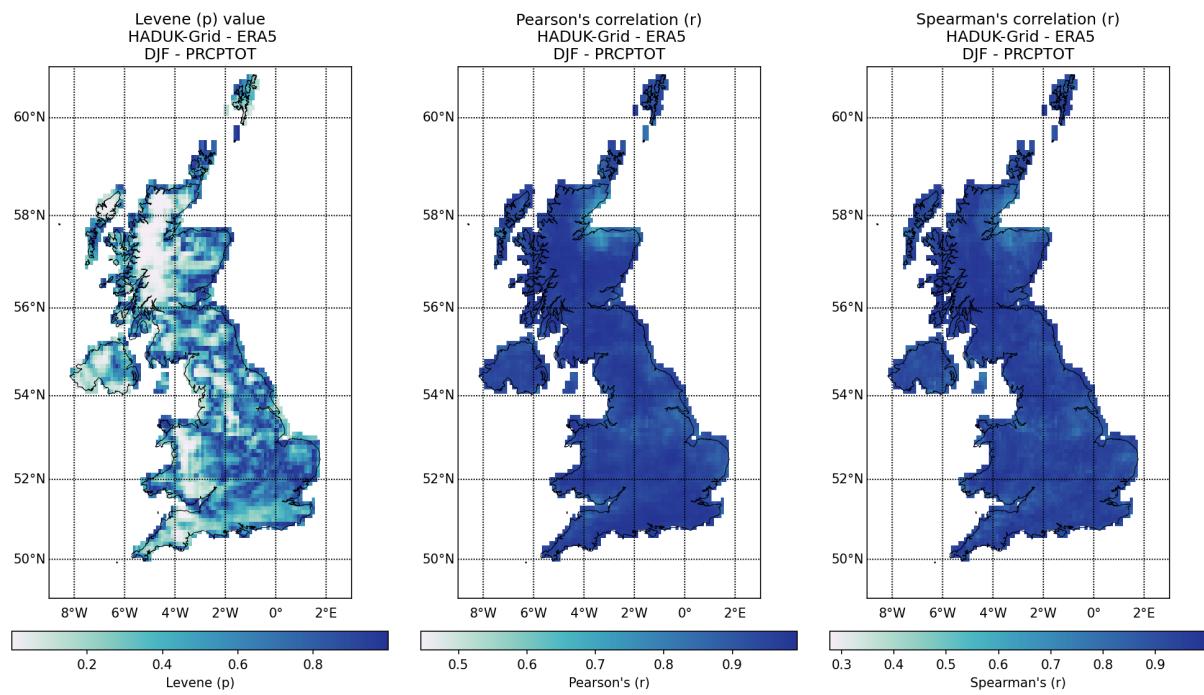


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

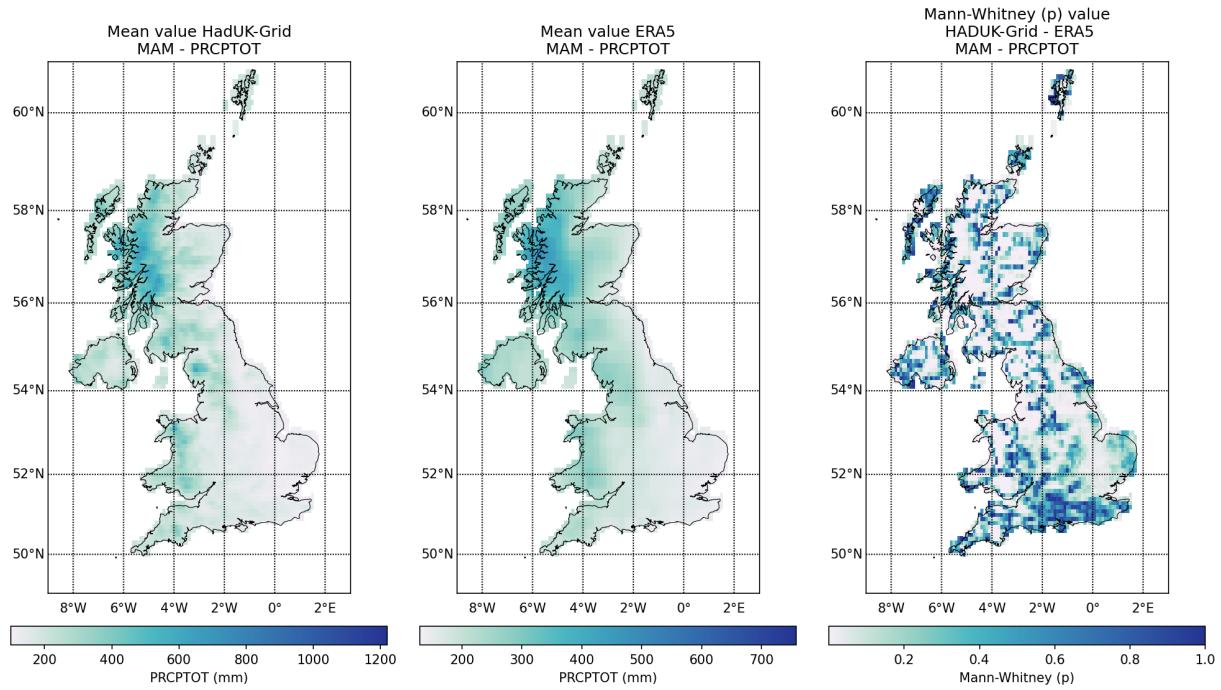


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

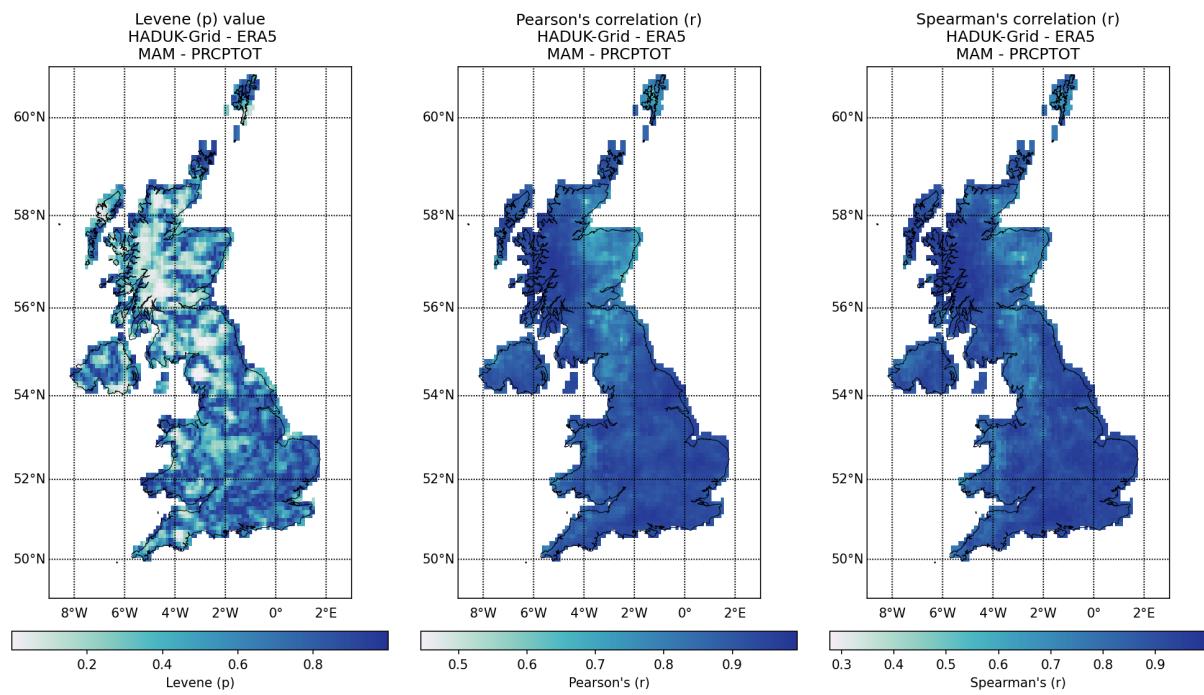


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

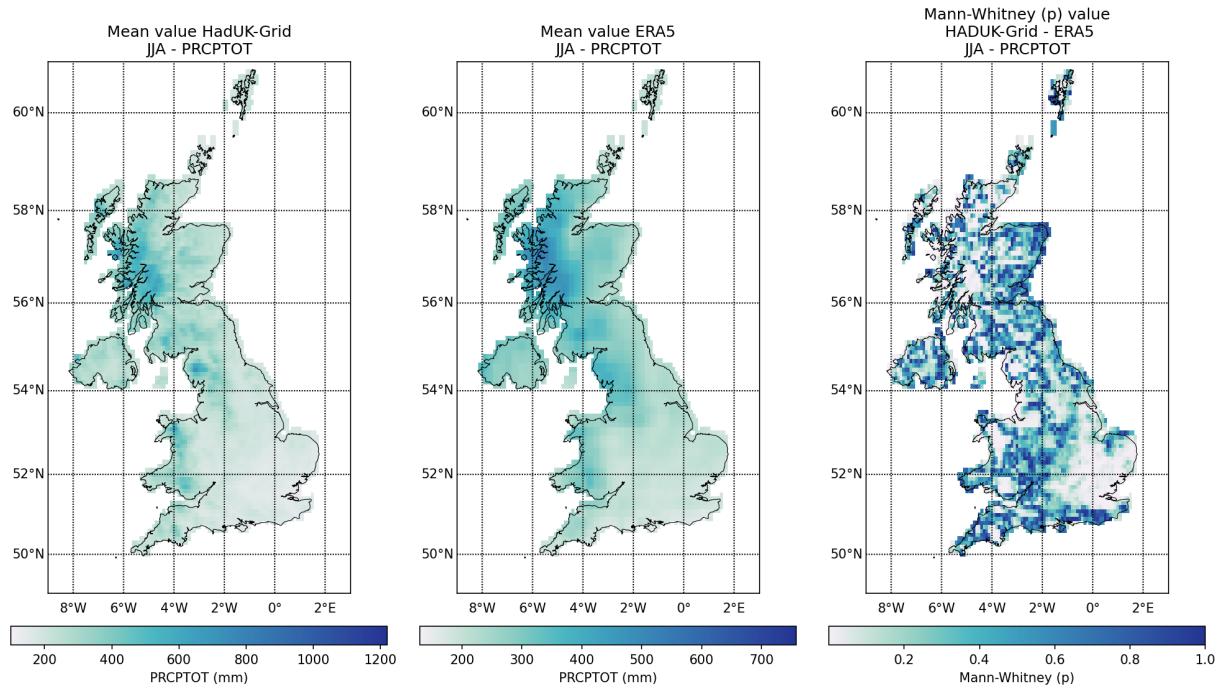


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

