Technical Report No. 4.0

ATLAS OF CLIMATE CHANGE METRICS V1

Start date of project: 01 June 2015 Duration: 48 months

Authors: AMMA-2050 Climate Science Team (Adama Bamba, Moussa Diakhate, Rory Fitzpatrick, Andy Hartley, Serge Janicot, Cornelia Klein, Nana Ama Browne Klutse, Oumar Konte, Kouakou Kouadio, Famien Moise, Siny N'Doye, Dave Rowell, Youssouph Sane, Evelyne Touré)

AMMA-2050 is funded under the Future Climate for Africa Programme which is supported by funding from the NERC and DFID

The AMMA-2050 project started 01/06/2015 and will continue for 4 years.

Title:	
Authors:	AMMA-2050 Climate Science Team (Adama Bamba, Moussa Diakhate, Rory Fitzpatrick, Andy Hartley, Serge Janicot, Cornelia Klein, Nana Ama Browne Klutse, Oumar Konte, Kouakou Kouadio, Famien Moise, Siny N'Doye, Dave Rowell, Youssouph Sane, Evelyne Touré)
Organisations:	Leeds University, CEH, Met Office, IPSL, UFHB, UCC, UCAD, ANACIM
Submission date:	05/12/17
Function:	To provide relevant and up-to-date information on projected climate change in West Africa to climate change impact scientists and technical stakeholders
Available from	https://wiki.ceh.ac.uk/display/AM/Atlases+of+climate+metrics

'The research leading to these results has received funding from the NERC/DFID Future Climate For Africa programme under the AMMA-2050 project, grant numbers NE/M020428/1 and NE/M019969/1'.

Atlas of Climate Metrics

For Senegal in June (English version)

version 1.019 December 2017

Contents

1 Introduction

This atlas has been created to provide relevant and up-to-date information on projected climate change in West Africa by the 2050s, crucially incorporating information on the modelling uncertainties that still persist. It forms a series of atlases, each addressing a specific region, month or season.

These atlases have been created by a team of African and European climate scientists within the FCFA AMMA-2050 project. The project aims to improve understanding of how the West African monsoon will be affected by climate change in the coming decades and to enhance the capacity of West African societies to prepare and adapt.

What is a Climate Metric? Our aim is to present maps and graphs of the changes and uncertainties in climate metrics that are relevant to stakeholders. We use the term 'climate metric' to describe a statistical measure of an aspect of climate that may change in the future, and that is thought to be relevant for assessing the effects of high impact weather and climate in West Africa. These climate metrics were chosen by groups of AMMA-2050 impacts scientists, in consultation with the project's climate scientists. We have also taken some feedback from stakeholders.

Audience: The audience for this atlas is envisaged to be:

- ***Climate change impact scientists***, principally from the hydrological and agricultural communities. We anticipate that suitably presented information on the changes and uncertainties in the most relevant aspects of West African climate can help interpret the output from impacts models, such as changes in crop yields, flooding frequency, etc.
- ***Technical experts*** in government ministries and local, national, regional and international bodies, engaged in sectors and services directly impacted by climate variability and change, and who have some understanding of modelling climate change. This group contributes to informed resource management decisions based on the plausible range of future climate outcomes. They will likely benefit from an understanding of the climate change context behind the outputs of impact modelling that AMMA-2050 will provide, such as changes in crop yields and flooding frequency.

Context of AMMA-2050 Stakeholder Communication: A key outcome of AMMA-2050 is the development of appropriate communication tools to help stakeholders understand the predicted impacts and uncertainties for each of their sectors. This atlas is not seen as one of these primary communication tools, but rather as an optional supplementary technical source of information that those stakeholders who have some understanding of modelling climate change may choose to use.

Data: Climate model data was sourced from the CMIP5 archive (which is also that used to provide climate model projections for the IPCC 5th Assessment Report), and then post-processed at the Institut Pierre Simon Laplace (IPSL) to disaggregate the projections to a 0.5°grid (approx 50x50km) (a process sometimes called 'downscaling'), and to largely eliminate discrepancies between historical model simulations and observations (a process called 'bias correction'). Further details of these techniques are being prepared for publication (updates will be available at http://www.amma2050.org/content/publications). The main focus is on future projections forced by 'RCP8.5' which is a high-end anthropogenic emissions scenario. This roughly matches current emissions, and can be linked to the worst plausible outcome, but note however that compliance with the Paris accord would lead to smaller changes in climate than those shown here. Indeed a minority of figures also show a comparison with strong mitigation scenarios (RCP2.6 and RCP4.5). Data from 29 climate models are used for the RCP8.5 scenario, 27 for RCP4.5, and 20 for RCP2.6.

Sub-Atlases: This atlas is one in a series of atlases. These cover combinations of 5 regions and up to 7 months (May to November) and the northern wet season (defined as July to September. The regions are defined as the land points within: Senegal, Burkina Faso, Sahelian (12.5°to 17.5, 11to 30), Soudanian (9.5N°to 12.5, coast to 30) and Guinea Coast (9.5N°to 12.5, coast to 10).

Metrics: The climate metrics analysed here cover the majority of those included within the AMMA-2050 Technical report No. 1 (`http://www.amma2050.org/content/technical-reports`). Exceptions are evapotranspiration and humidity-based metrics (not yet bias-corrected and disaggregated), wet season duration (awaiting a definition), seasonal mean temperature from onset date (over-sensitive to onset definition and coding complexities), and 4 medium-priority metrics (drought severity, max seasonal no. of consecutive dry days, diurnal temperature range, and count of extreme Tmax days; all due to coding complexities).

Plot Types: We deliberately choose to display the changes and uncertainties in model projections using a number of different formats. Maps are used to show spatial differences in the projected changes and their uncertainties, using the 90^{th} and 10^{th} percentiles computed across the multi-model ensemble to illustrate the range of plausible outcomes. To be clear, these percentiles are computed across model space (usually 29 models), not for example across different days within a model. Note also that we deliberately omit the median response to encourage planning for a range of plausible outcomes rather than only the central outcome. The mapped figures also include the recent climatology of each metric. Then, for each metric, we use a histogram, box-plots and a ranked scatter-plot to further illustrate the uncertainty (across the ensemble of climate models) in the projected change of that metric averaged across the entire region. The box-plots also include analysis of scenarios with stronger mitigation of anthropogenic emissions. Additionally, for those metrics that are defined as a monthly average, the annual cycle of their changes and uncertainties are shown using box-plots. Last, the units plotted are either those of the relevant metric or (for precipitation-based metrics) the percentage difference from their climatology.

Contacts to Request Data or Software: Bias-corrected 0.5°CMIP5 Data: S. Janicot serge.janicot@locean-ipsl.upmc.fr
Climate Metrics Data: C. Klein cornkle@ceh.ac.uk or R. Fitzpatrick js08rgjf@leeds.ac.uk
Climate Metrics Software: `https://github.com/AMMA-2050/metrics_workshop/tree/master/metric_atlas`

2 Potential Evapotranspiration

Potential Evapo-Transpiration (Hargreaves equation based on daily Tmin, Tmax, Tmean and radiation)

2.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

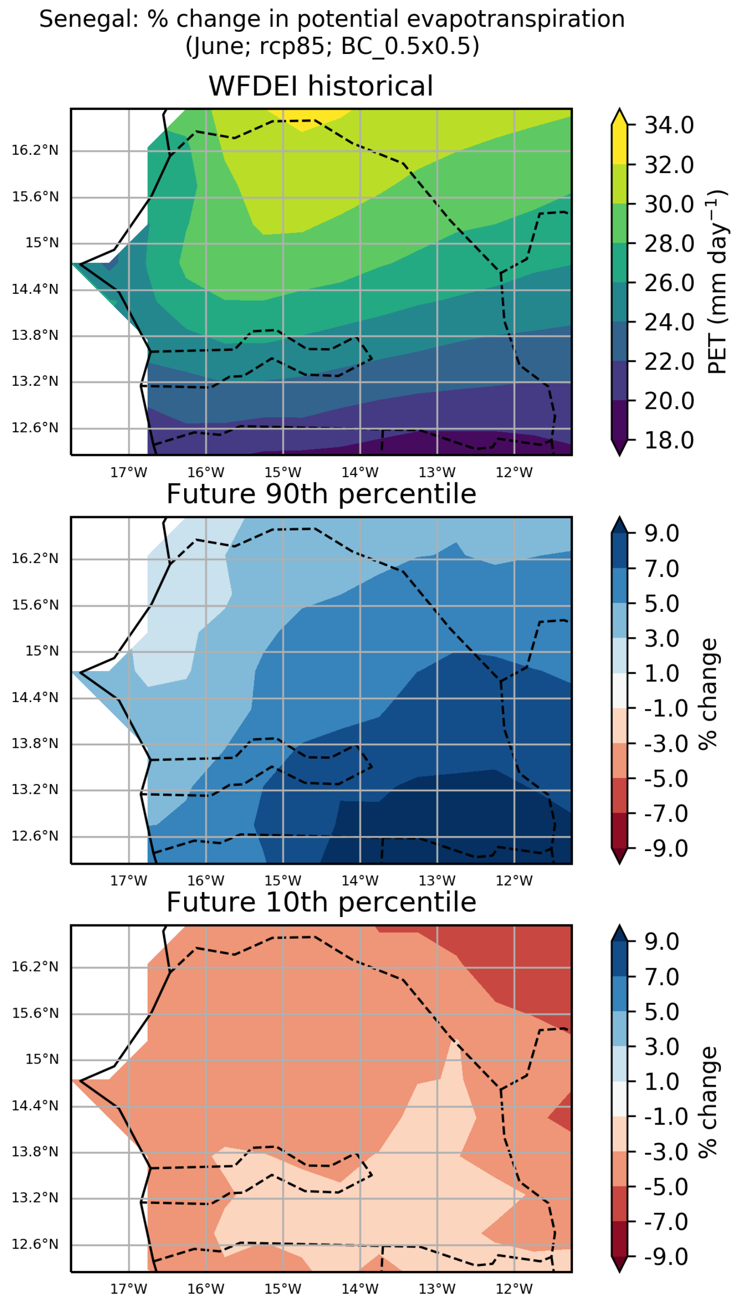

Figure 1: These maps show the ensemble spread in the percentage change in Potential Evapotranspiration for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

2.2 'Number of model' histograms

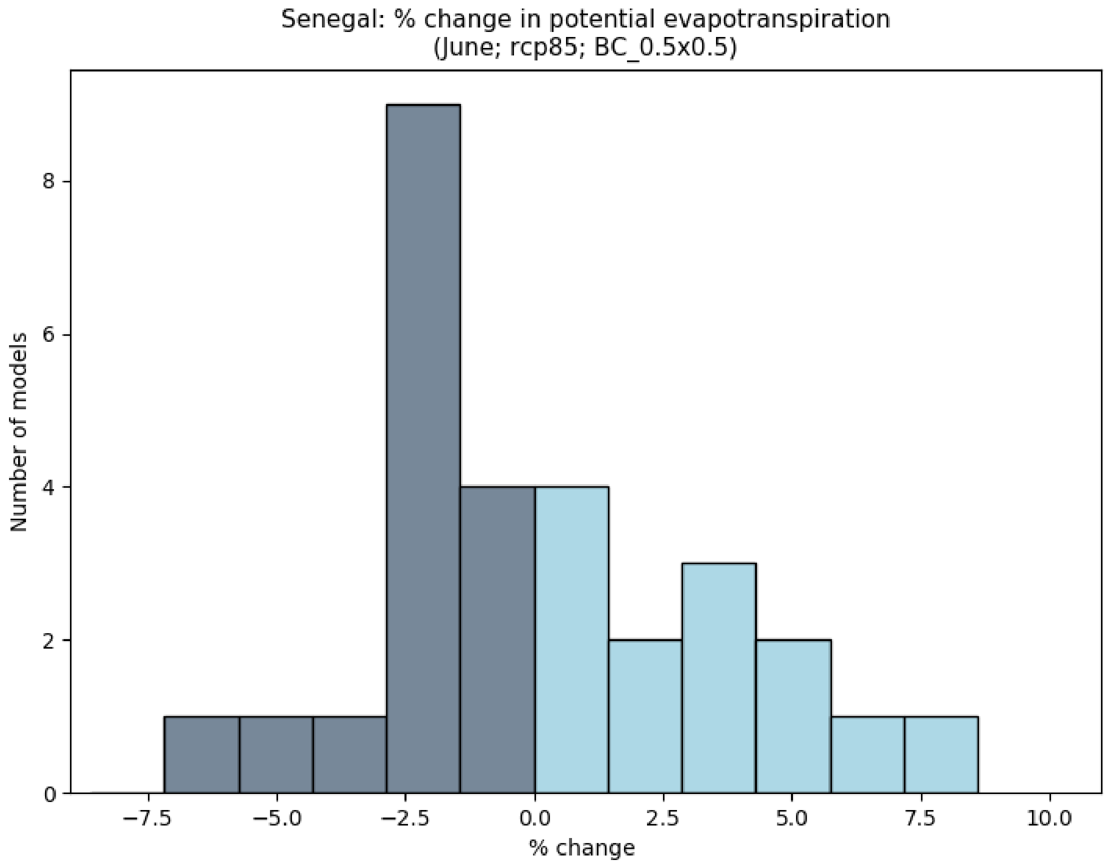

Figure 2: This histogram shows the number of models that agree on the percentage change in Potential Evapotranspiration for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