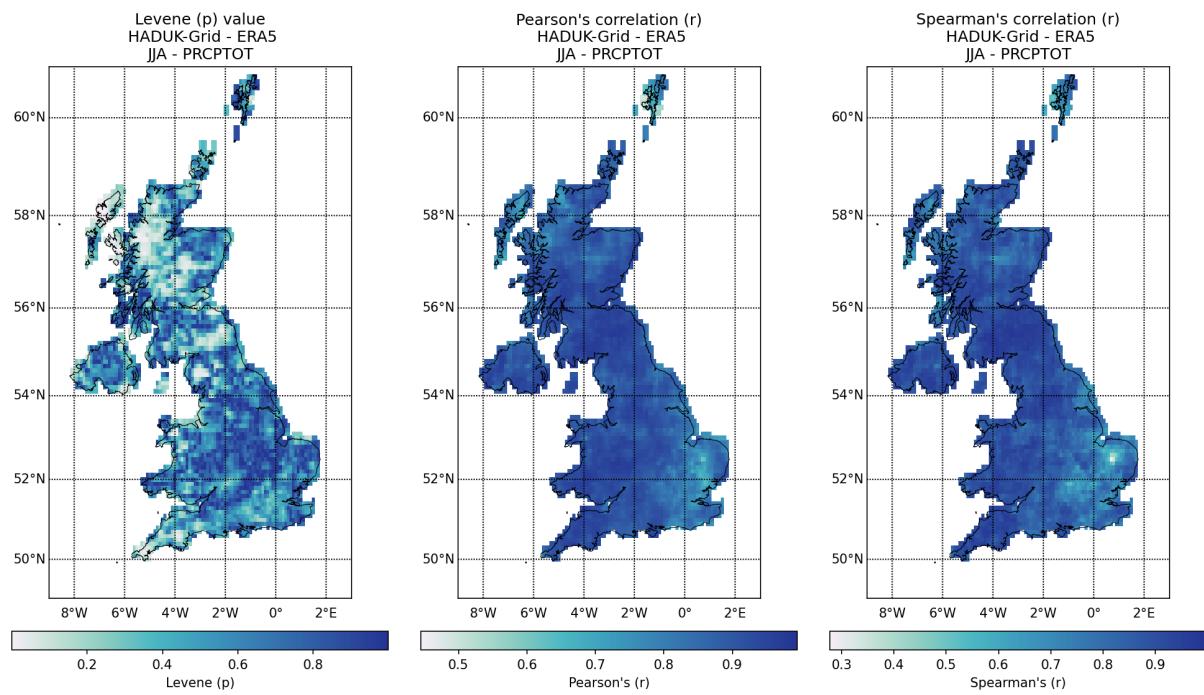


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

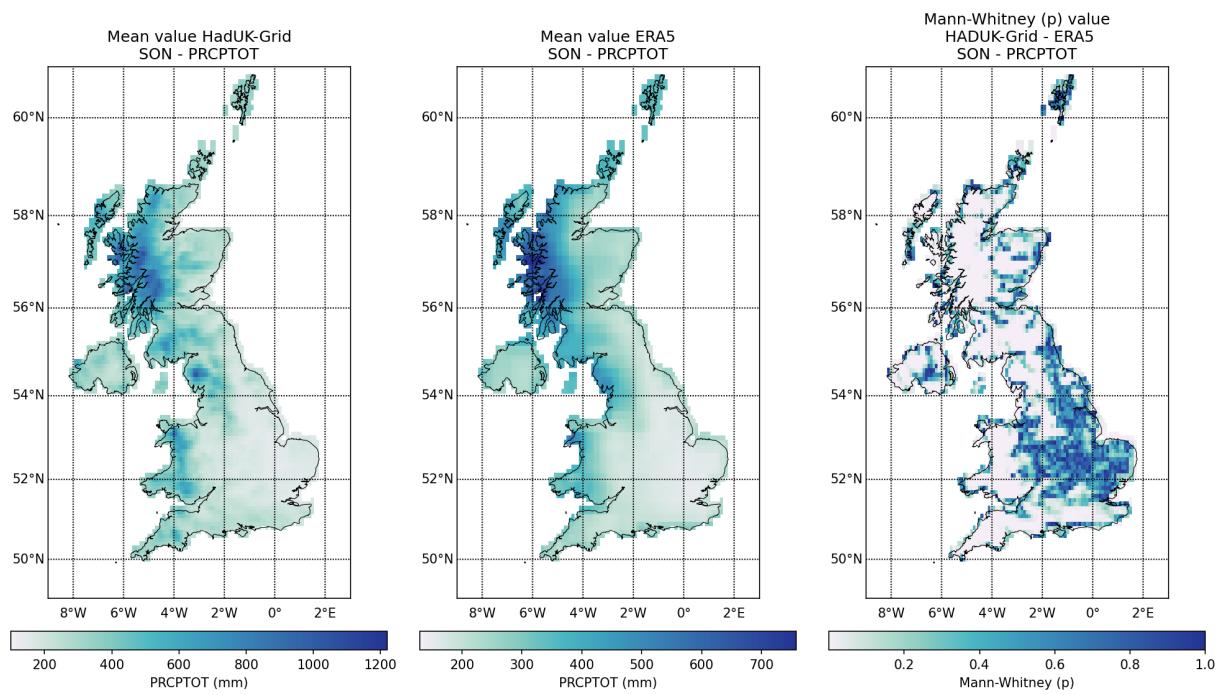


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

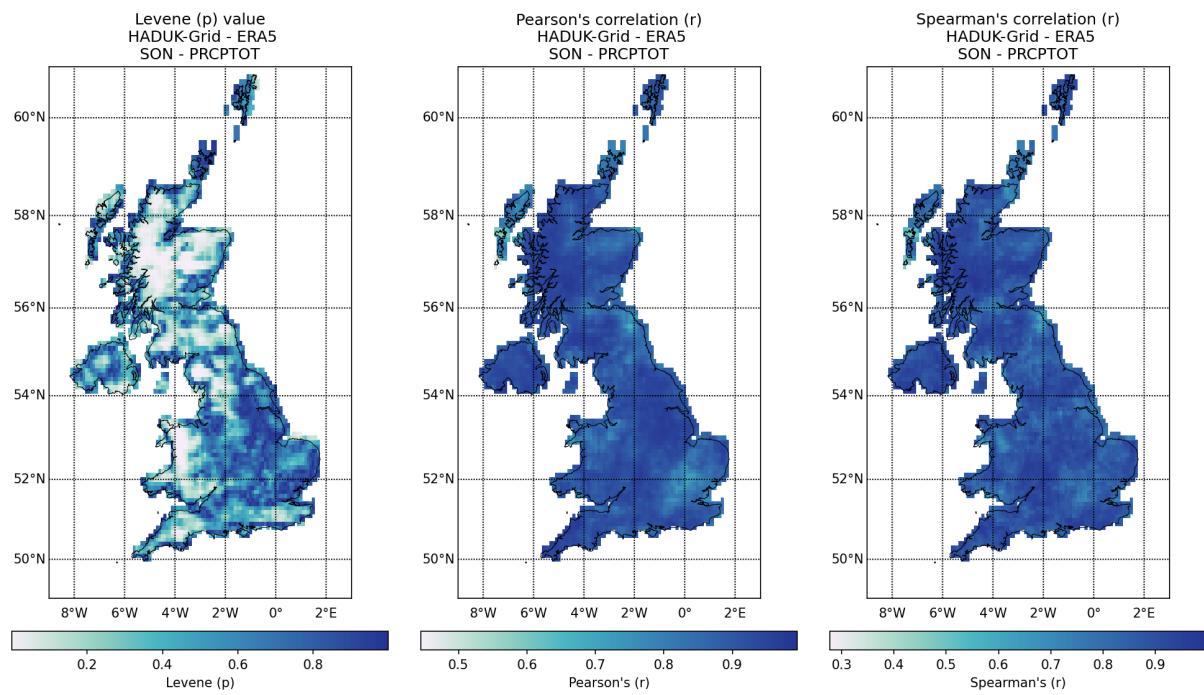


Figure 17: Spatial distribution of PRCPTOT values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

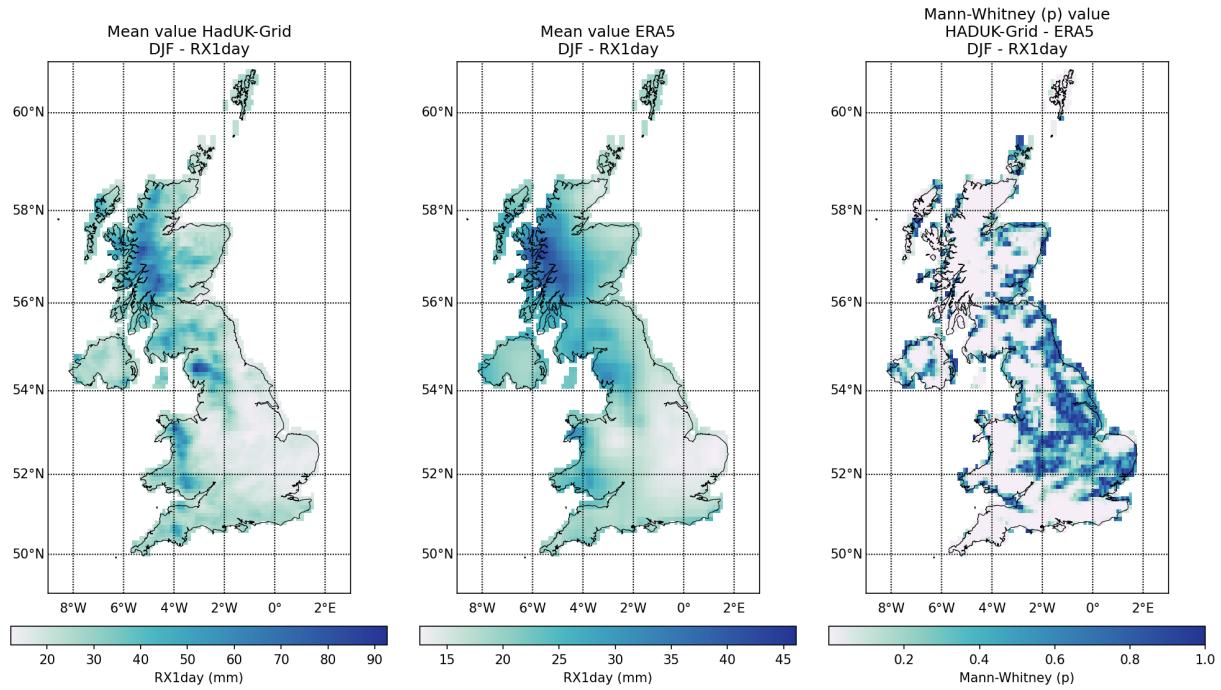


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

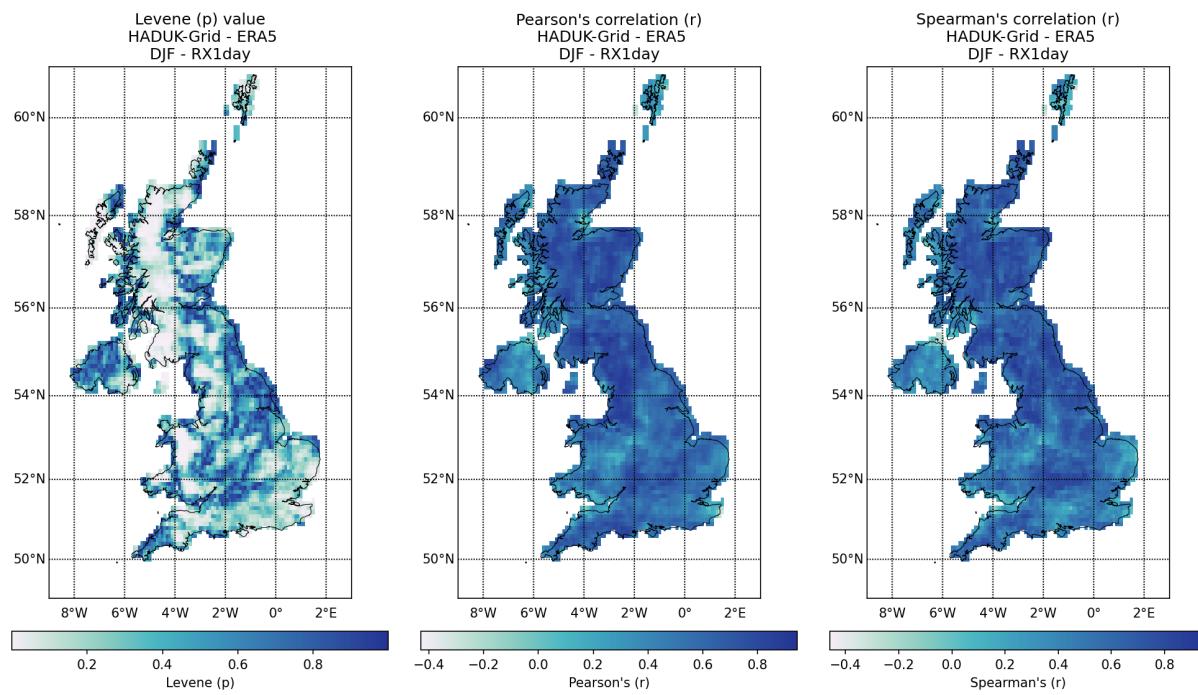


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

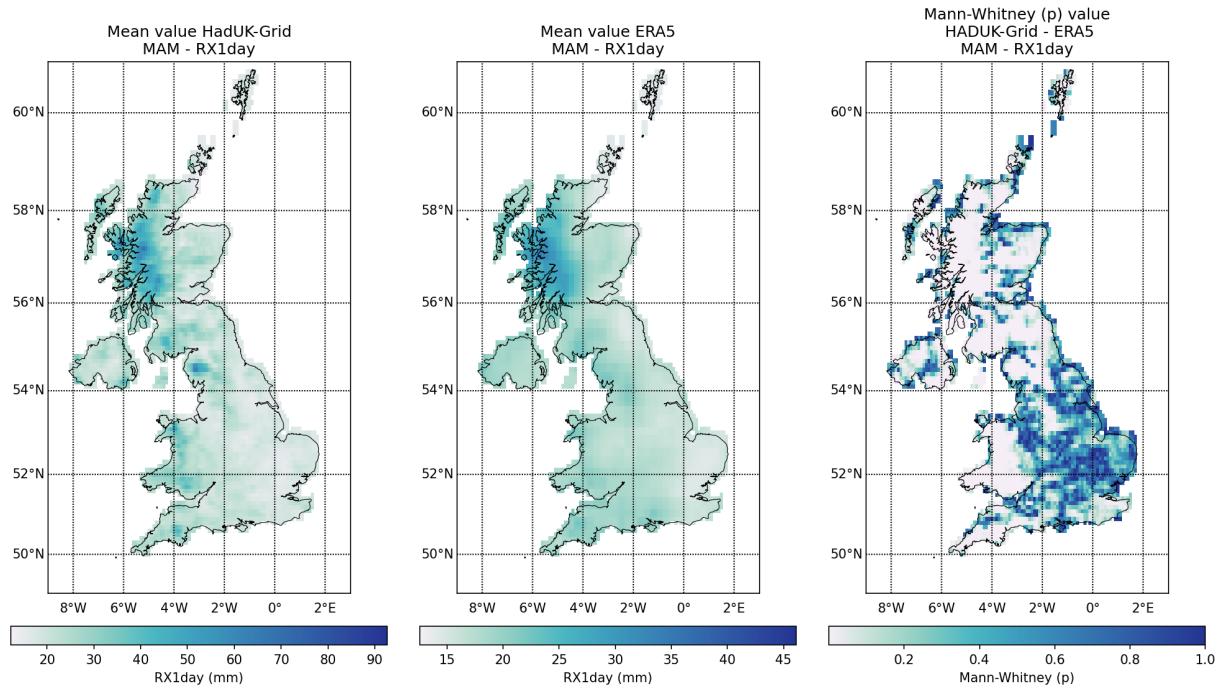


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

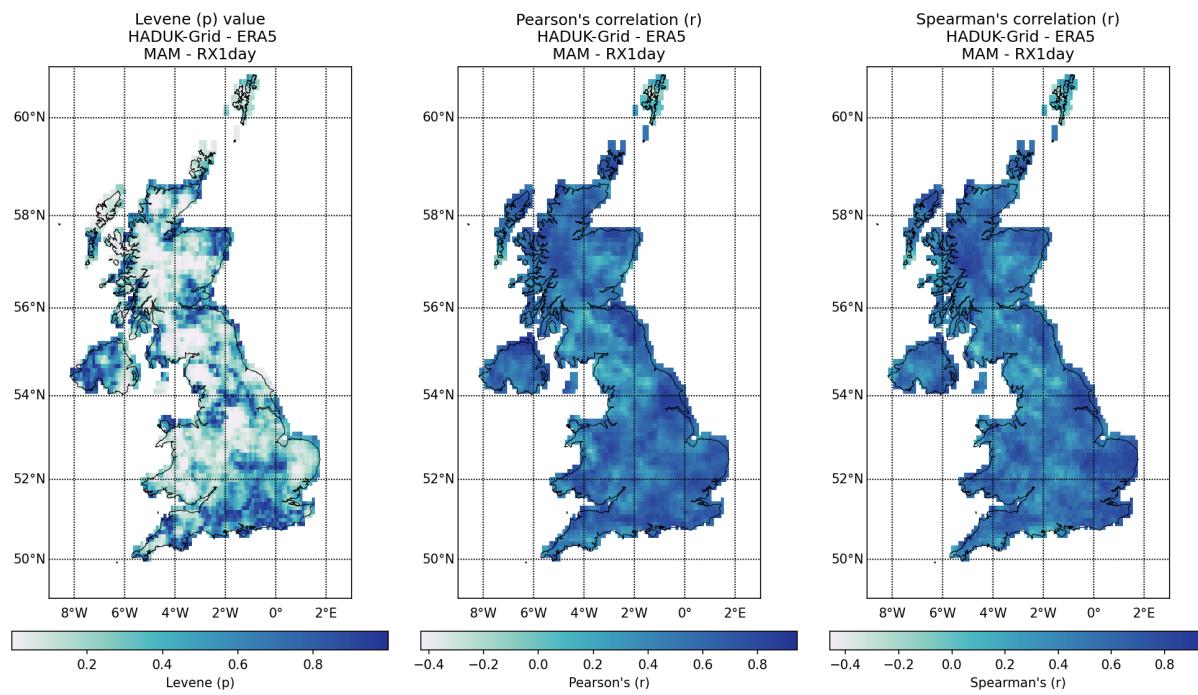


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