2.3 Boxplots

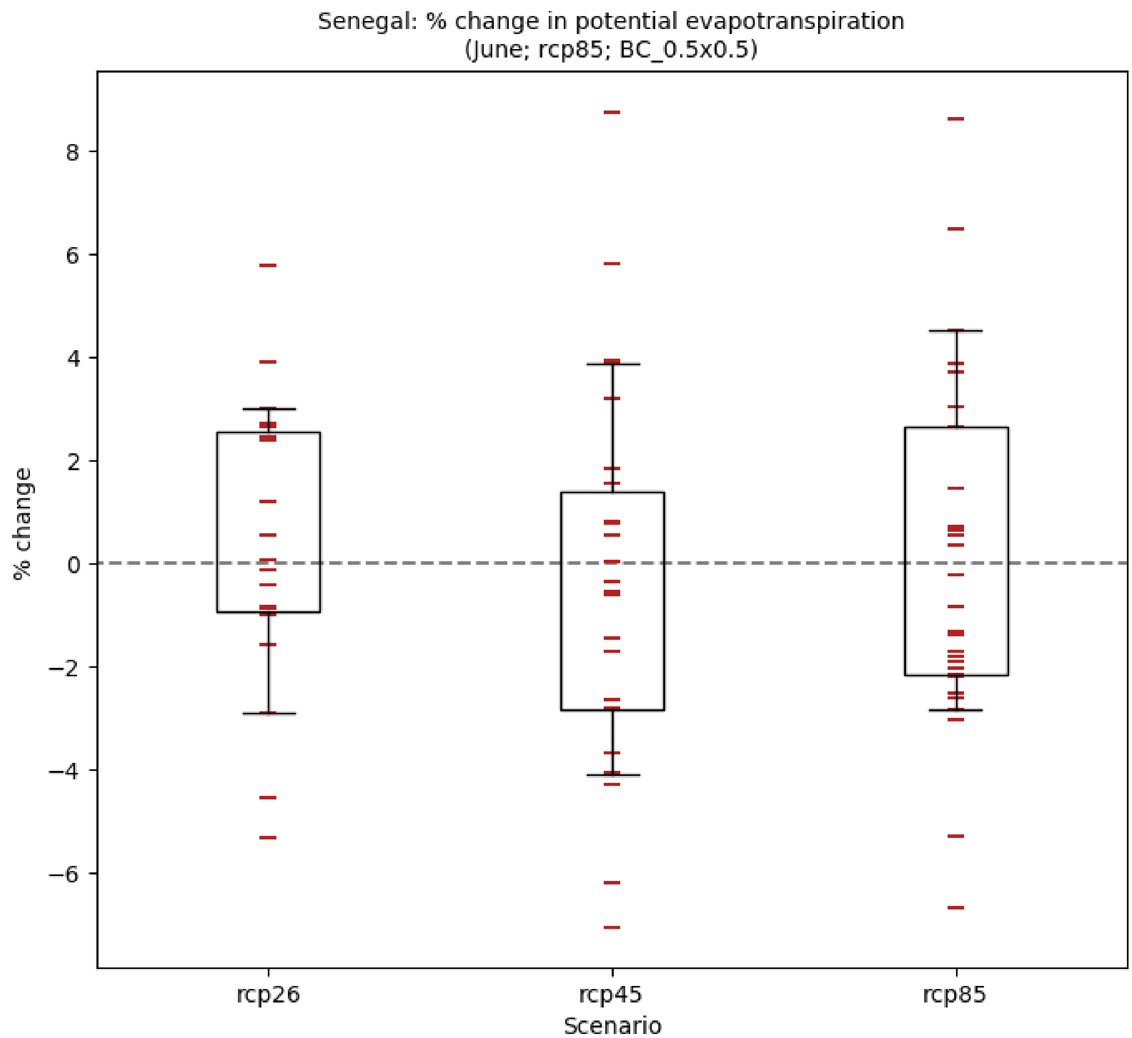

Figure 3: This boxplot shows the percentage change (all available scenarios) in Potential Evapotranspiration for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

2.4 Model ranking scatterplots

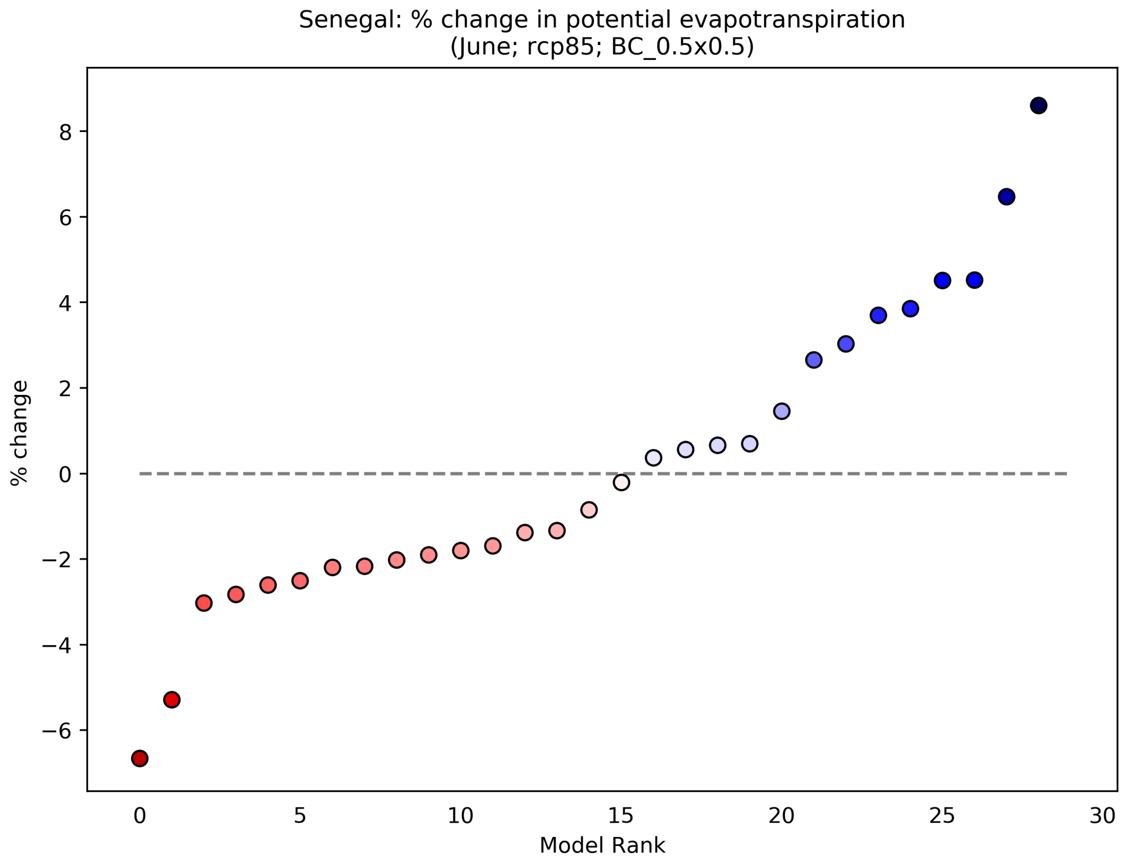

Figure 4: This scatterplot shows the percentage change in Potential Evapotranspiration for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

3 Local Agronomic Monsoon Onset Date (Marteau)

The Local Agronomic Monsoon Onset Date (Marteau) is defined as the first rainy day (> 1 mm) of two consecutive rainy days (with total precipitation > 20 mm) and no 7-day dry spell (< 5 mm) of rainfall during the subsequent 20 days

3.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

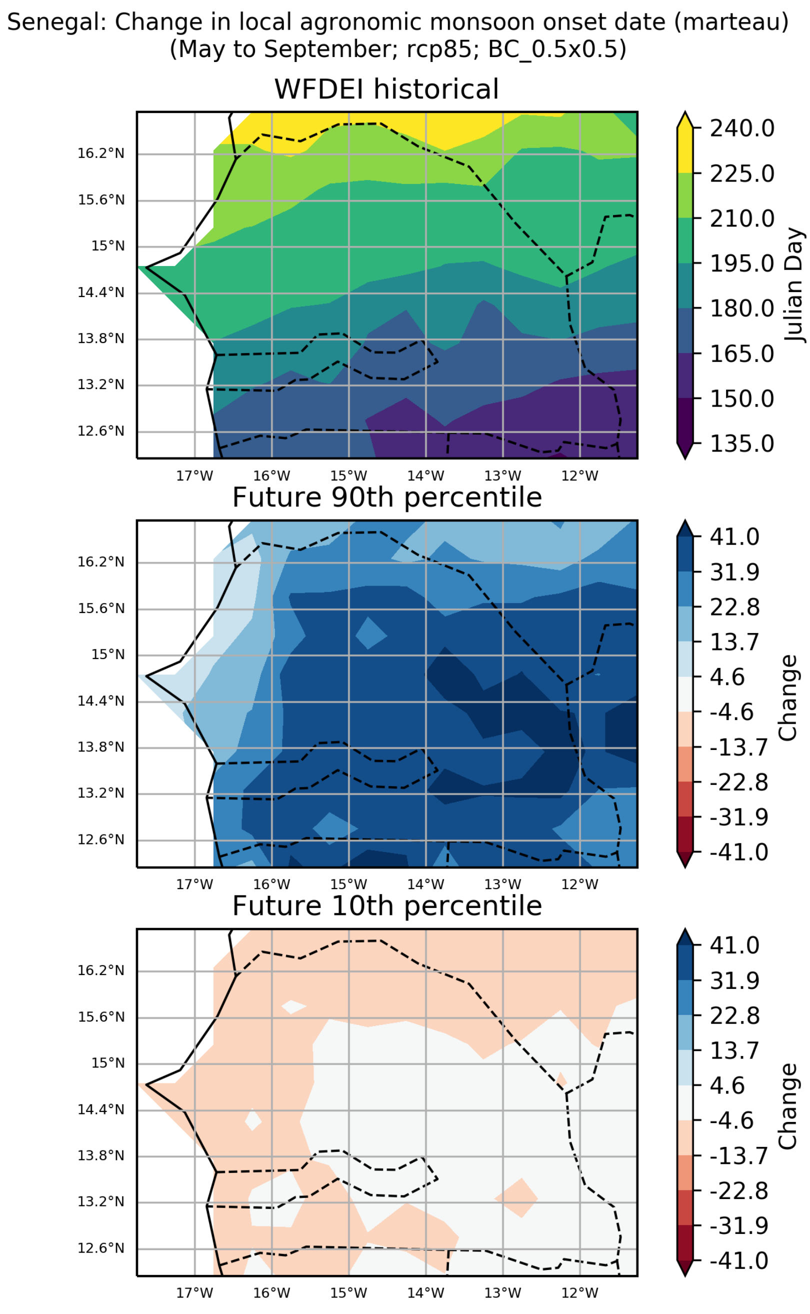

Figure 5: These maps show the ensemble spread in the absolute change in Local Agronomic Monsoon Onset Date (Marteau) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the May to September season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

3.2 'Number of model' histograms

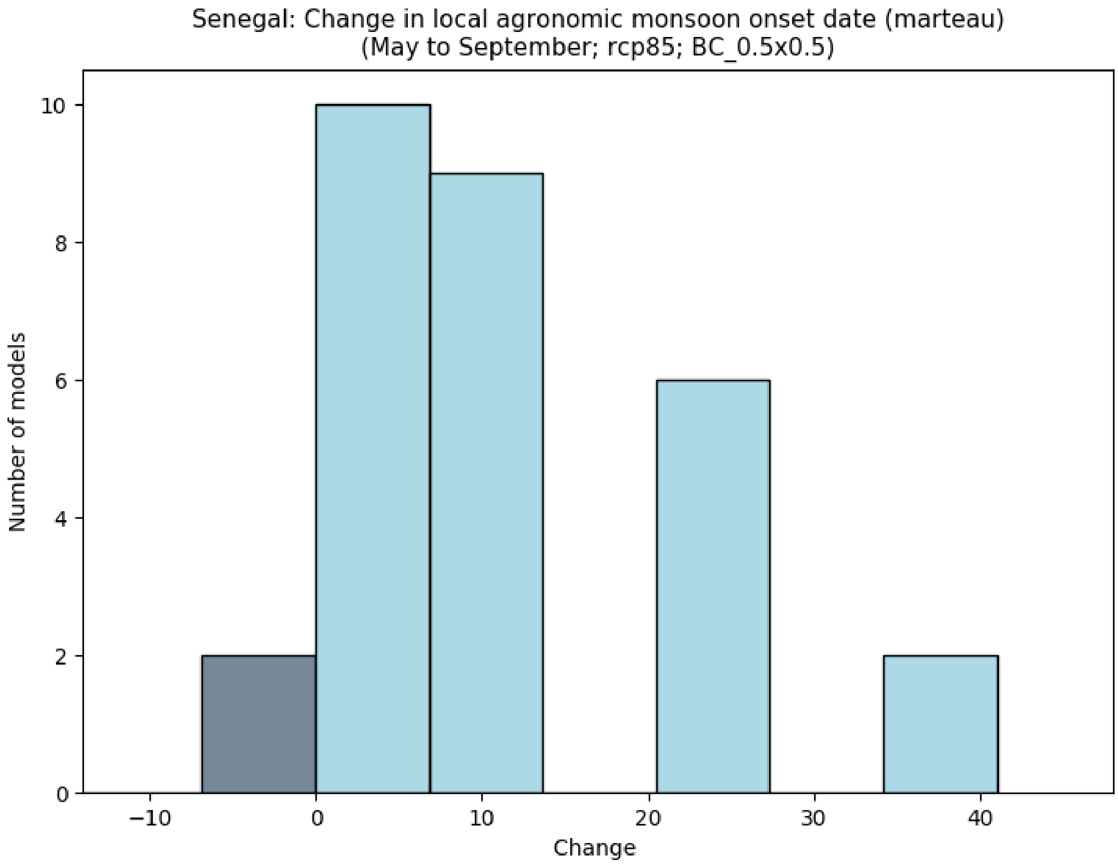

Figure 6: This histogram shows the number of models that agree on the absolute change in Local Agronomic Monsoon Onset Date (Marteau) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the May to September season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

3.3 Boxplots

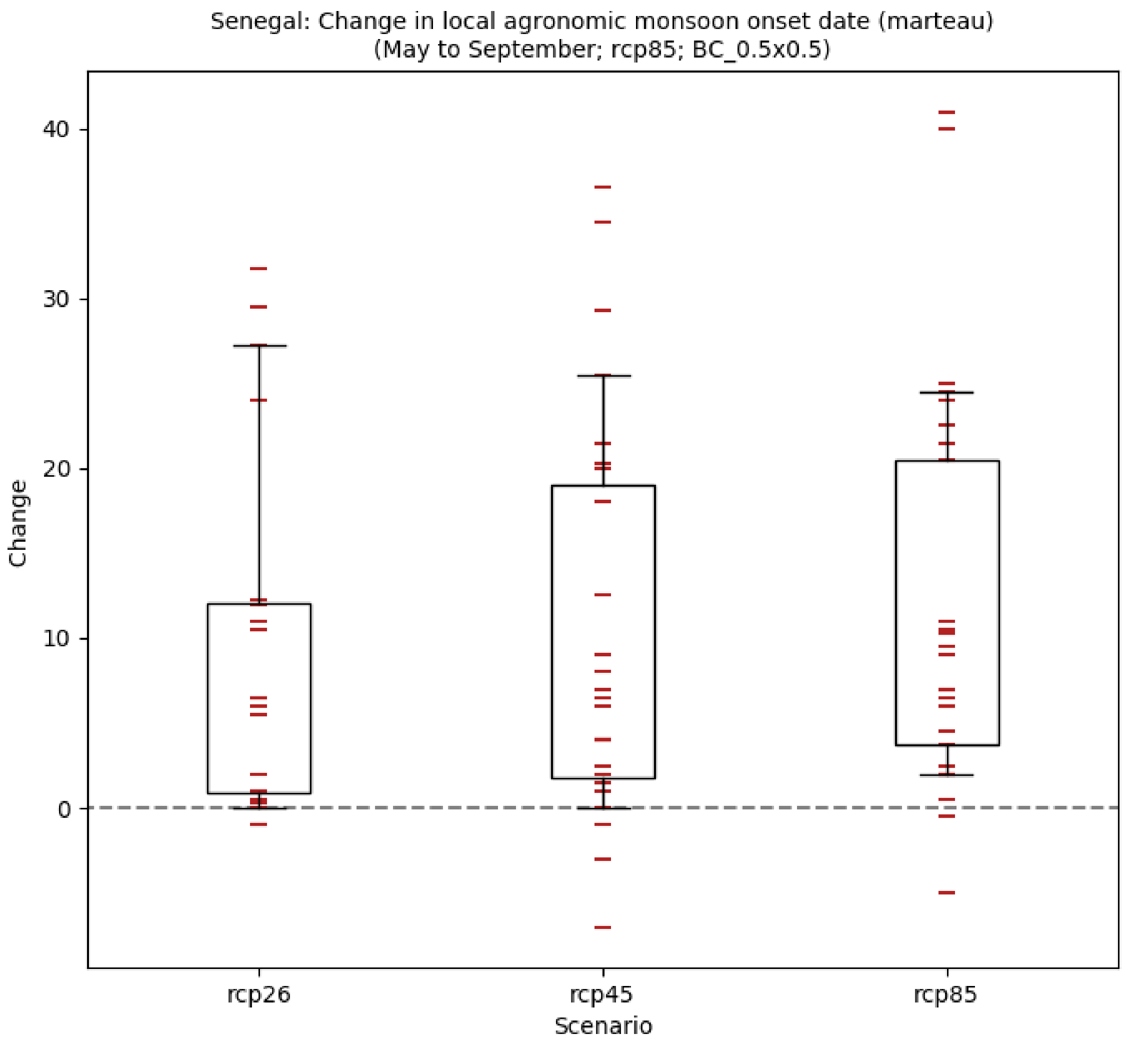

Figure 7: This boxplot shows the absolute change (all available scenarios) of Local Agronomic Monsoon Onset Date (Marteau) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the May to September season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