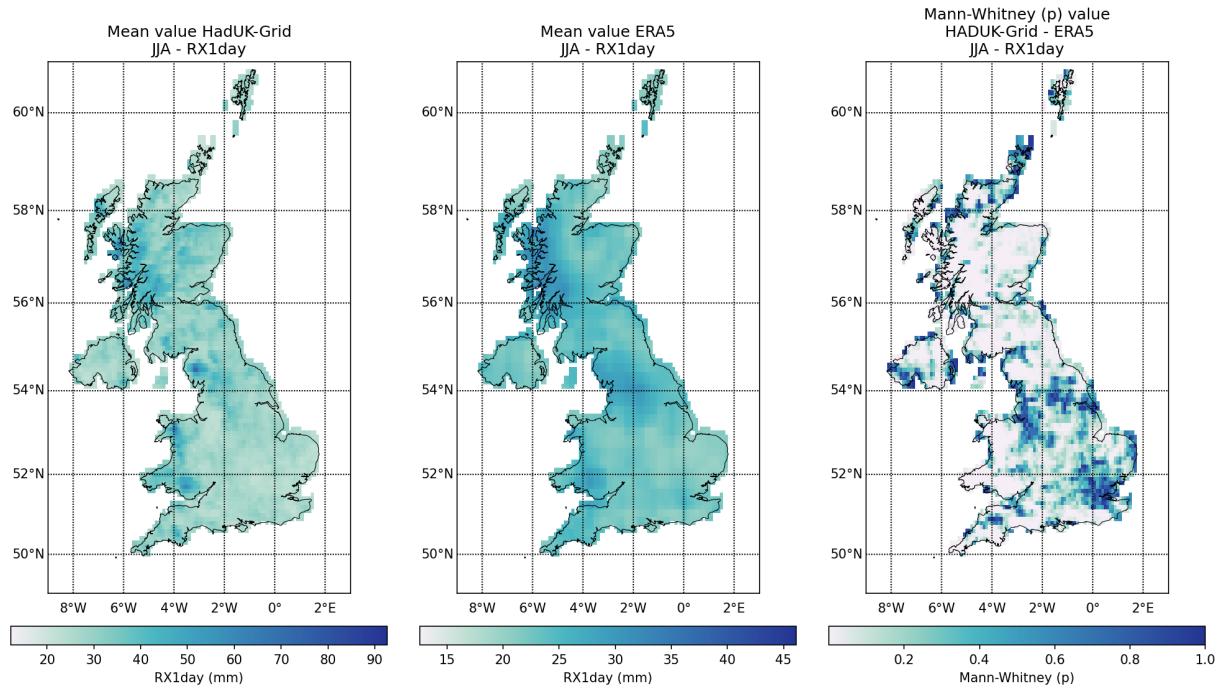


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

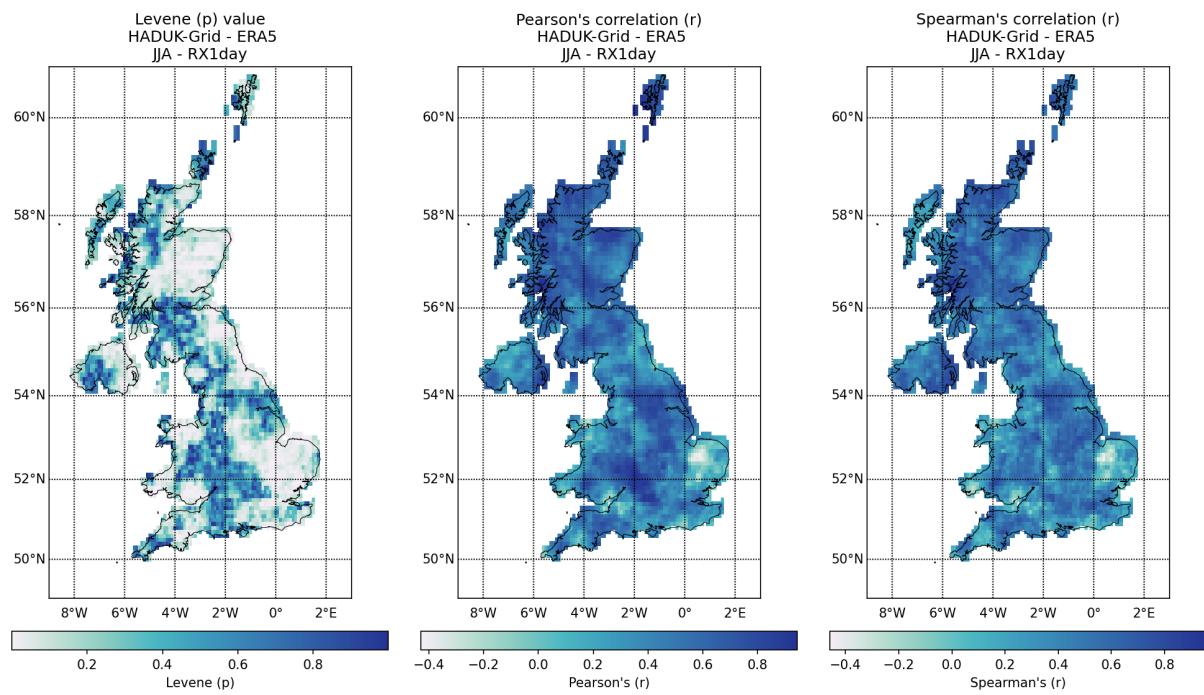


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

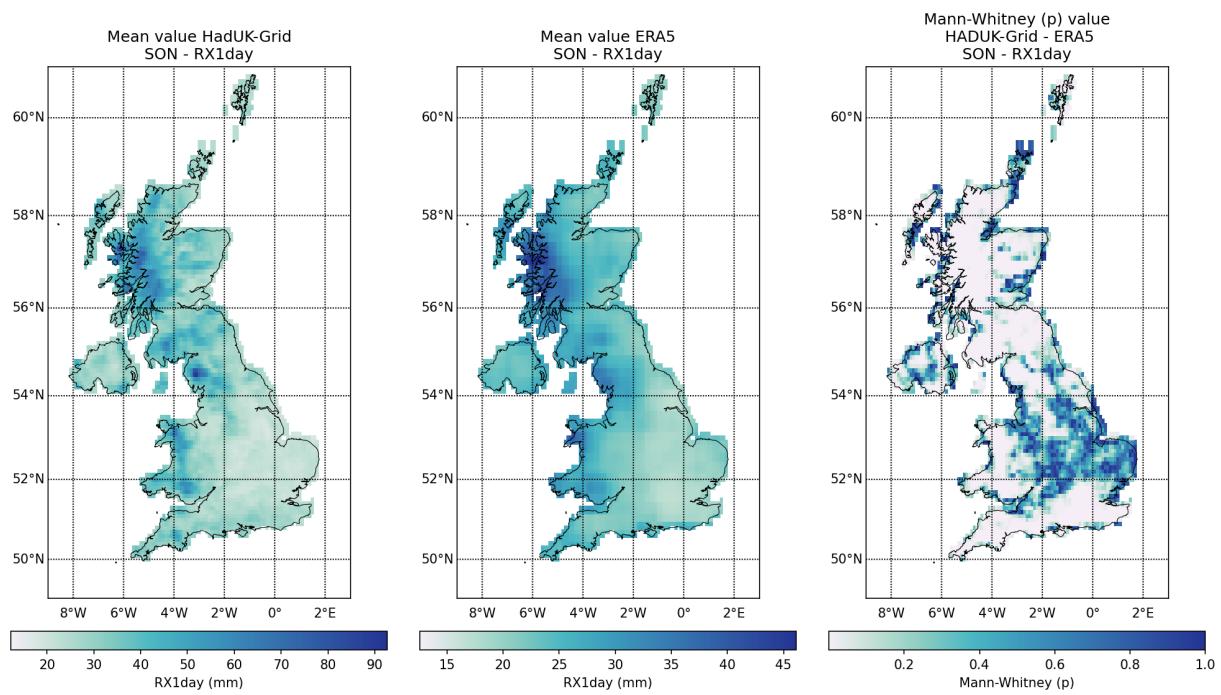


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

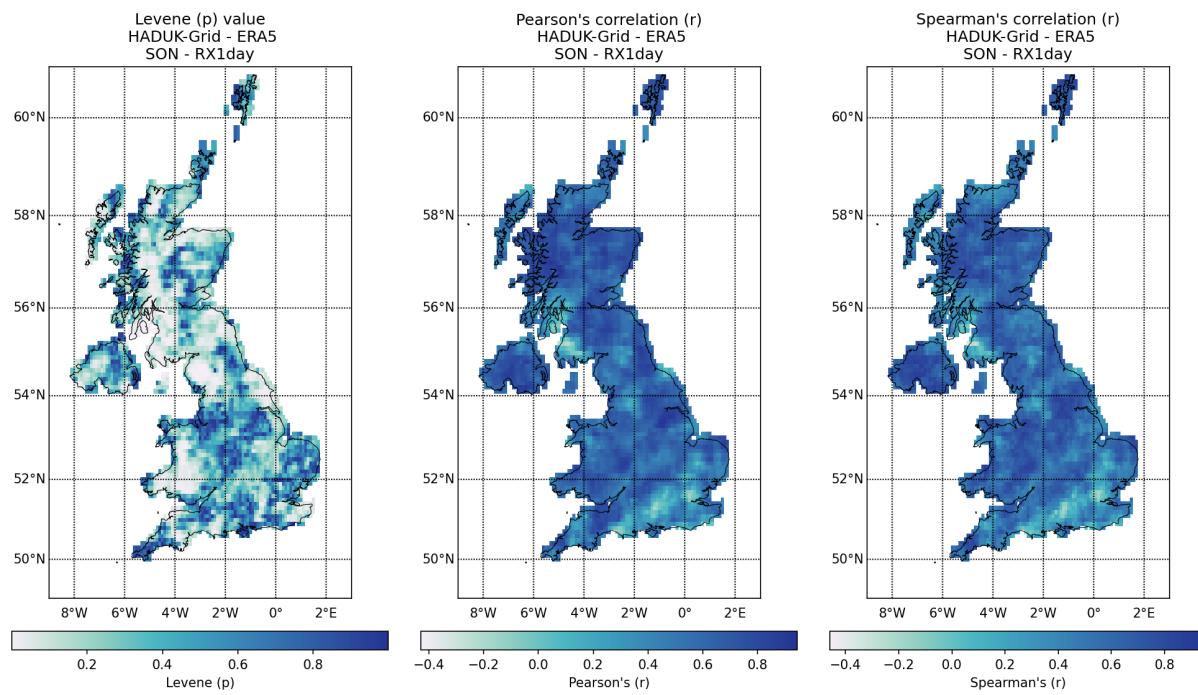


Figure 18: Spatial distribution of RX1day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

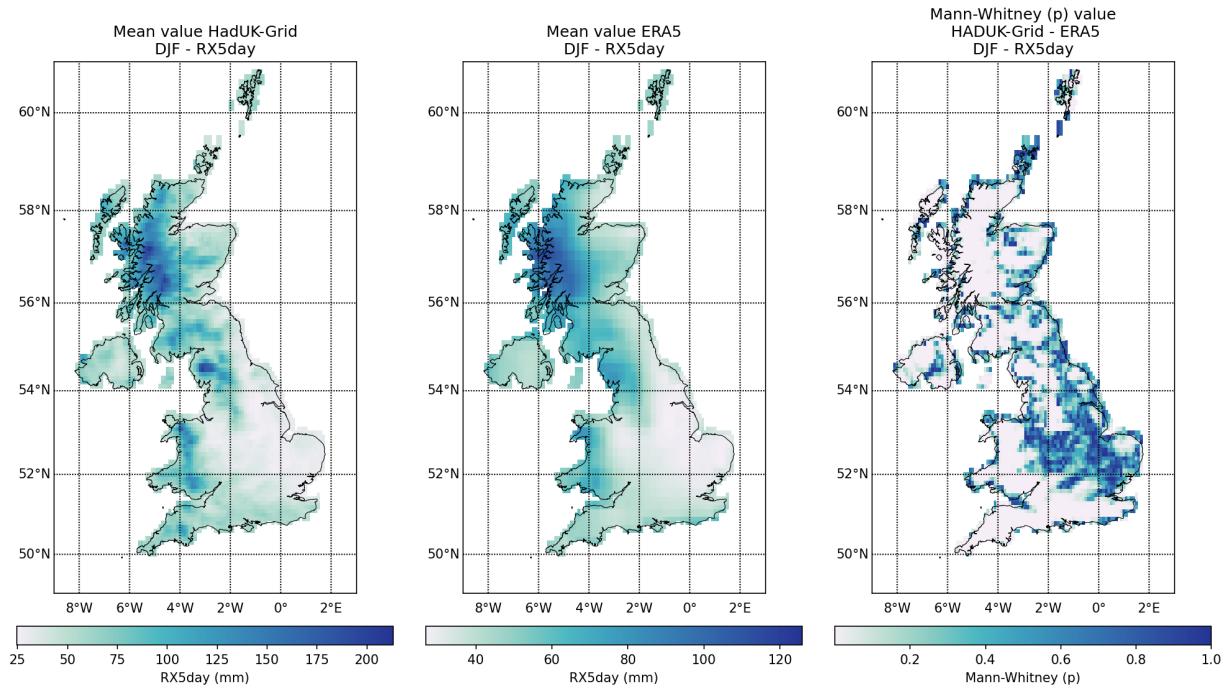


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

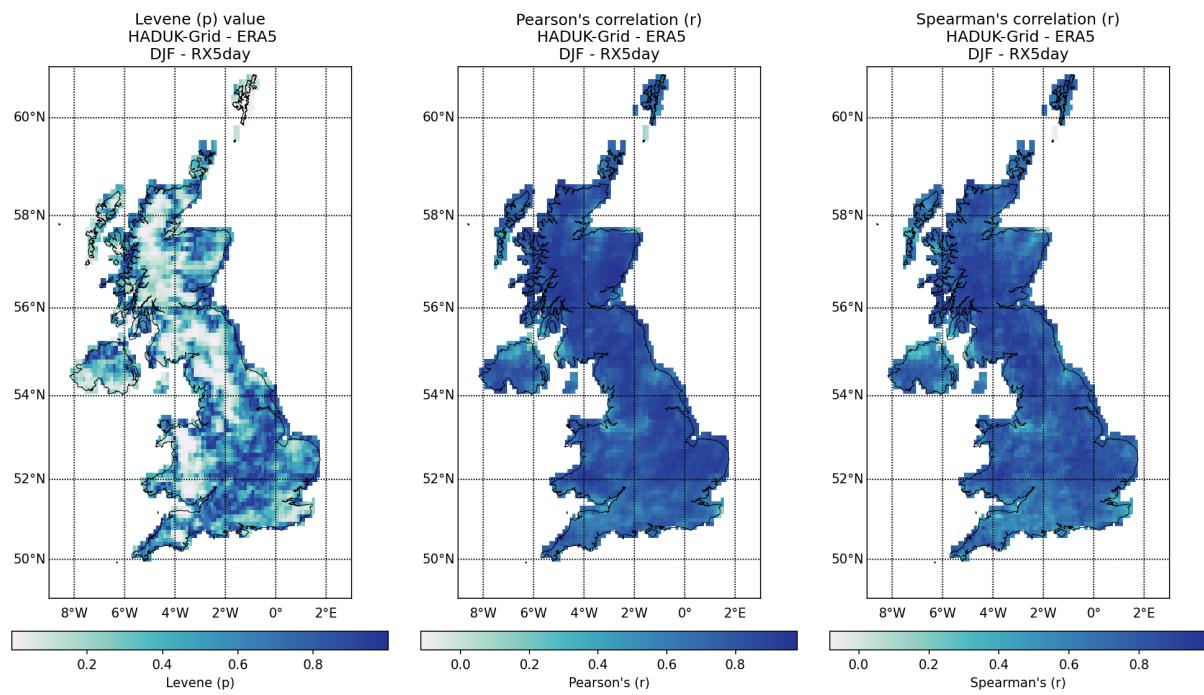


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

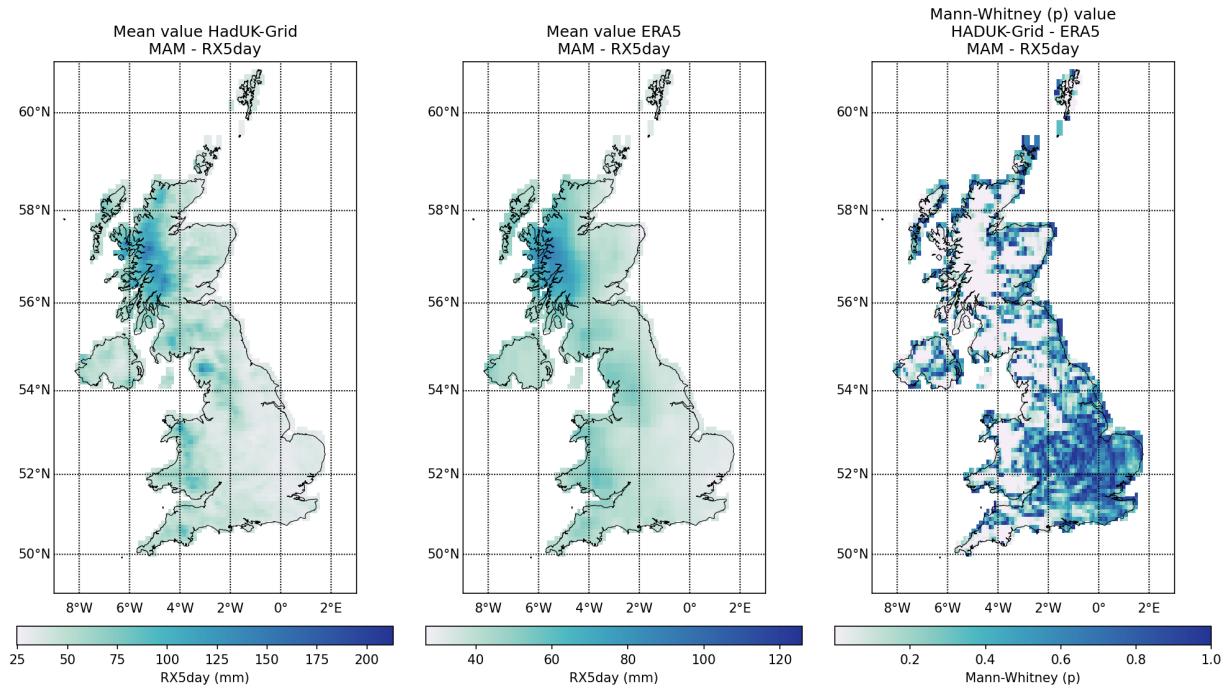


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

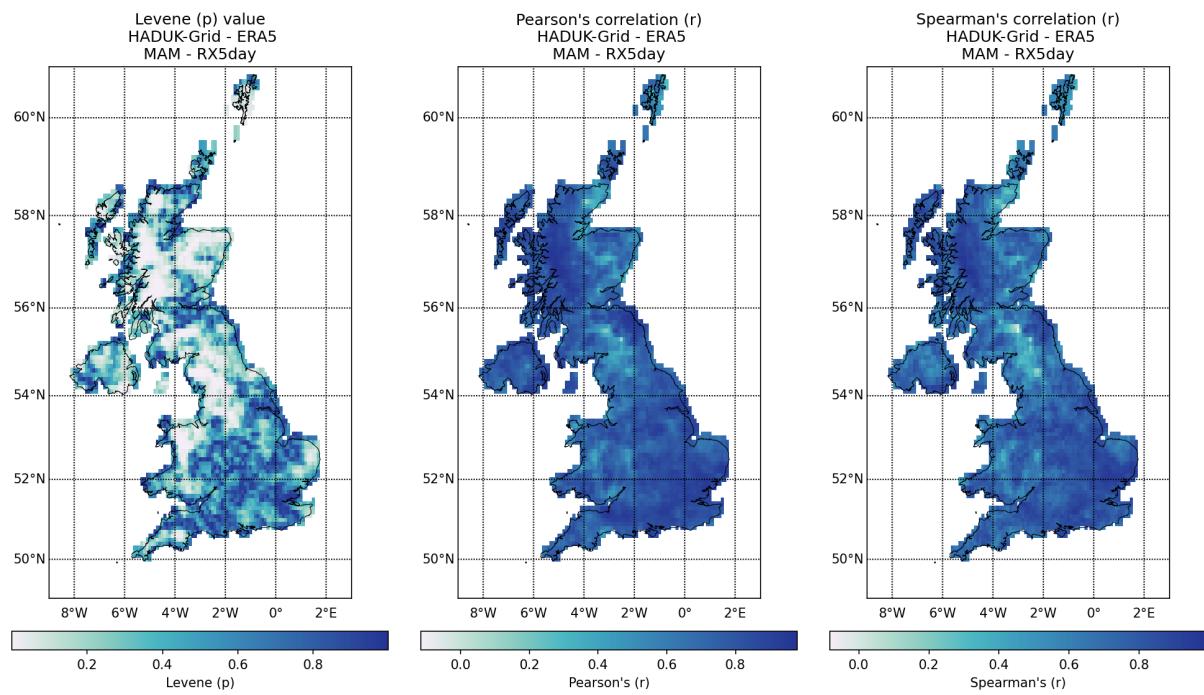


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (MAM) over the 2001-2019 climatological period (cont.).