3.4 Model ranking scatterplots

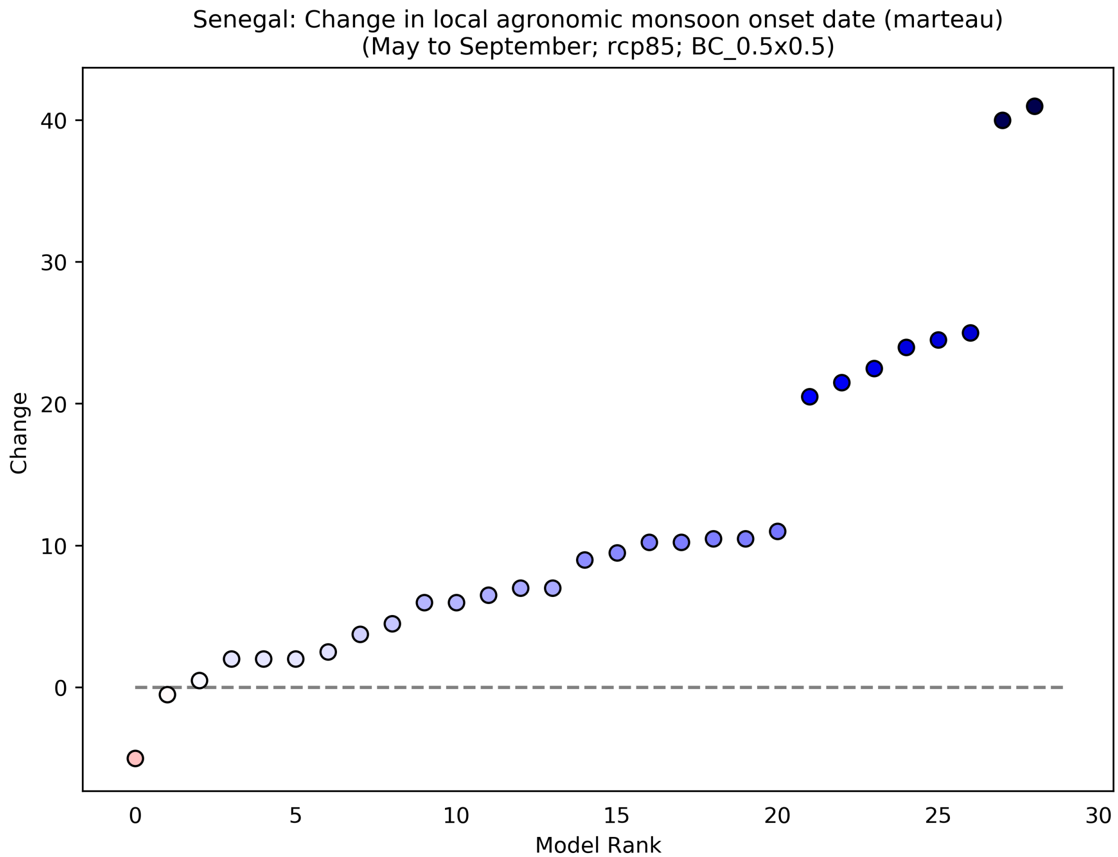

Figure 8: This scatterplot shows the absolute change in Local Agronomic Monsoon Onset Date (Marteau) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the May to September season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

4 Standardised Precipitation Index

The Standardised Precipitation Index (SPI) shown here is defined as the anomaly relative to the baseline period devided by the standard deviation of that baseline period. This metric allows to determine the rarity of drought or periods of anomalously wet events.

4.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

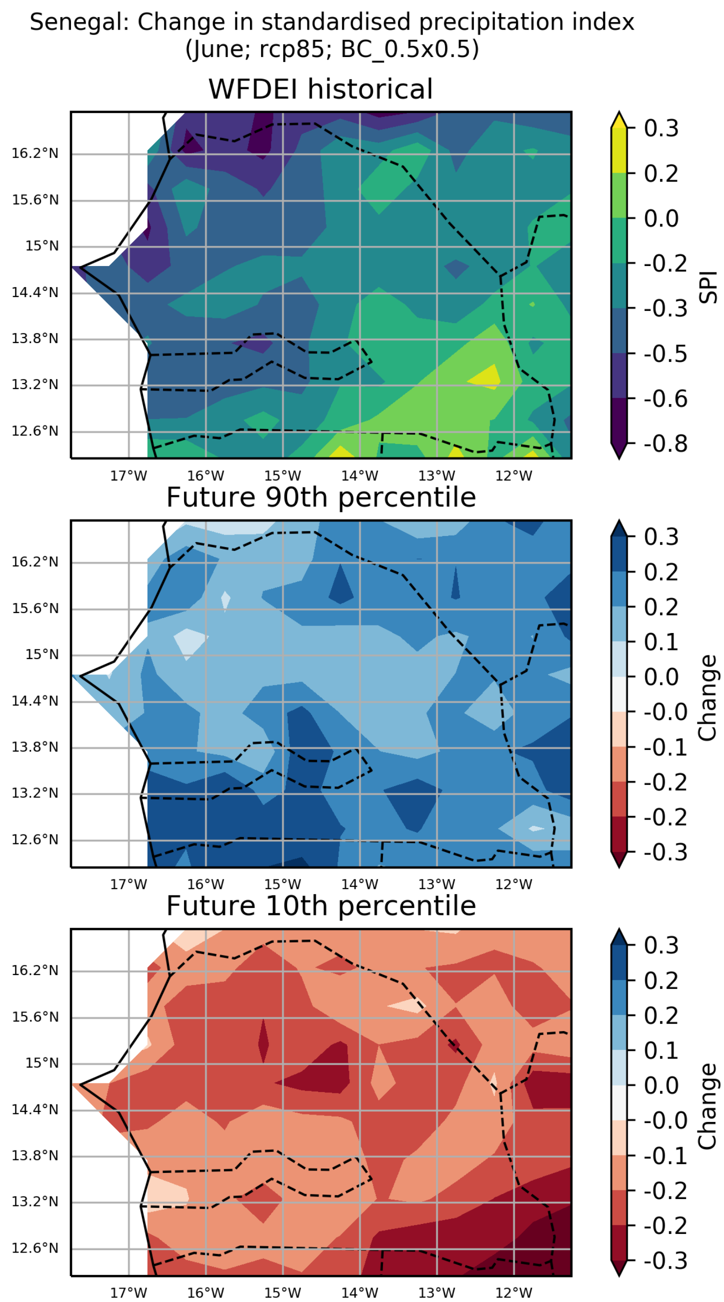

Figure 9: These maps show the ensemble spread in the absolute change in Standardised Precipitation Index for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

4.2 'Number of model' histograms

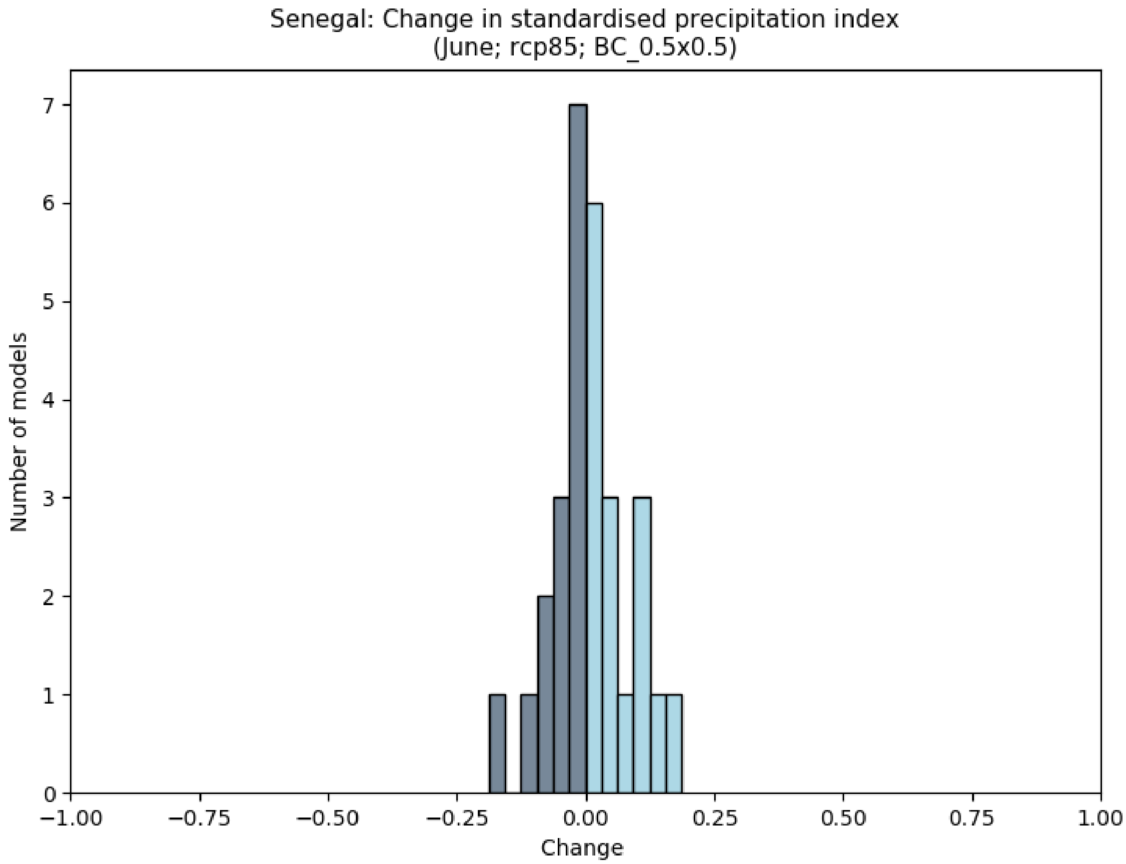

Figure 10: This histogram shows the number of models that agree on the absolute change in Standardised Precipitation Index for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

4.3 Boxplots

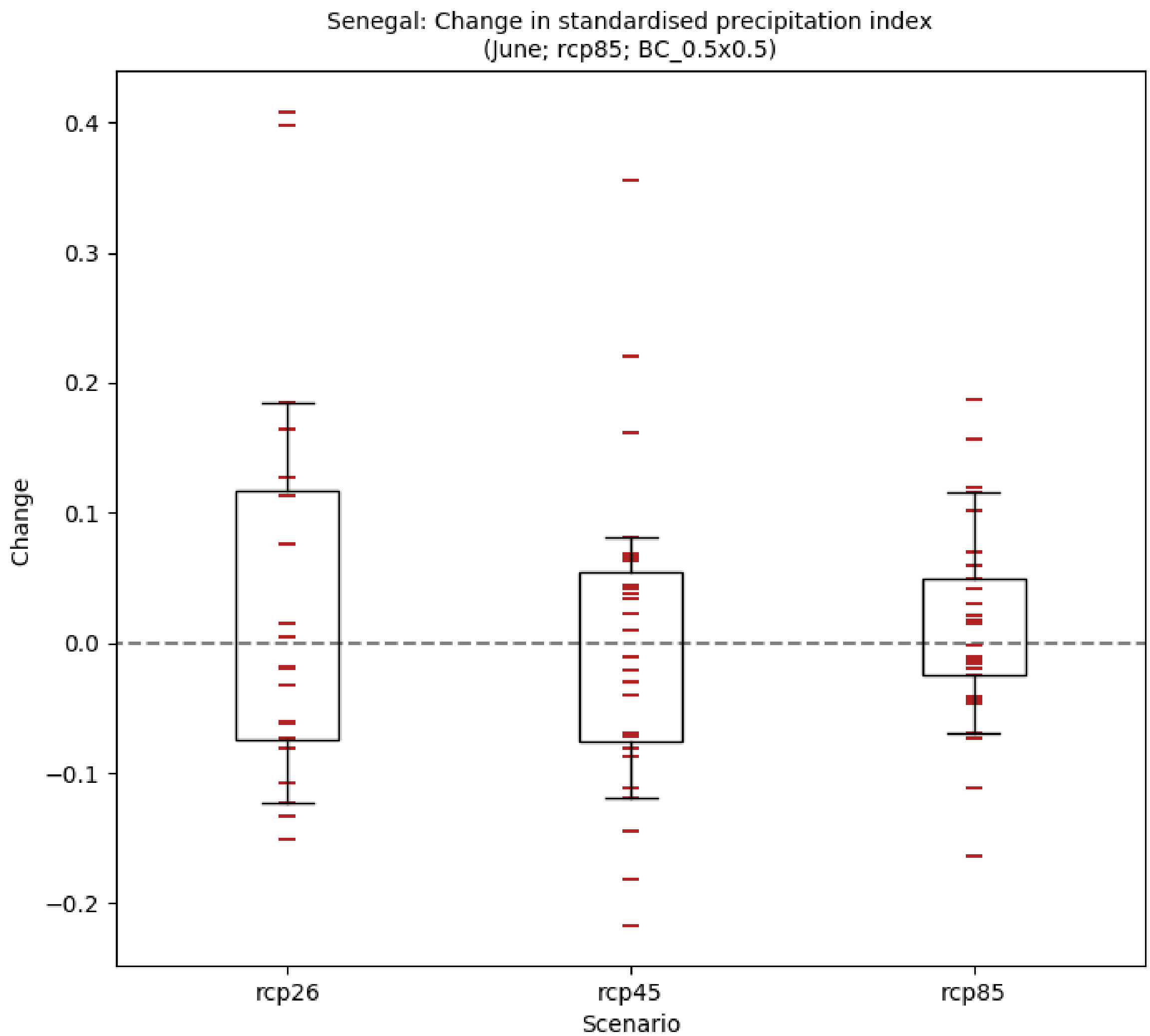

Figure 11: This boxplot shows the absolute change (all available scenarios) of Standardised Precipitation Index for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