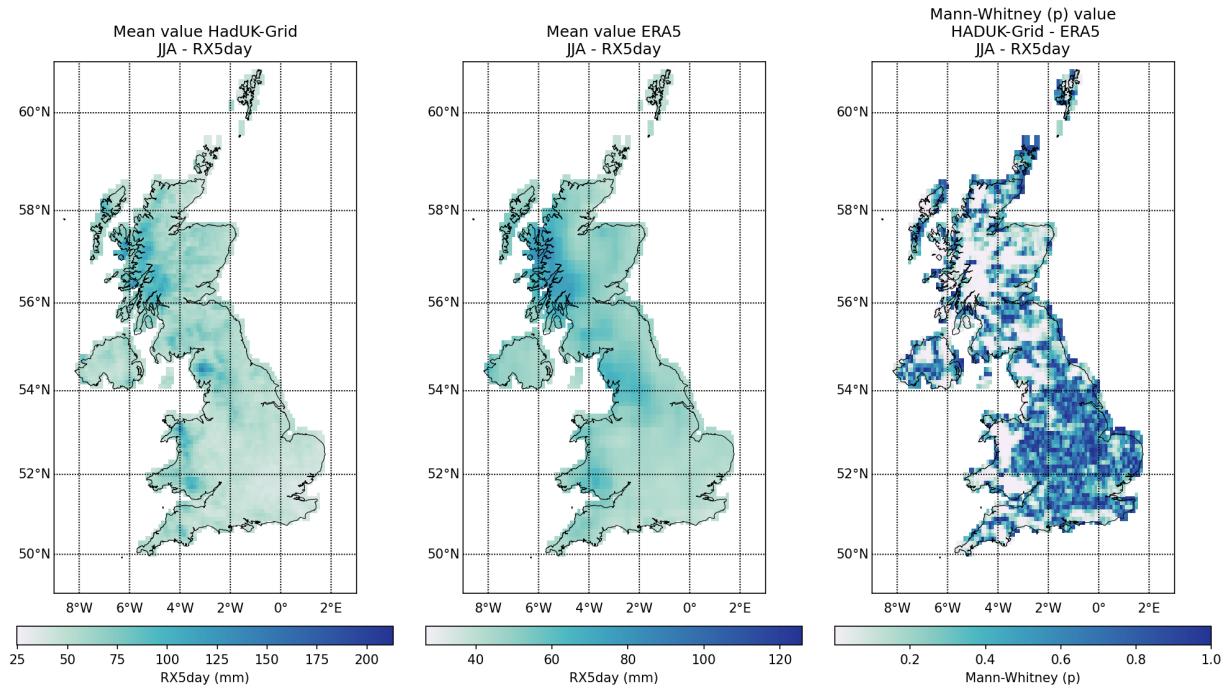


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

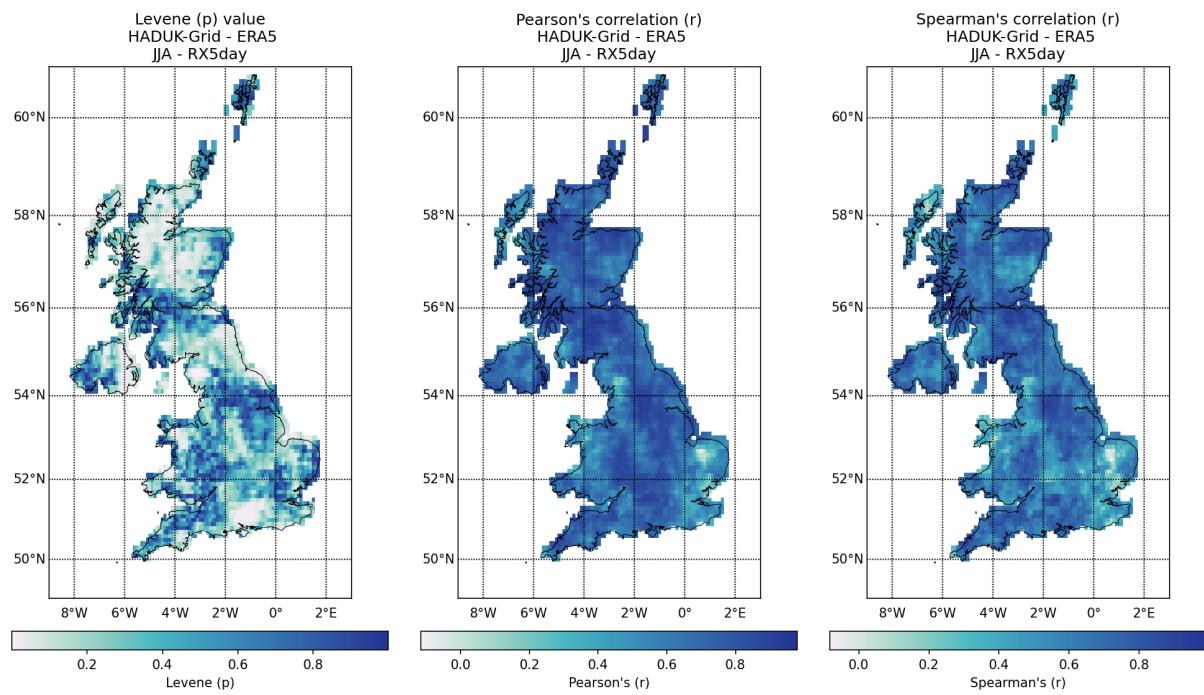


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

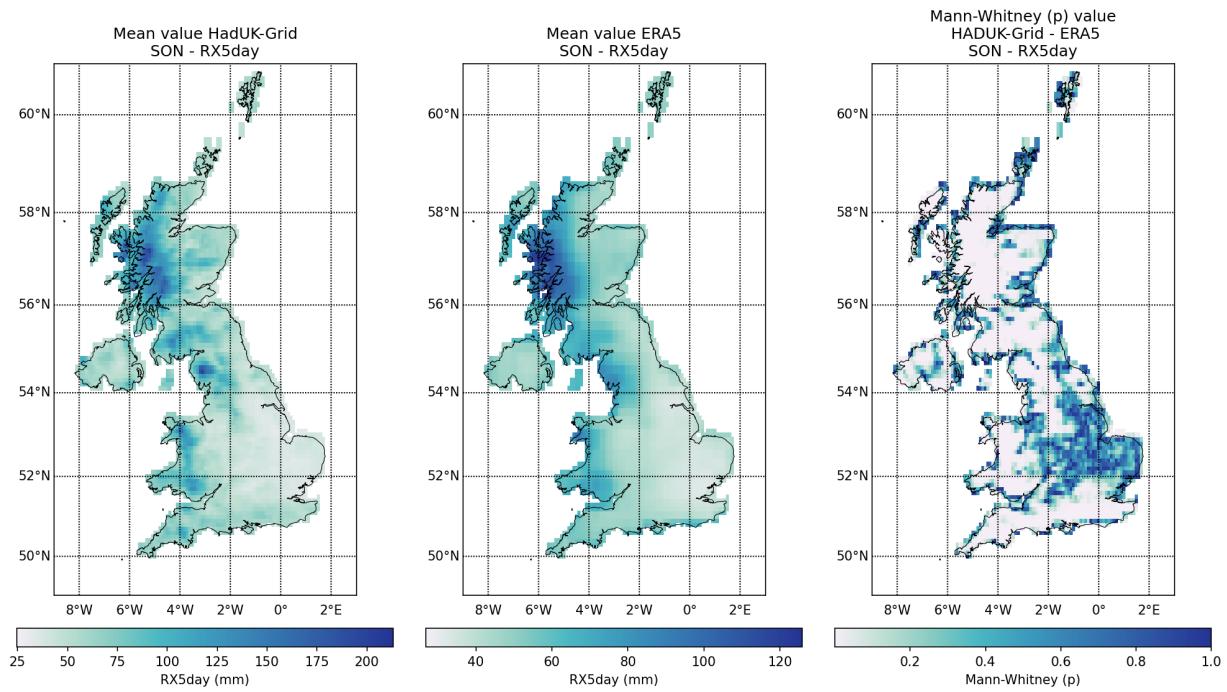


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

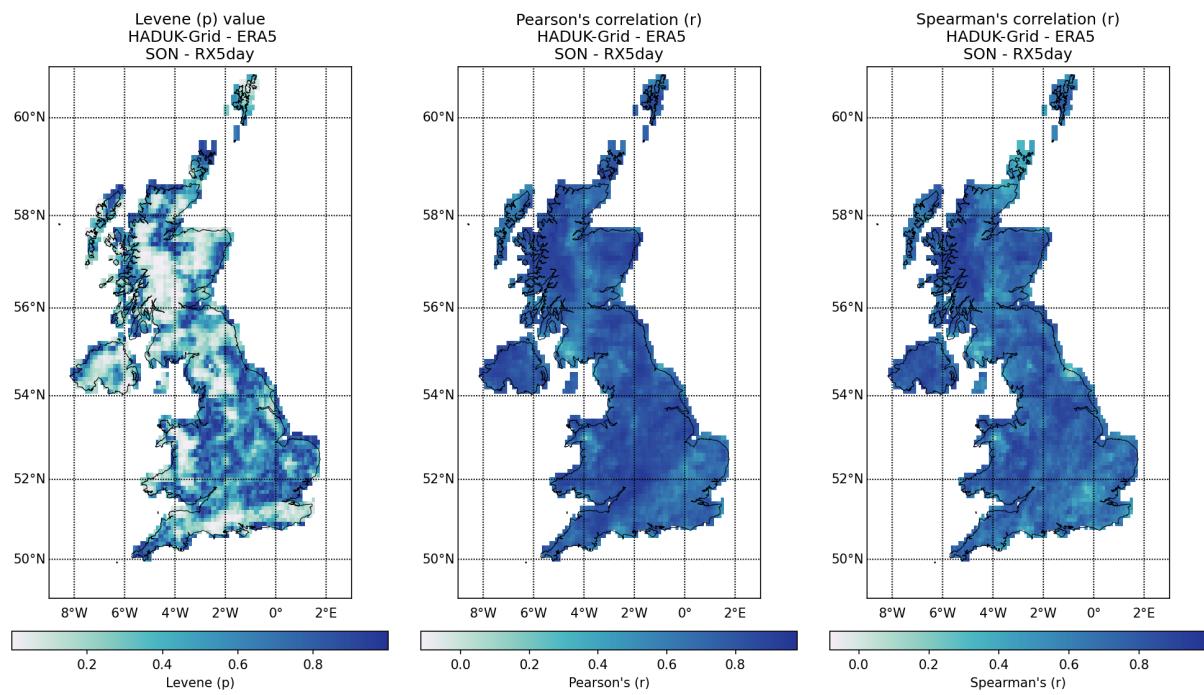


Figure 19: Spatial distribution of RX5day values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.