4.4 Model ranking scatterplots

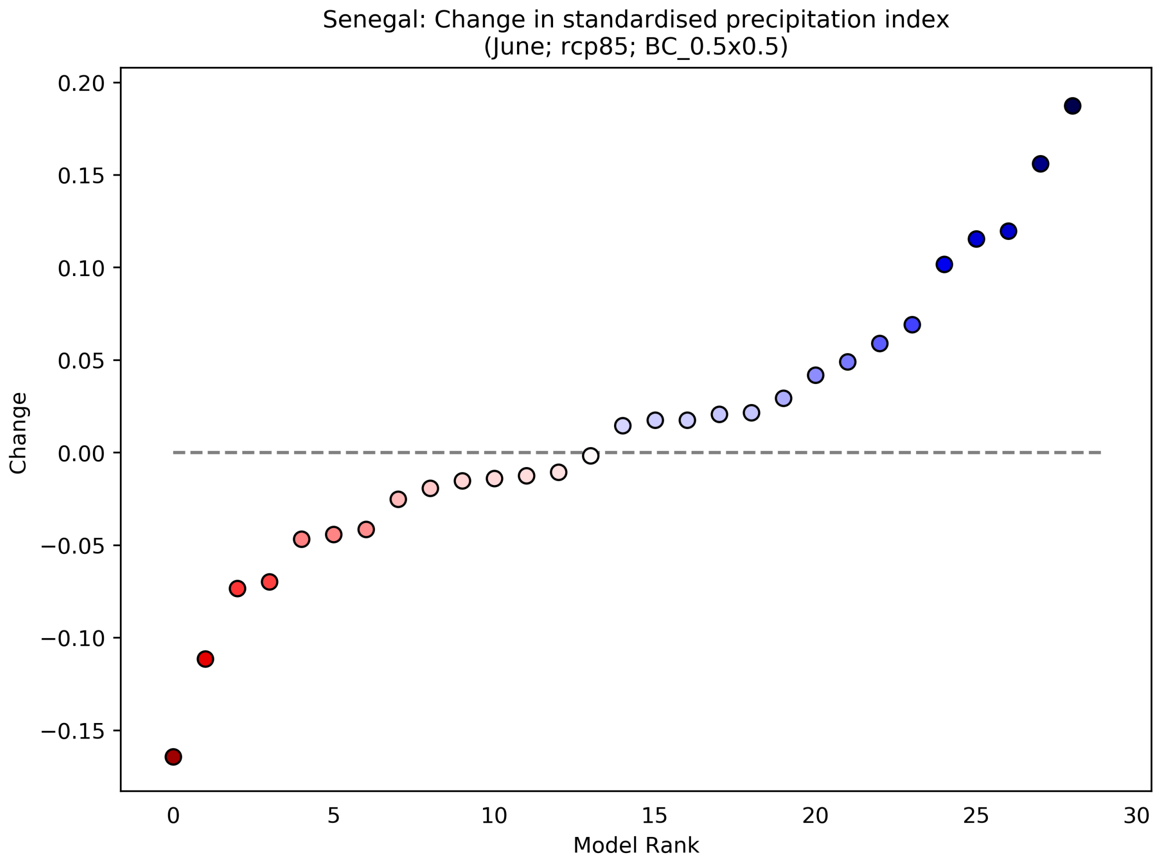

Figure 12: This scatterplot shows the absolute change in Standardised Precipitation Index for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

5 Standardised Precipitation Index (bi-annual)

The Standardised Precipitation Index (SPI) shown here is defined as the anomaly relative to the baseline period devided by the standard deviation of that baseline period. In this case, a 2-year rolling window is used to compute the anomaly.

5.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

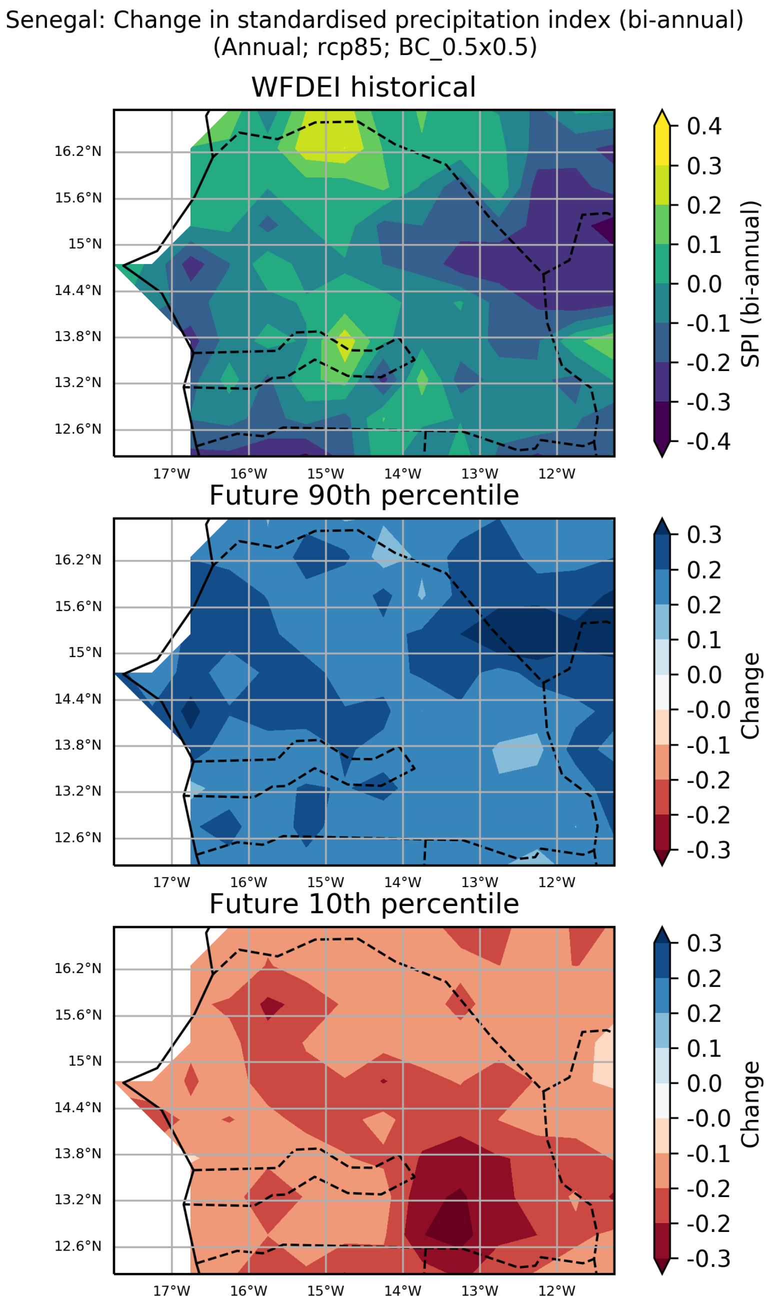

Figure 13: These maps show the ensemble spread in the absolute change in Standardised Precipitation Index (bi-annual) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

5.2 'Number of model' histograms

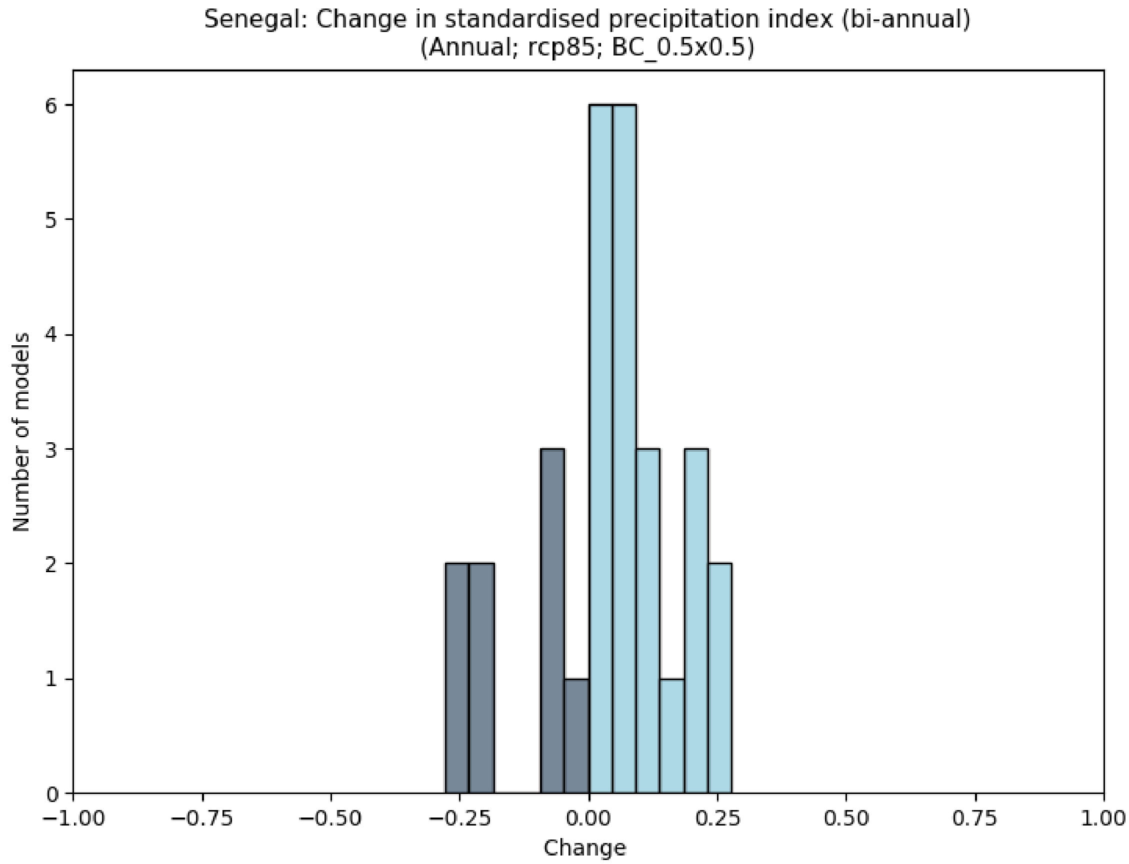

Figure 14: This histogram shows the number of models that agree on the absolute change in Standardised Precipitation Index (bi-annual) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

5.3 Boxplots

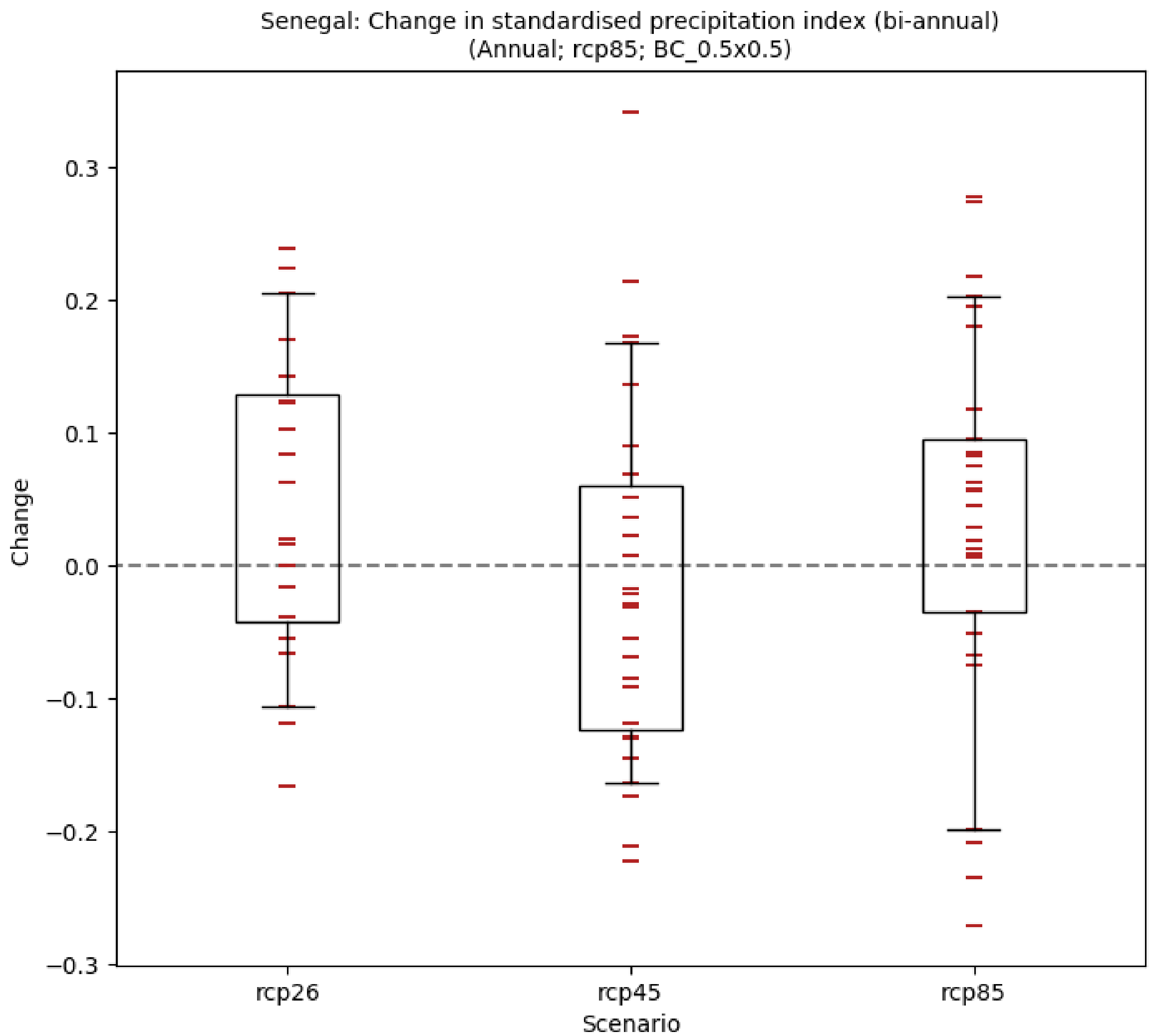

Figure 15: This boxplot shows the absolute change (all available scenarios) of Standardised Precipitation Index (bi-annual) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

5.4 Model ranking scatterplots

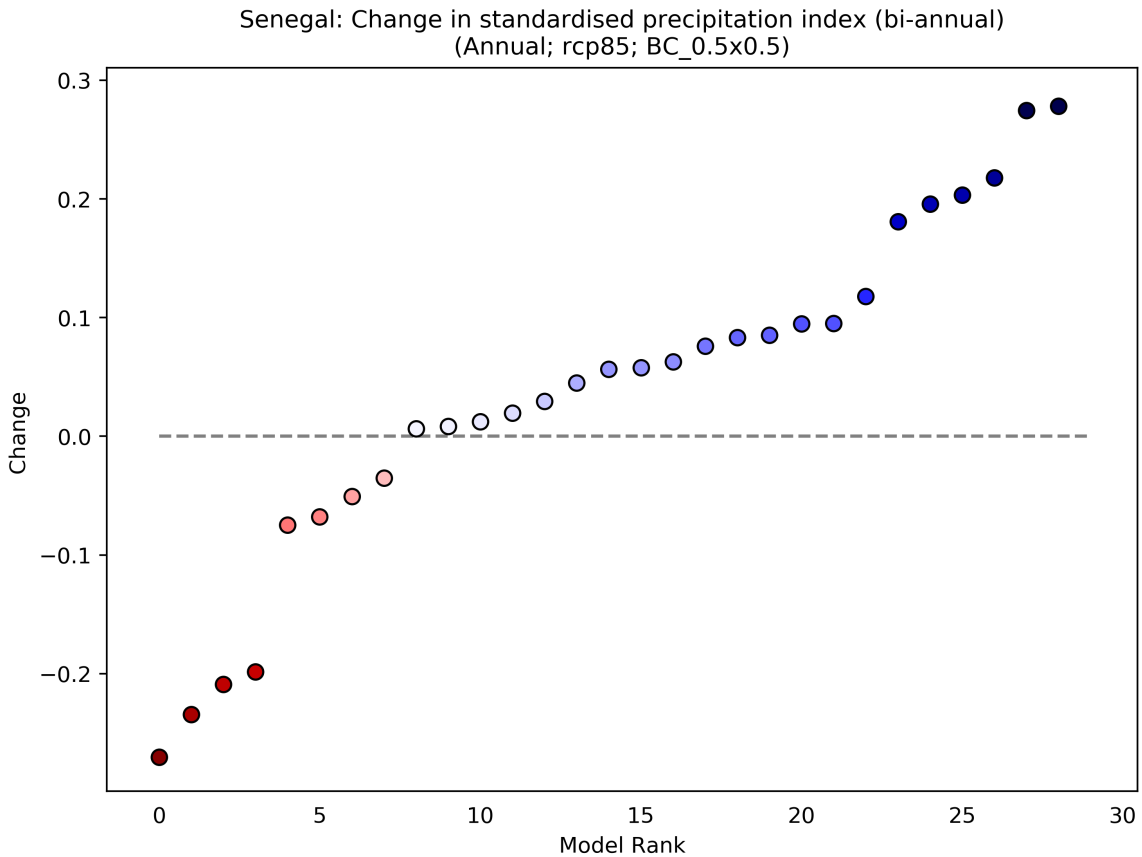

Figure 16: This scatterplot shows the absolute change in Standardised Precipitation Index (bi-annual) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

6 Number of Periods with a Wet Spell Longer Than 10 Days

This metric shows the number of periods with a wet spell longer than 10 days for the selected period.

6.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

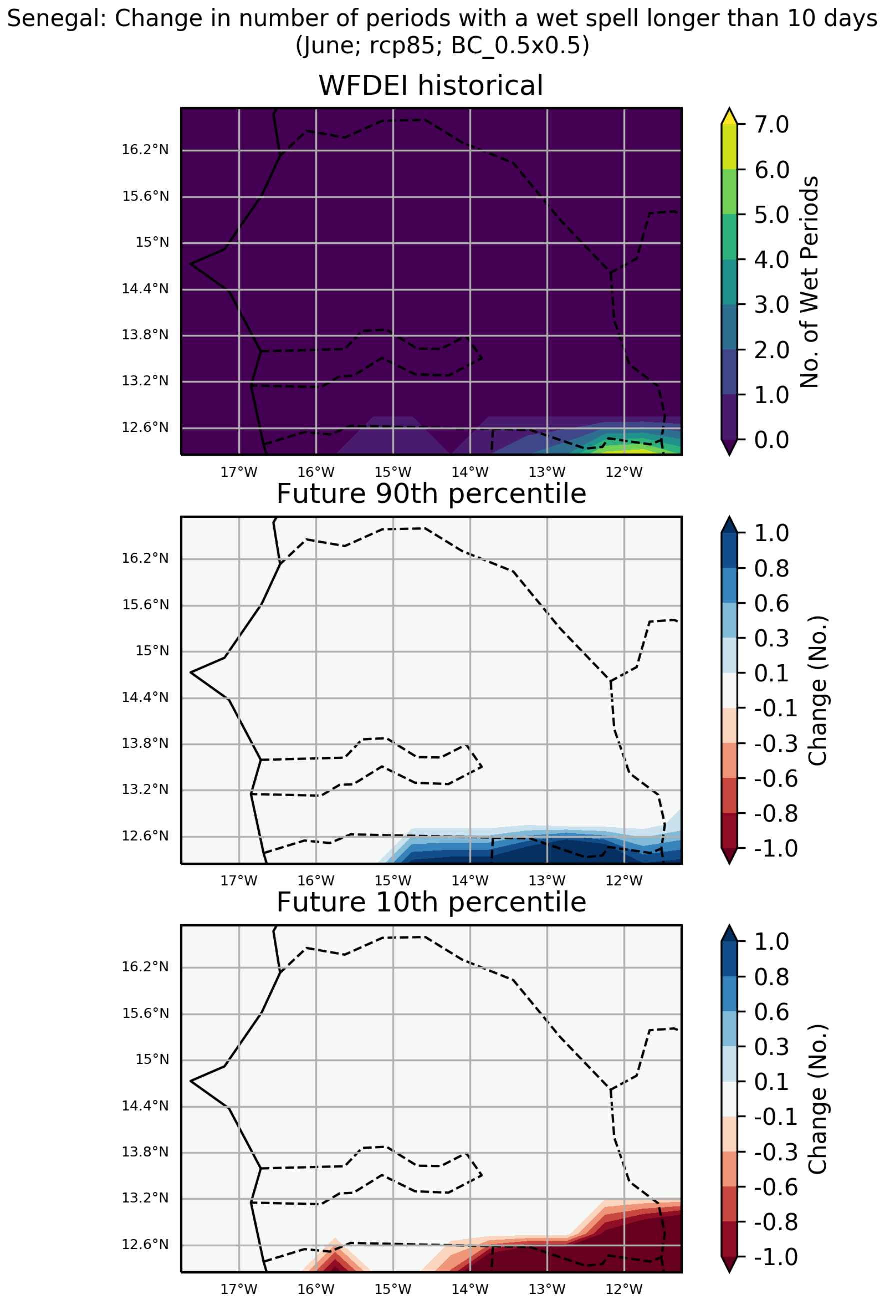

Figure 17: These maps show the ensemble spread in the absolute change in Number of Periods with a Wet Spell Longer Than 10 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

6.2 'Number of model' histograms

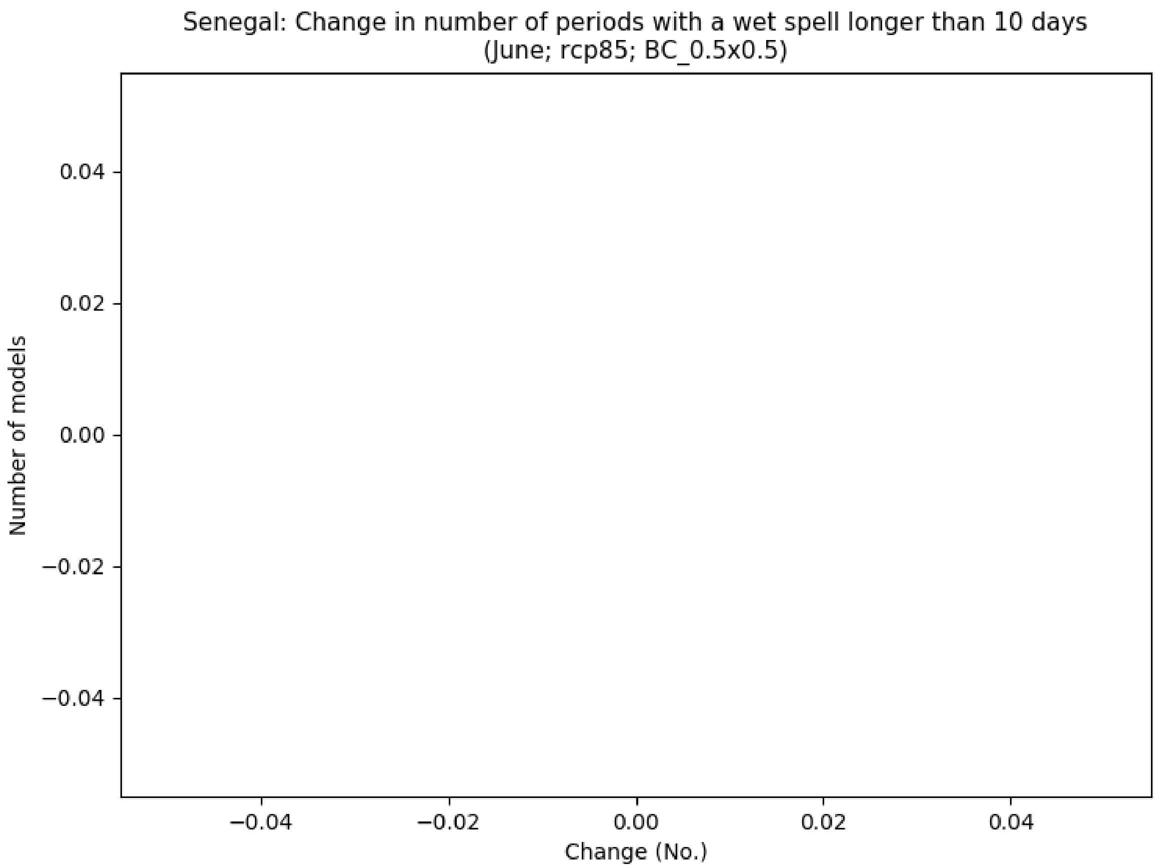

Figure 18: This histogram shows the number of models that agree on the absolute change in Number of Periods with a Wet Spell Longer Than 10 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

6.3 Boxplots

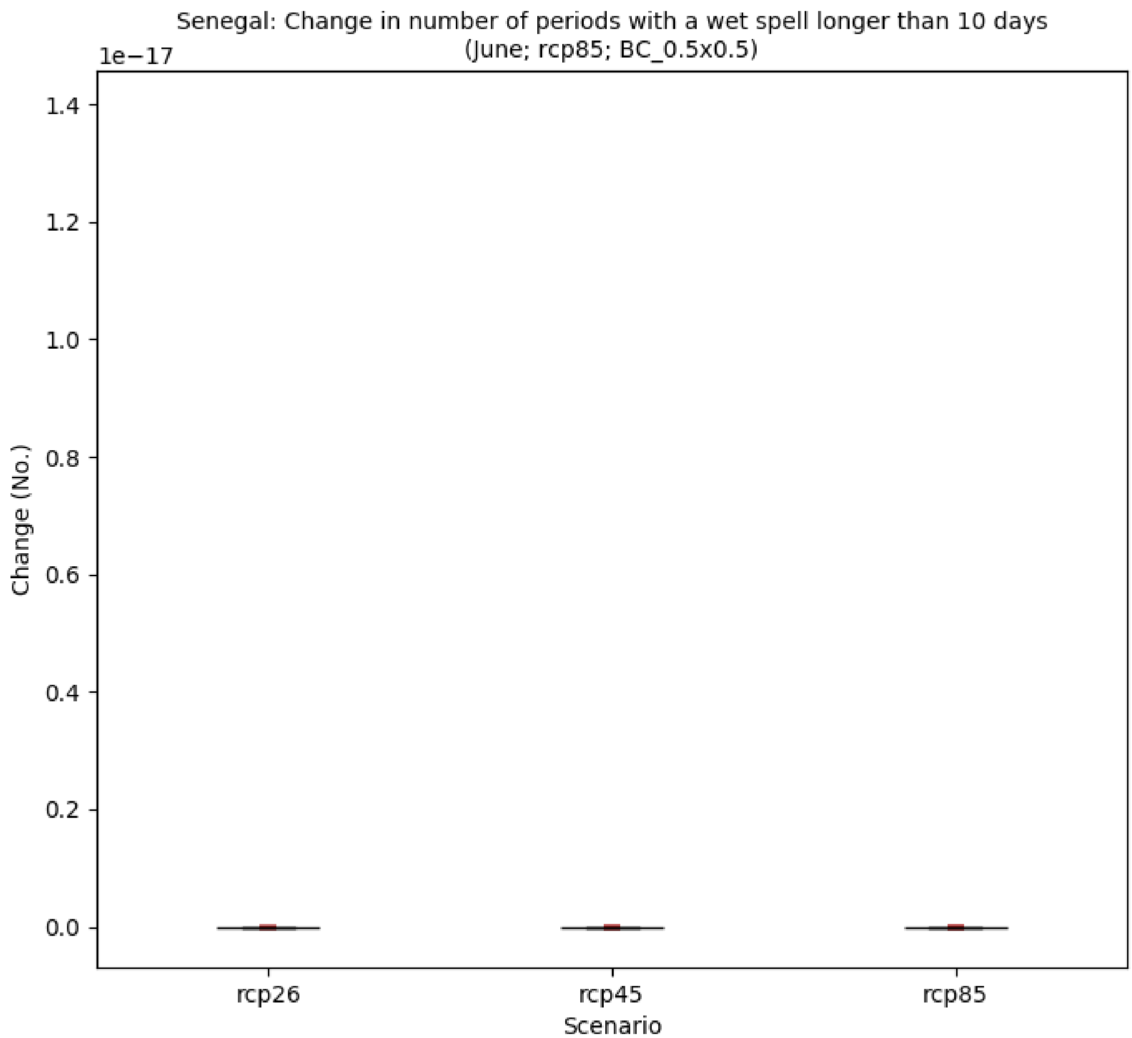

Figure 19: This boxplot shows the absolute change (all available scenarios) of Number of Periods with a Wet Spell Longer Than 10 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

6.4 Model ranking scatterplots

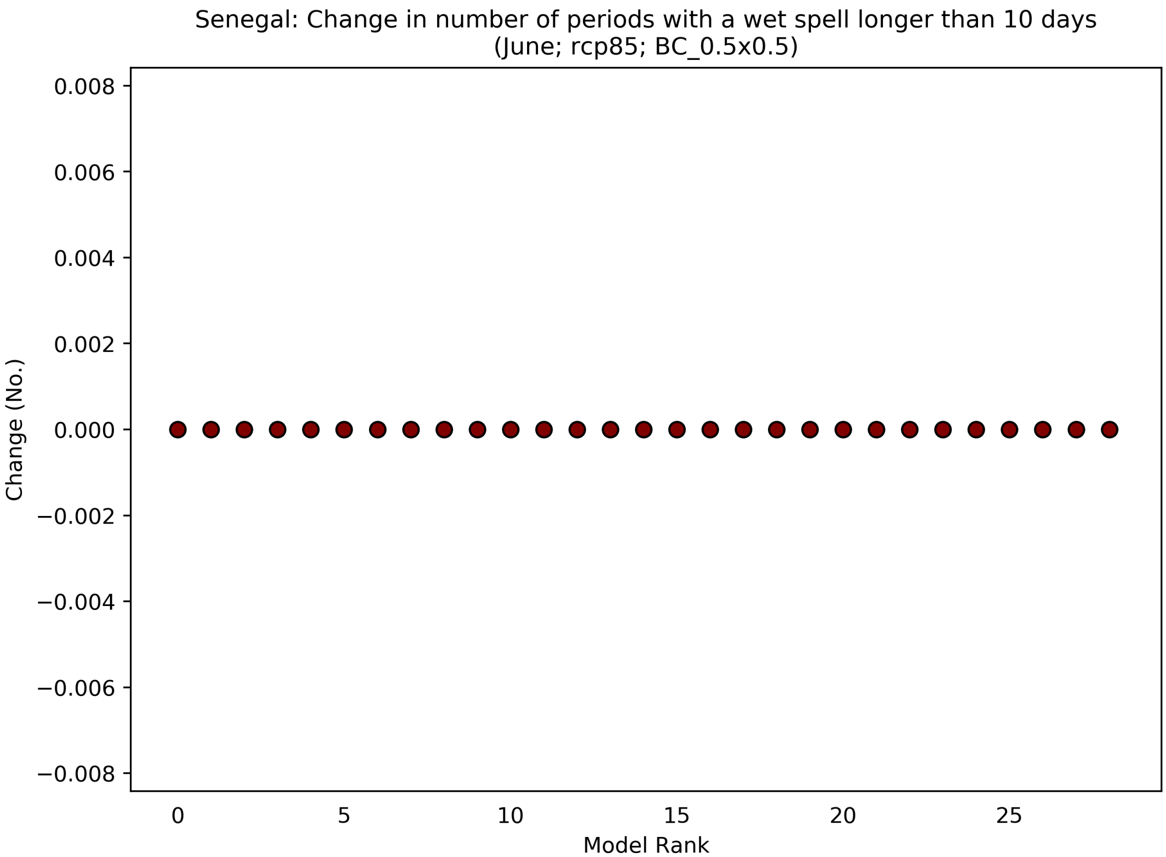

Figure 20: This scatterplot shows the absolute change in Number of Periods with a Wet Spell Longer Than 10 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

7 Number of Periods with a Dry Spell Longer Than 6 Days

This metric shows the number of periods with a dry spell longer than 6 days for the selected period.