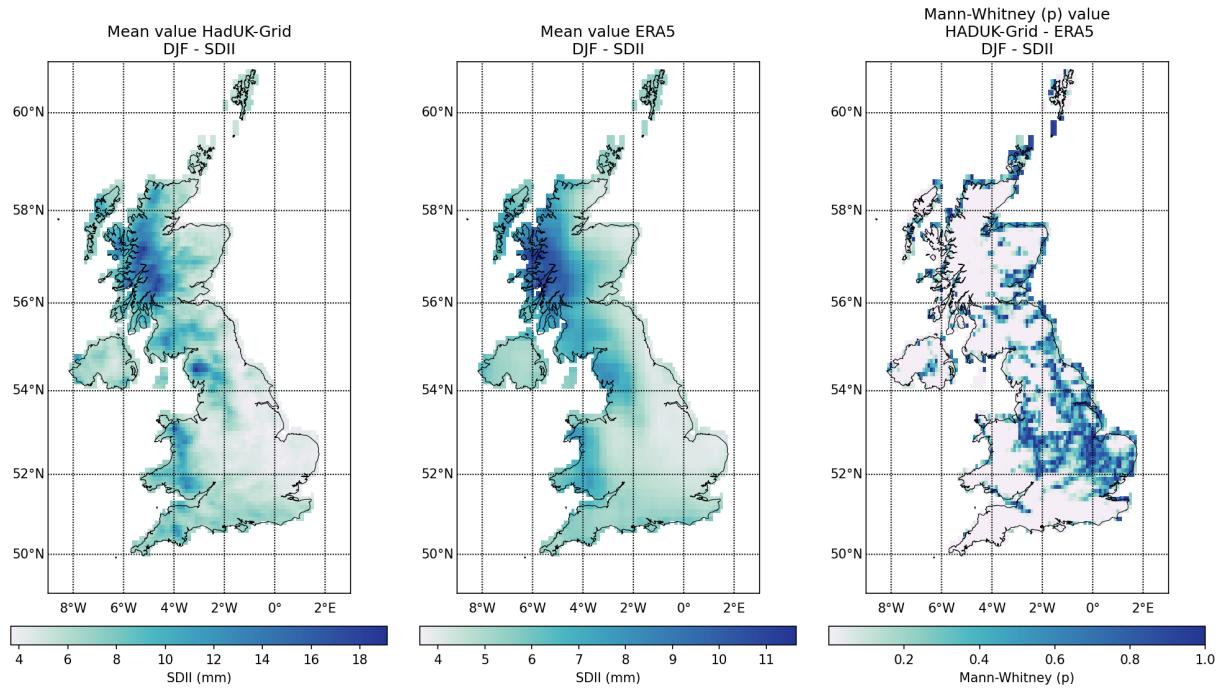


Figure 20: Spatial distribution of SDII values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for winter (DJF) over the 2001-2019 climatological period.

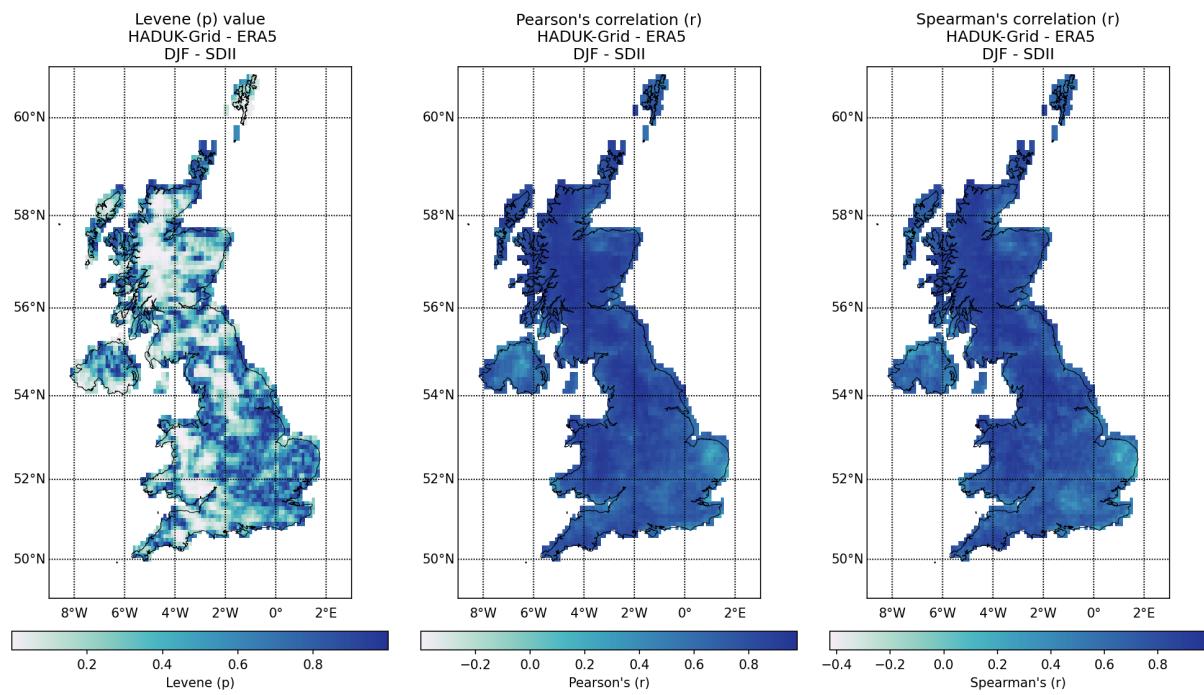


Figure 20: Spatial distribution of SDII values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for spring (DJF) over the 2001-2019 climatological period (cont.).