7.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

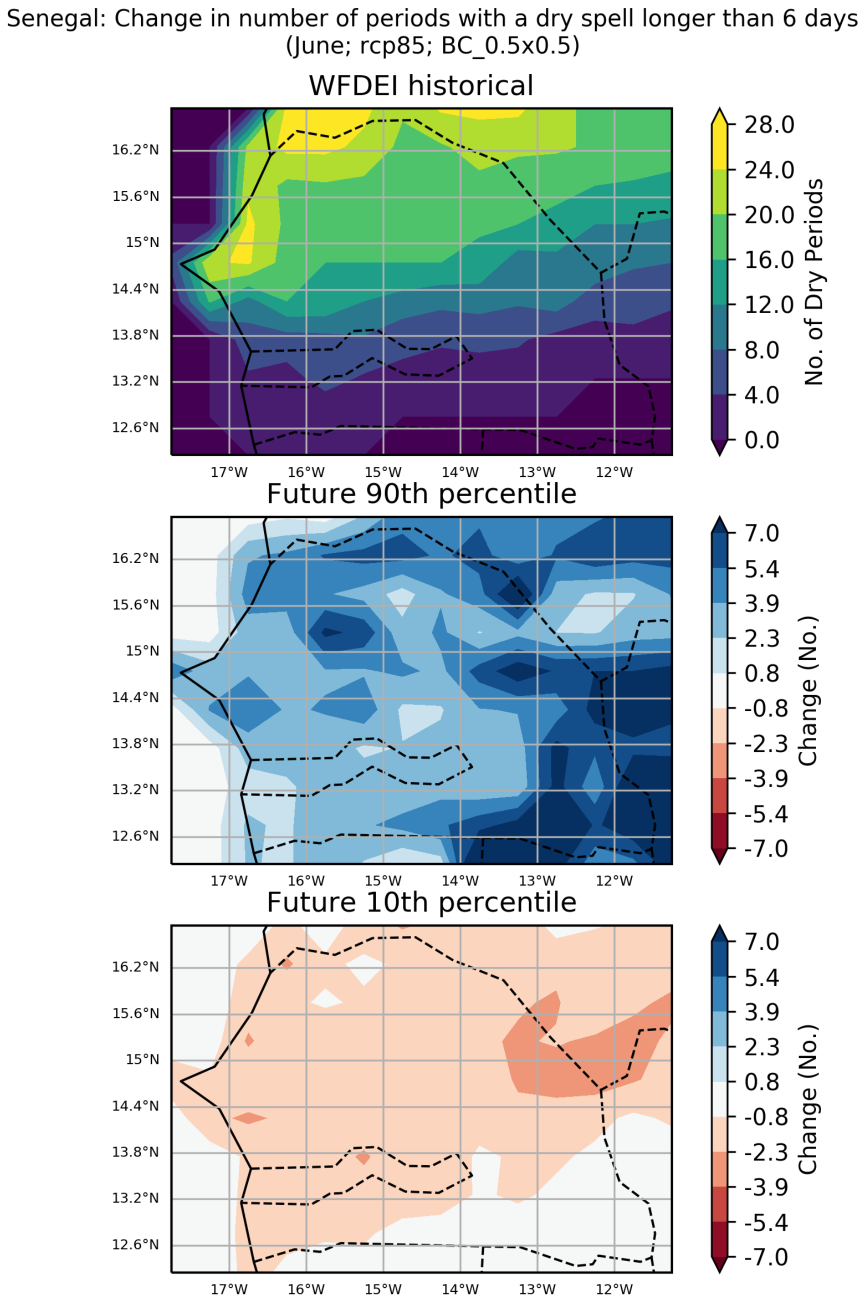

Figure 21: These maps show the ensemble spread in the absolute change in Number of Periods with a Dry Spell Longer Than 6 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

7.2 'Number of model' histograms

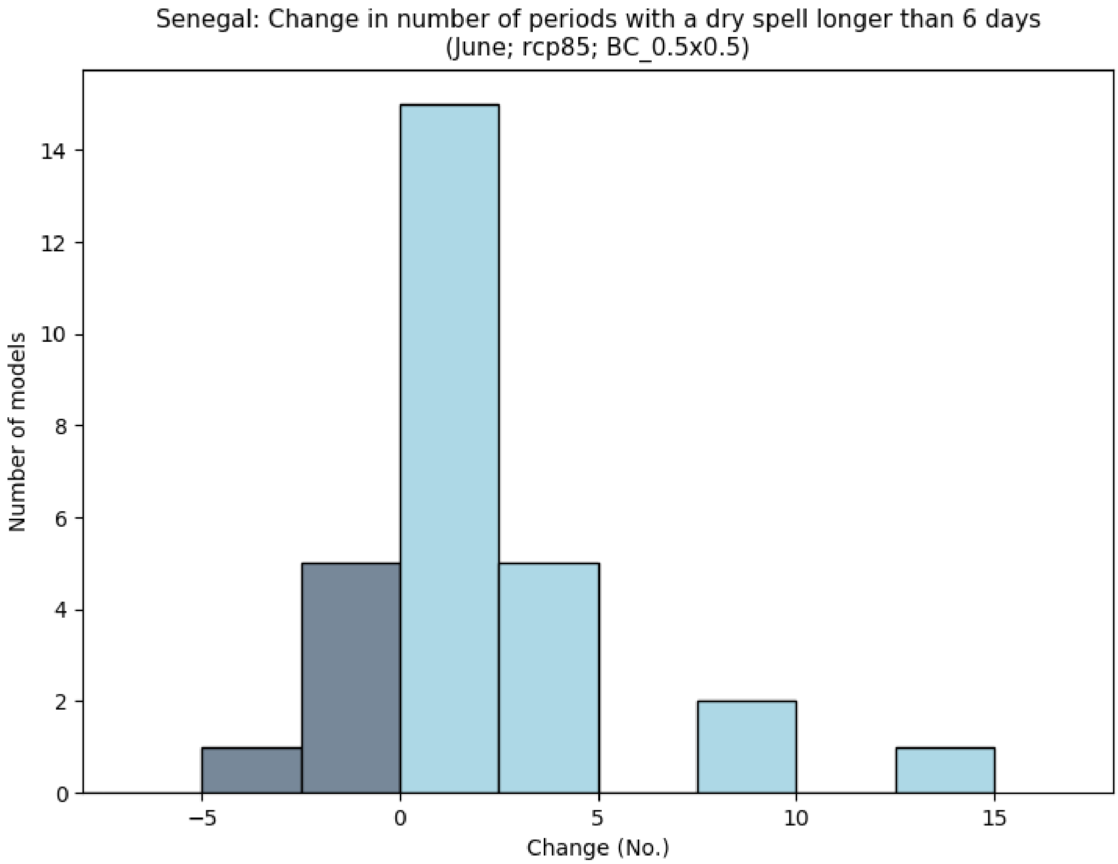

Figure 22: This histogram shows the number of models that agree on the absolute change in Number of Periods with a Dry Spell Longer Than 6 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

7.3 Boxplots

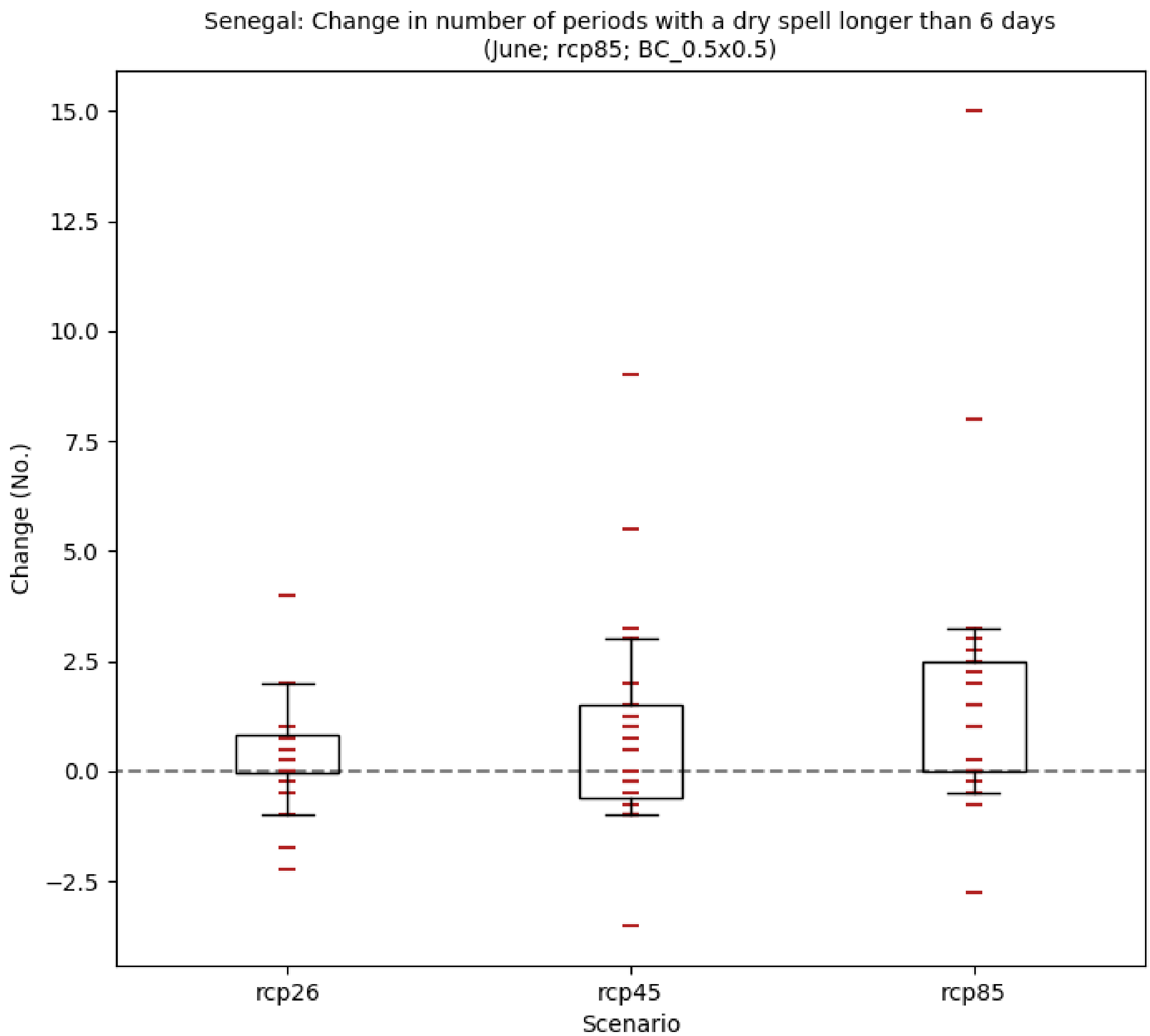

Figure 23: This boxplot shows the absolute change (all available scenarios) of Number of Periods with a Dry Spell Longer Than 6 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

7.4 Model ranking scatterplots

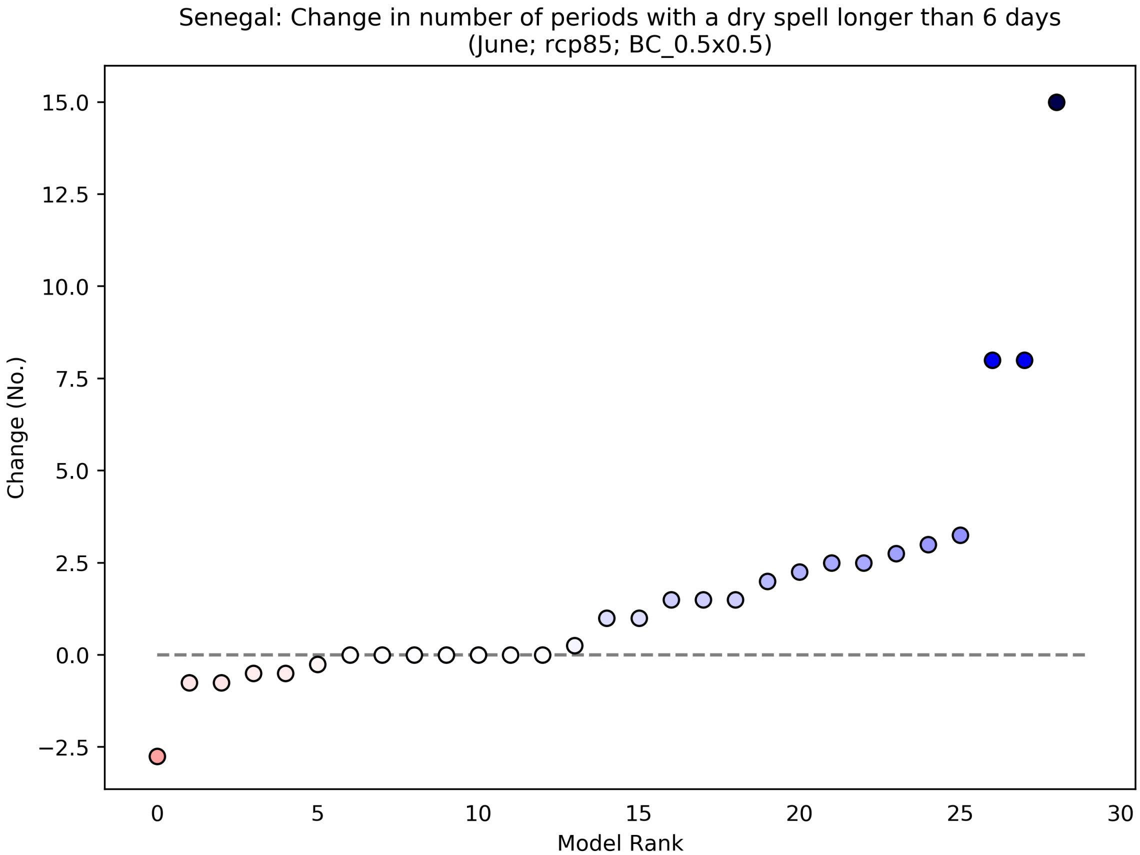

Figure 24: This scatterplot shows the absolute change in Number of Periods with a Dry Spell Longer Than 6 Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

8 Maximum Daily Precipitation

This metric shows the maximum daily value for each variable, for the period shown.