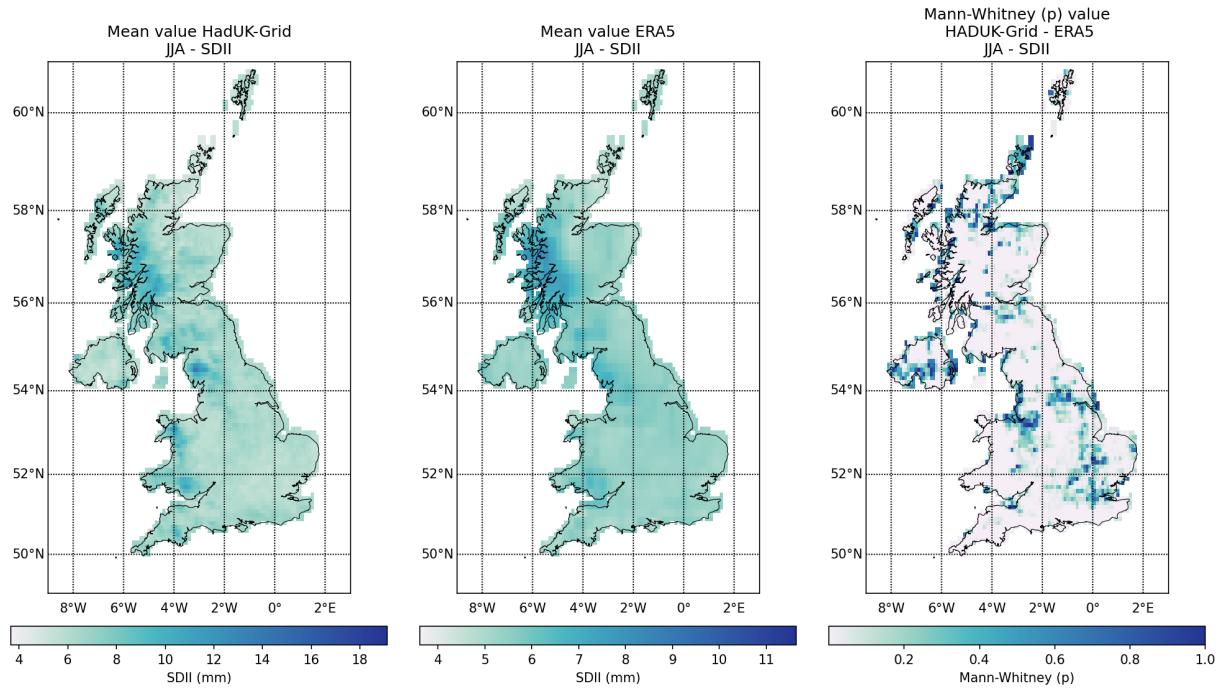


Figure 20: Spatial distribution of SDII values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

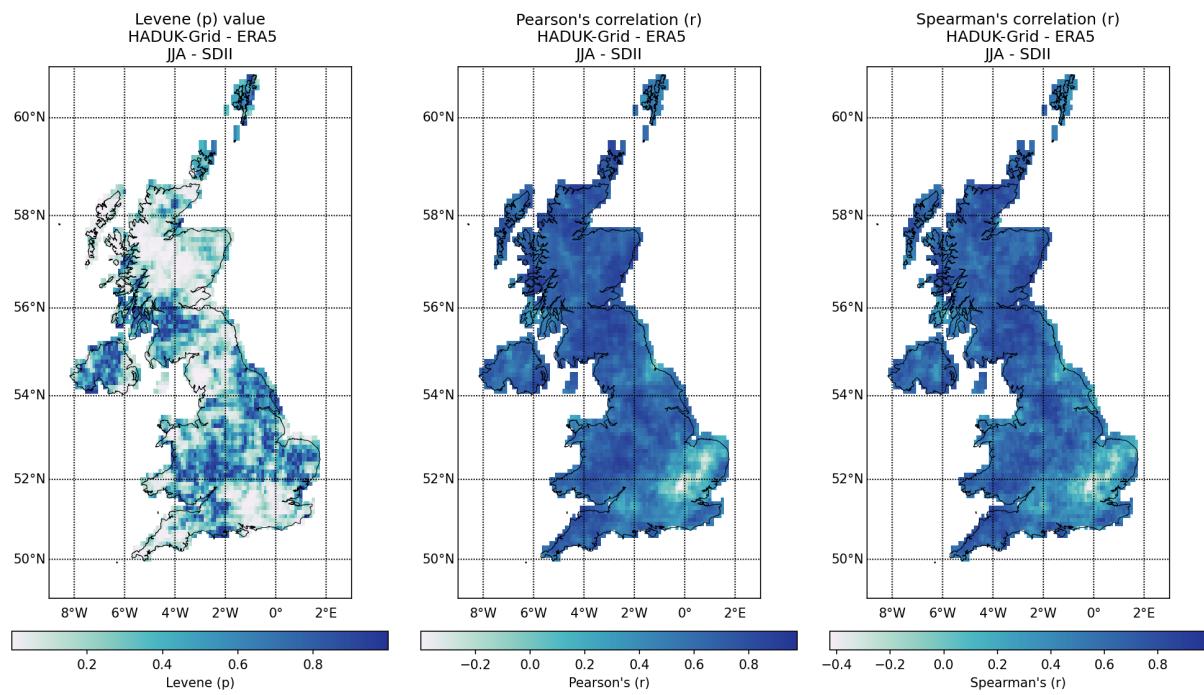


Figure 20: Spatial distribution of SDII values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for summer (JJA) over the 2001-2019 climatological period (cont.).

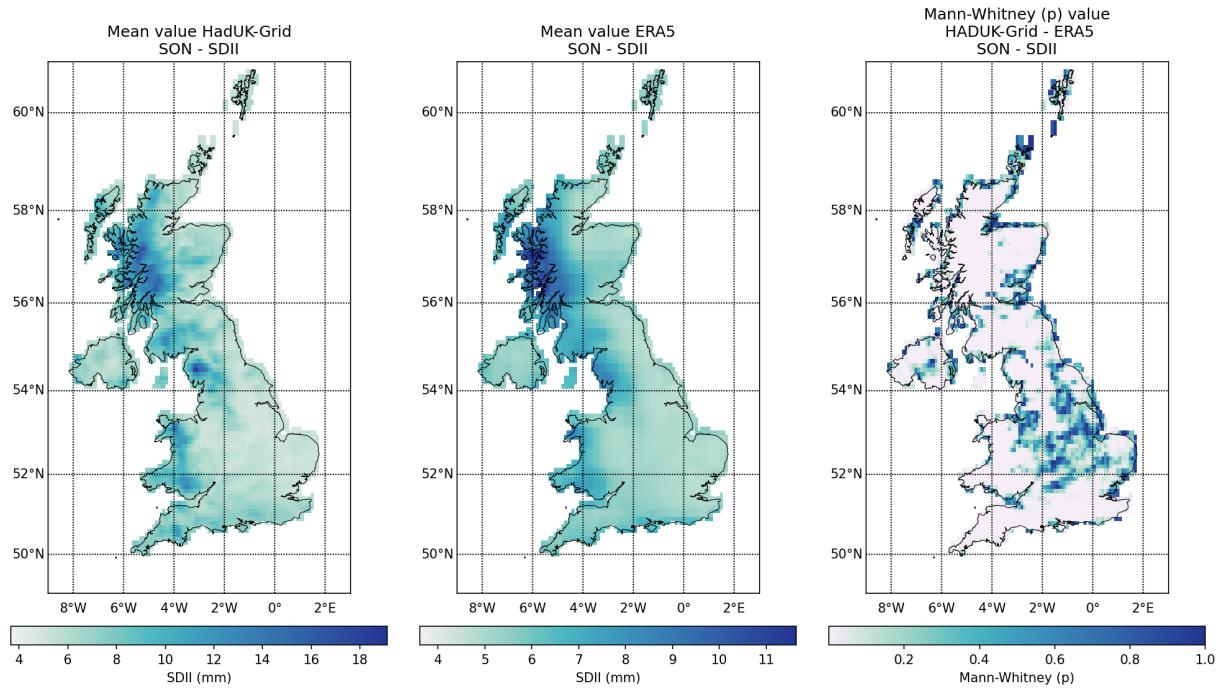


Figure 20: Spatial distribution of SDII values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period (cont.).

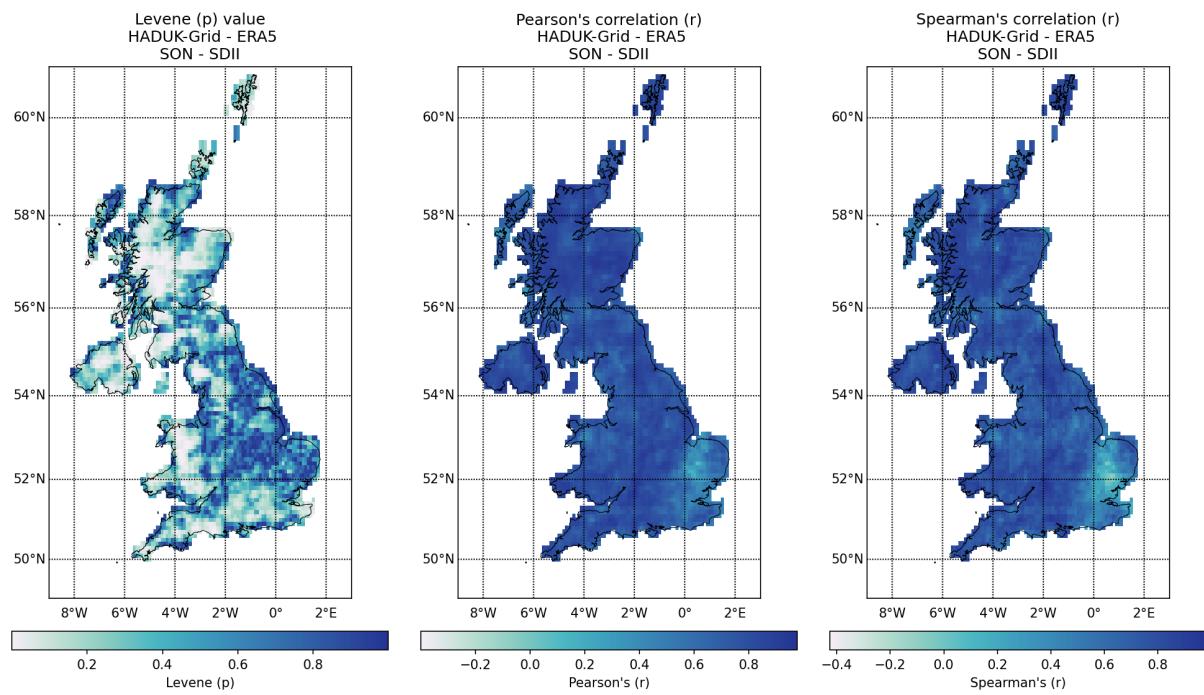


Figure 20: Spatial distribution of SDII values obtained from HadUK-Grid and ERA5 with Mann-Whitney test p value, Levene -center in the median- p value, and Pearson and Spearman correlation coefficient (r), for autumn (SON) over the 2001-2019 climatological period.