8.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

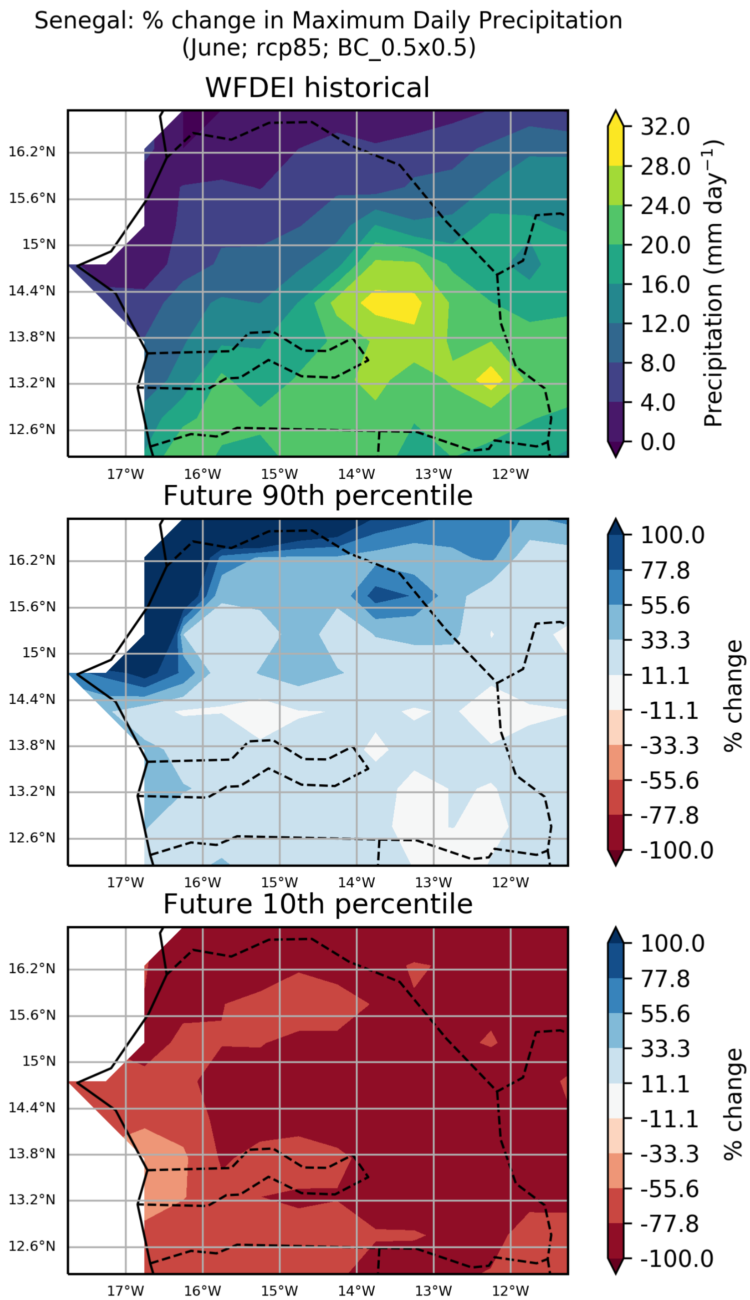

Figure 25: These maps show the ensemble spread in the percentage change in Maximum Daily Precipitation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

8.2 'Number of model' histograms

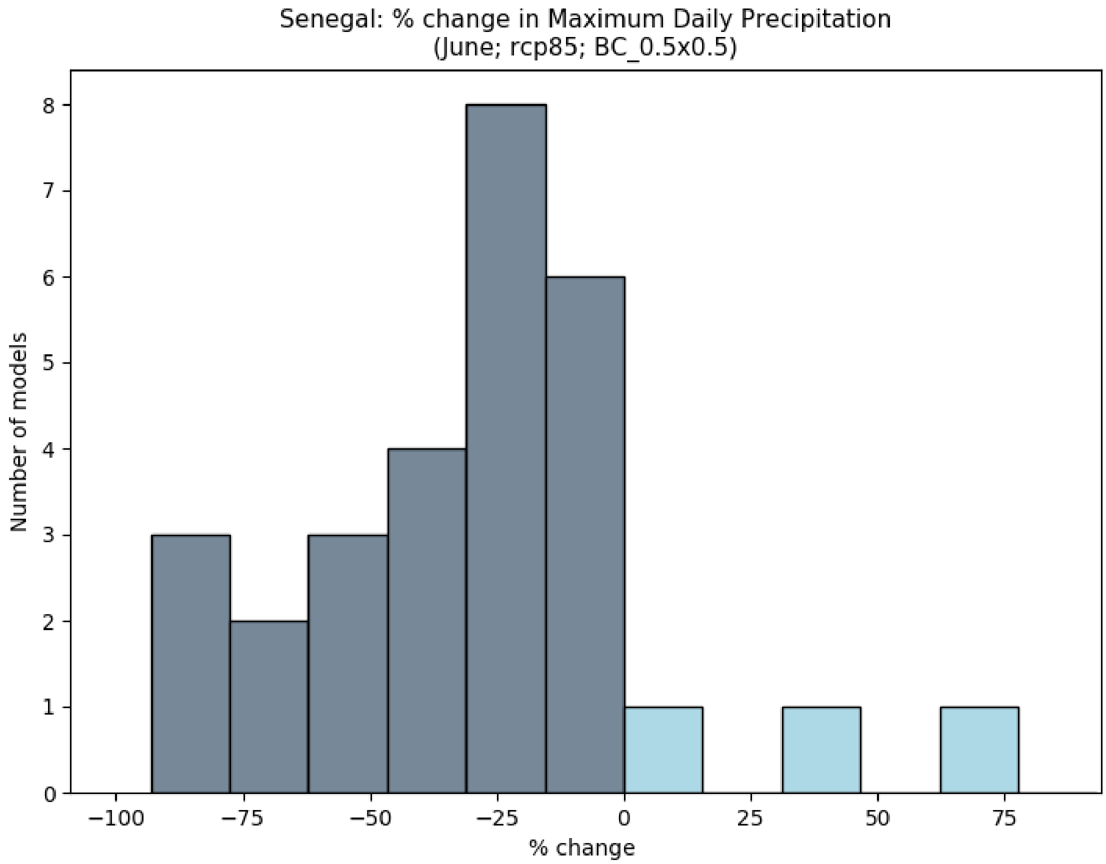

Figure 26: This histogram shows the number of models that agree on the percentage change in Maximum Daily Precipitation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

8.3 Boxplots

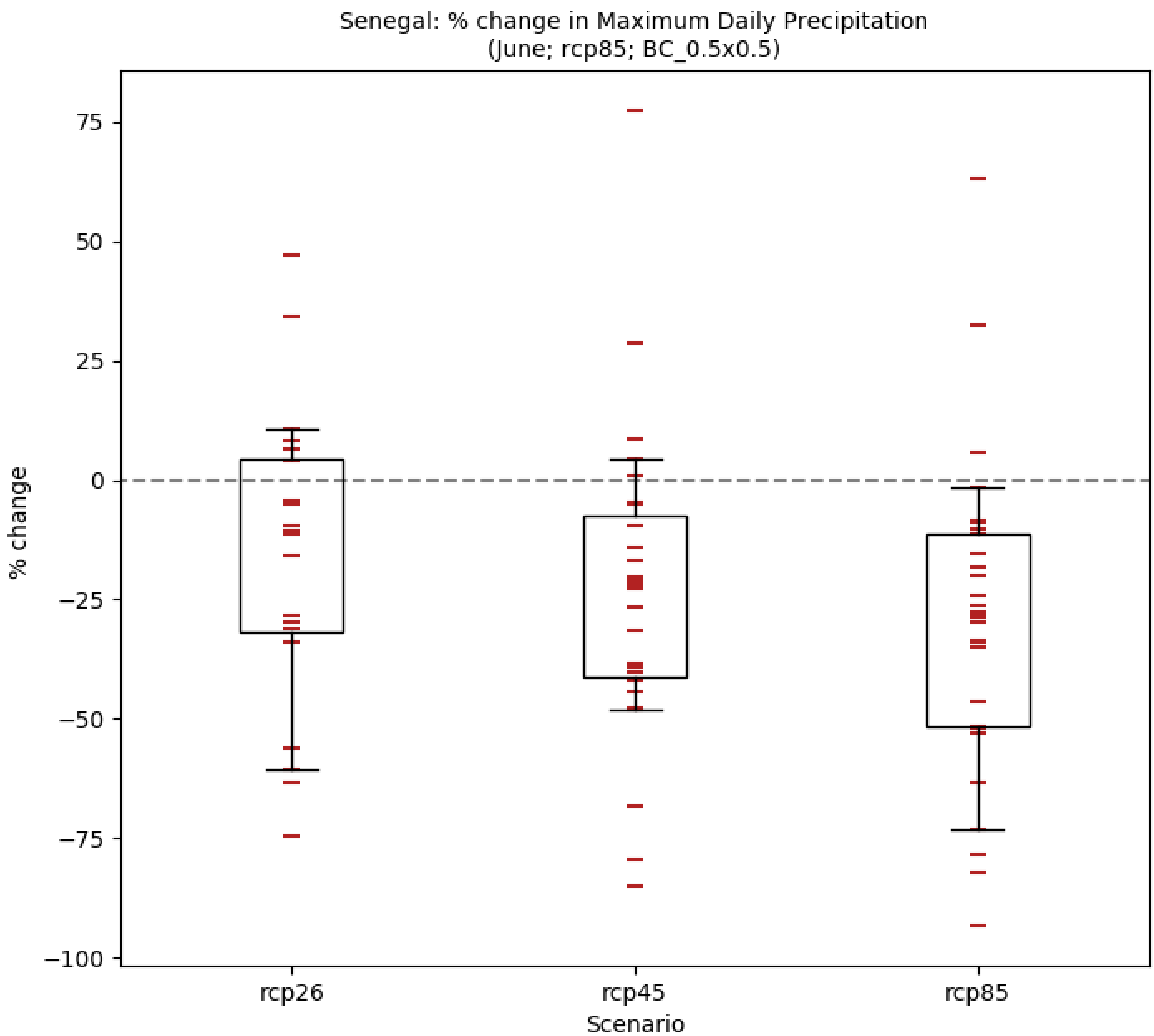

Figure 27: This boxplot shows the percentage change (all available scenarios) in Maximum Daily Precipitation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

8.4 Model ranking scatterplots

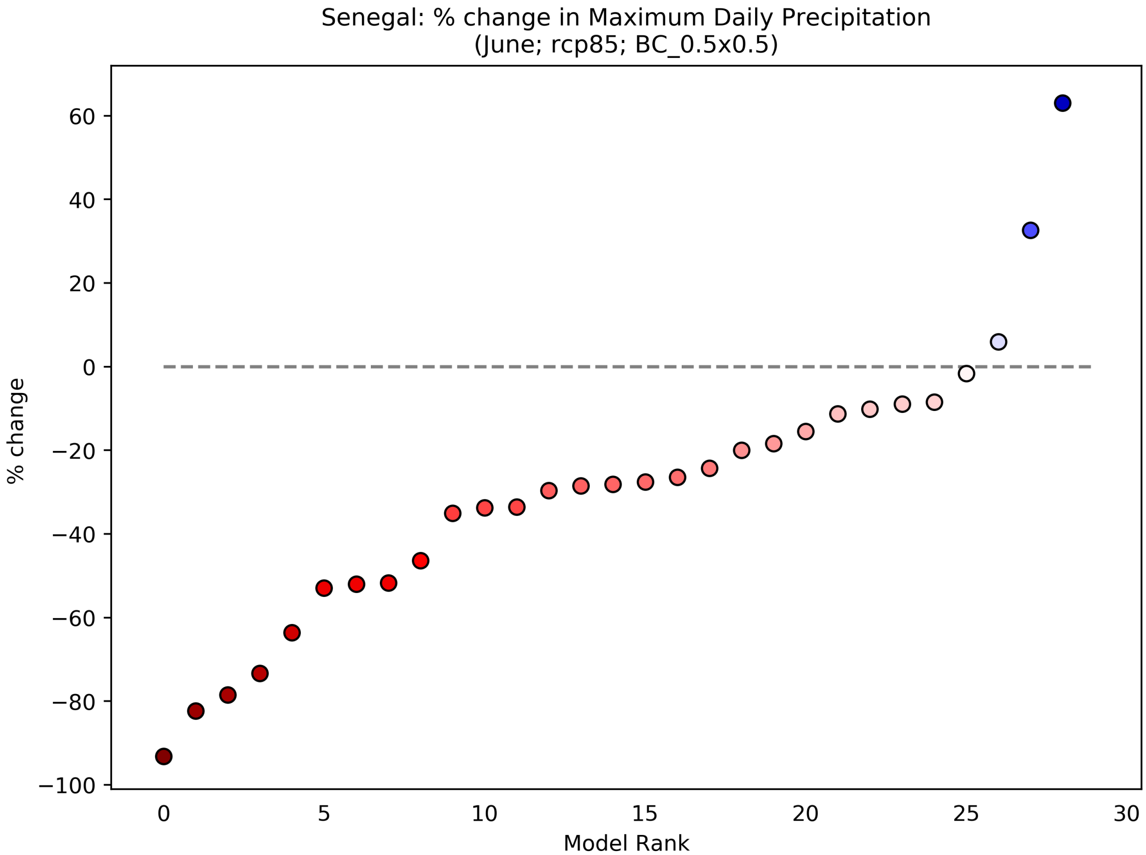

Figure 28: This scatterplot shows the percentage change in Maximum Daily Precipitation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

9 Maximum Daily Maximum Temperature

This metric shows the maximum daily value for each variable, for the period shown.

9.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

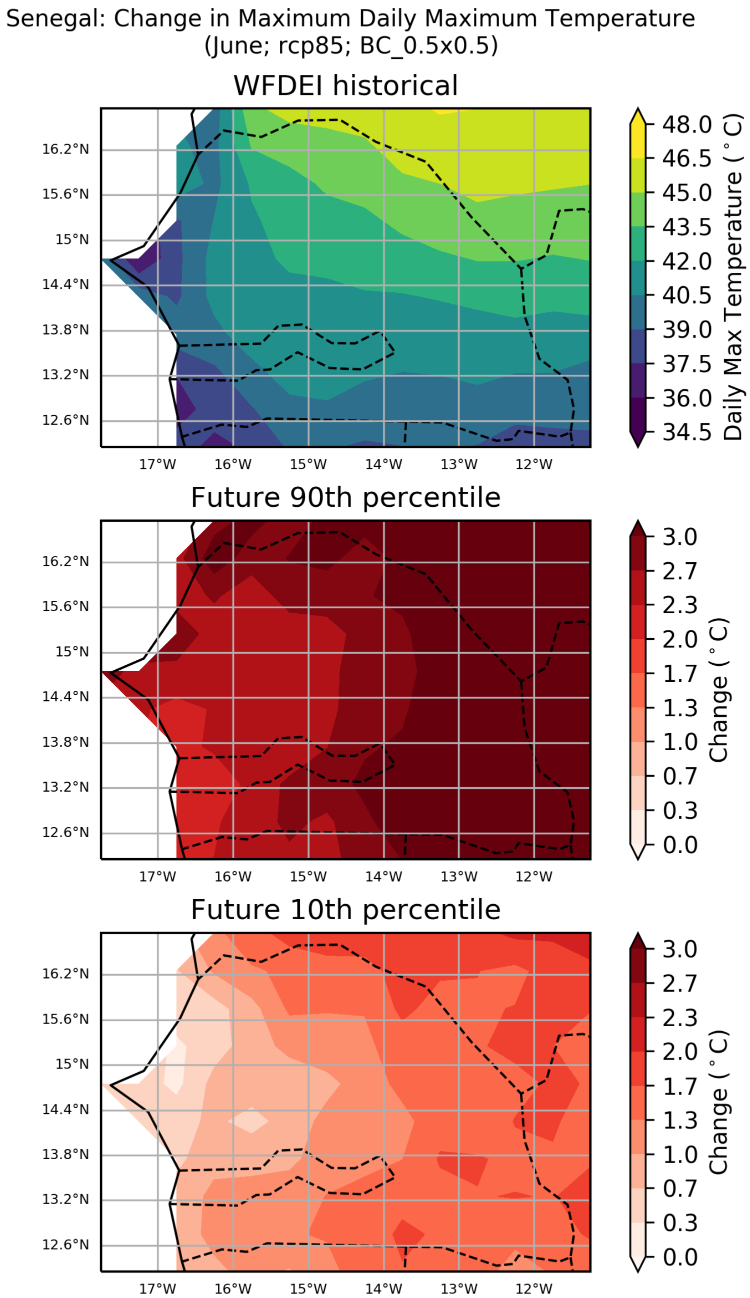

Figure 29: These maps show the ensemble spread in the absolute change in Maximum Daily Maximum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

9.2 'Number of model' histograms

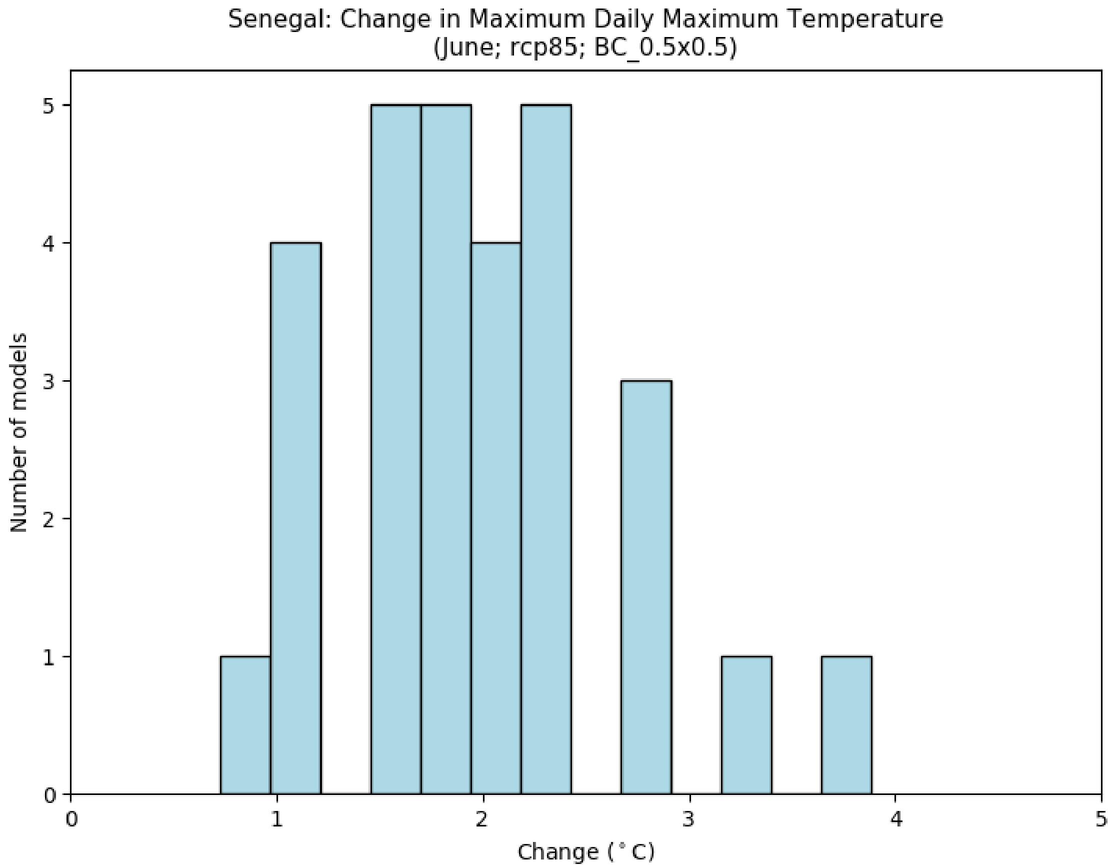

Figure 30: This histogram shows the number of models that agree on the absolute change in Maximum Daily Maximum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

9.3 Boxplots

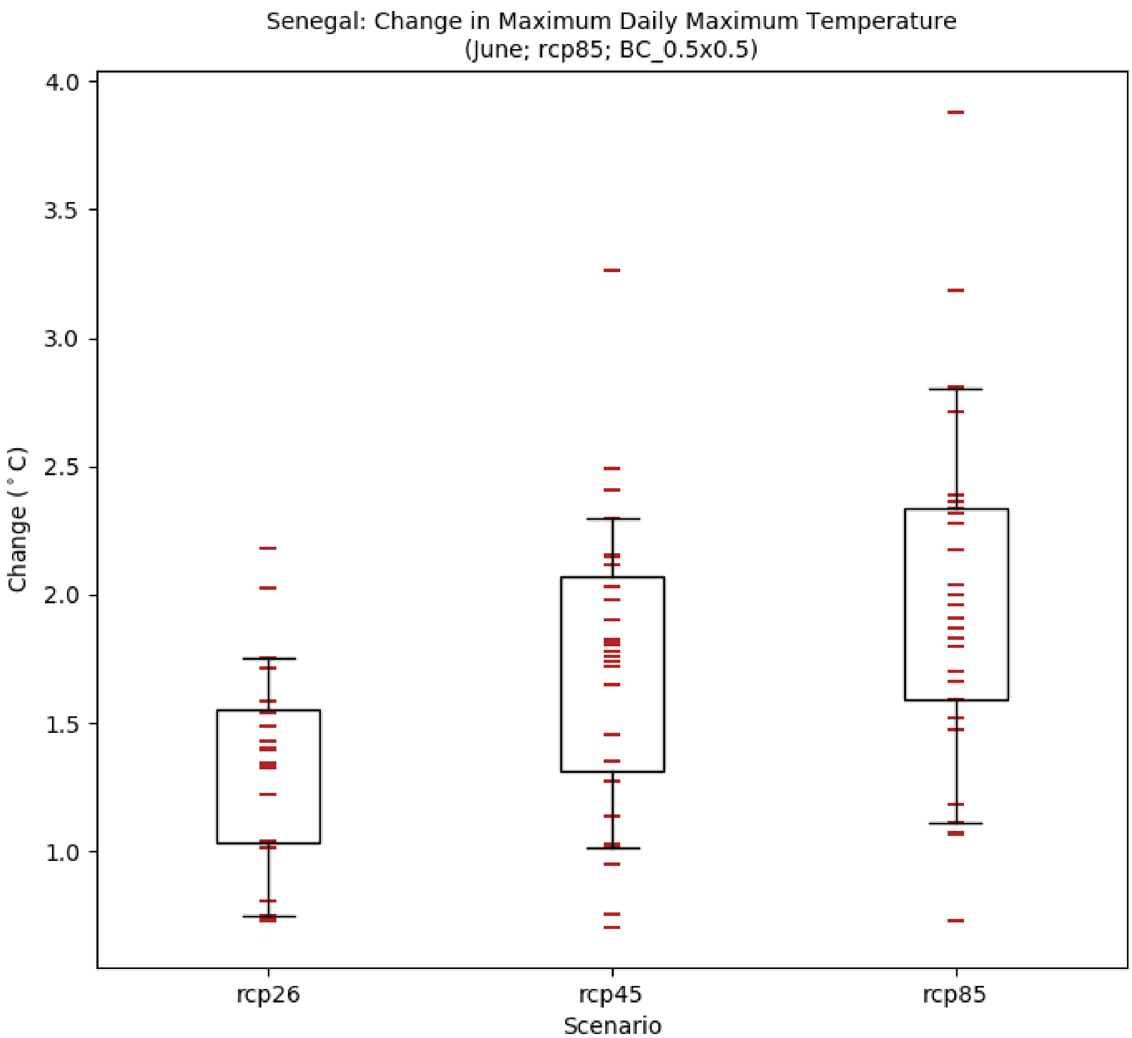

Figure 31: This boxplot shows the absolute change (all available scenarios) of Maximum Daily Maximum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

9.4 Model ranking scatterplots

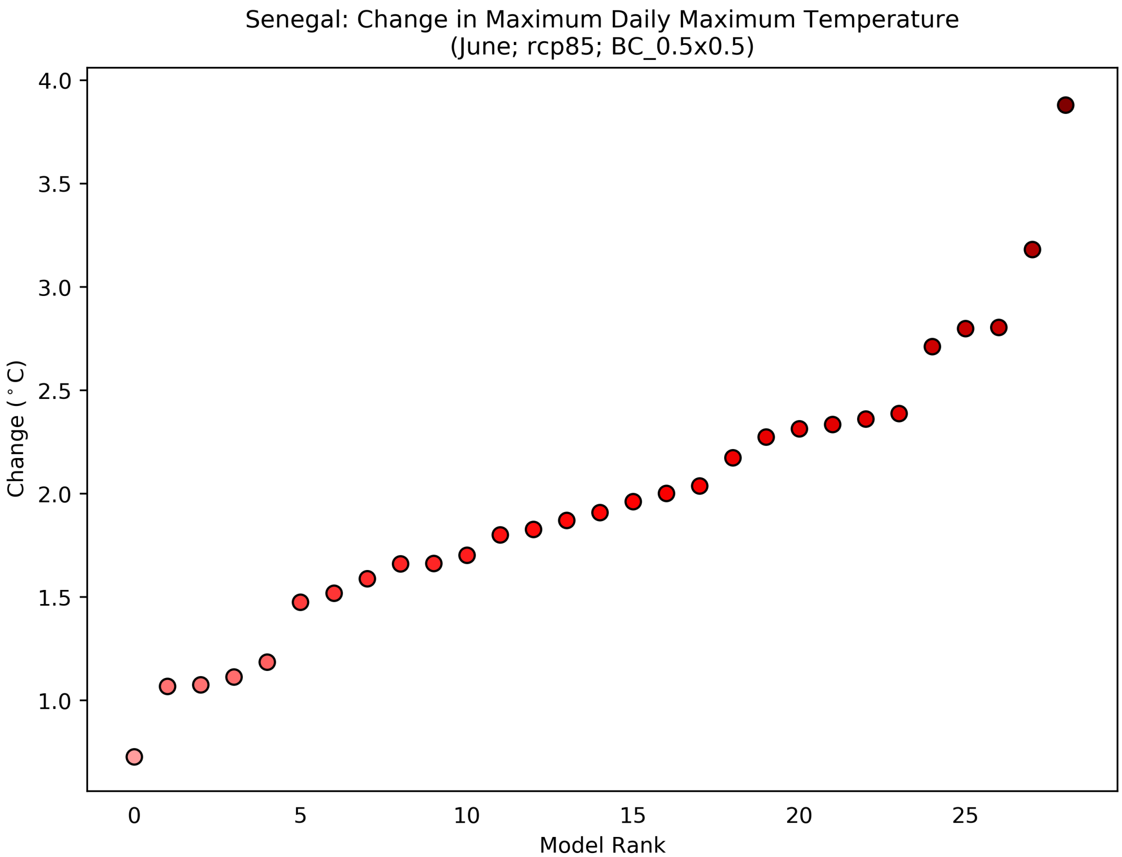

Figure 32: This scatterplot shows the absolute change in Maximum Daily Maximum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

10 Maximum Surface Downwelling Shortwave Radiation

This metric shows the maximum daily value for each variable, for the period shown.

10.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

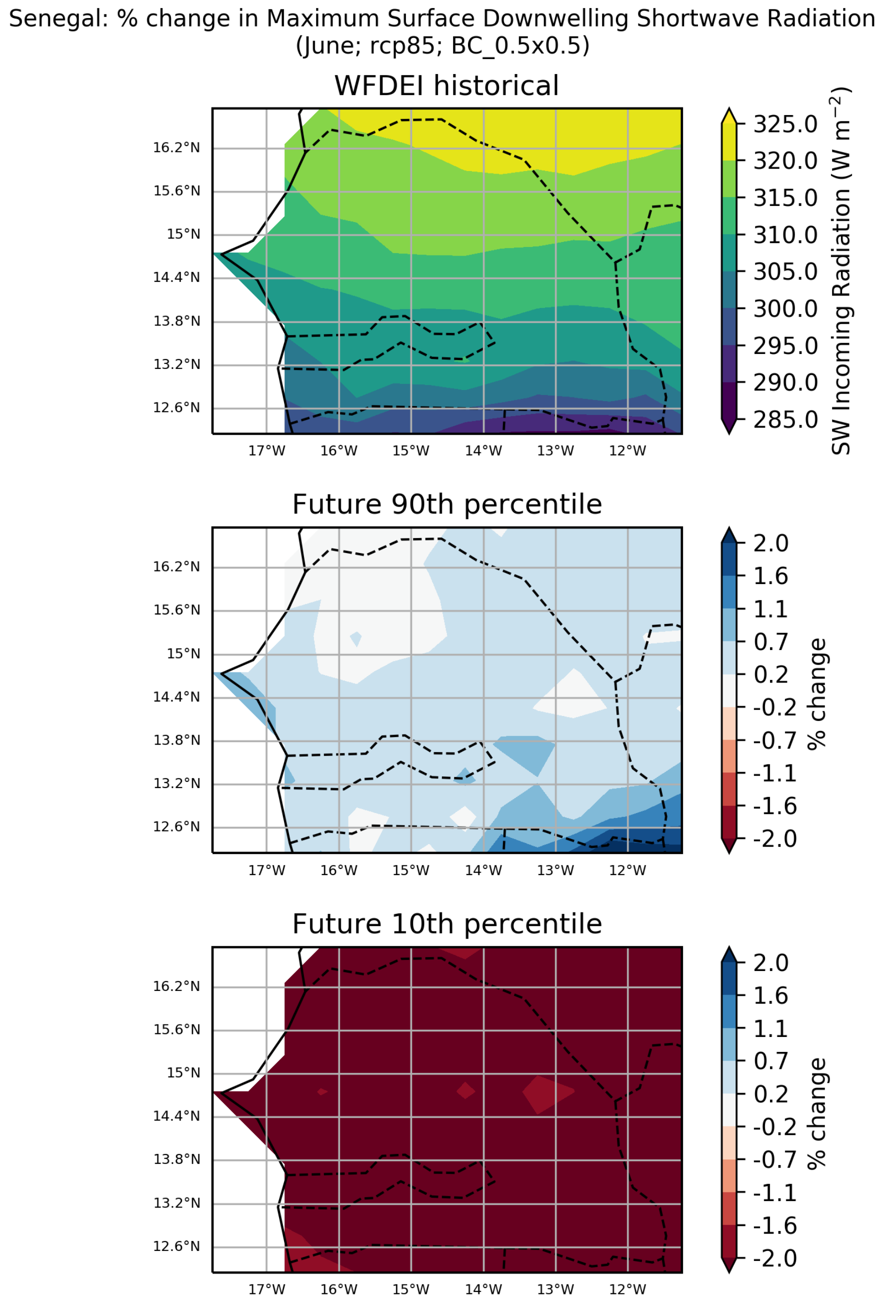

Figure 33: These maps show the ensemble spread in the percentage change in Maximum Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

10.2 'Number of model' histograms

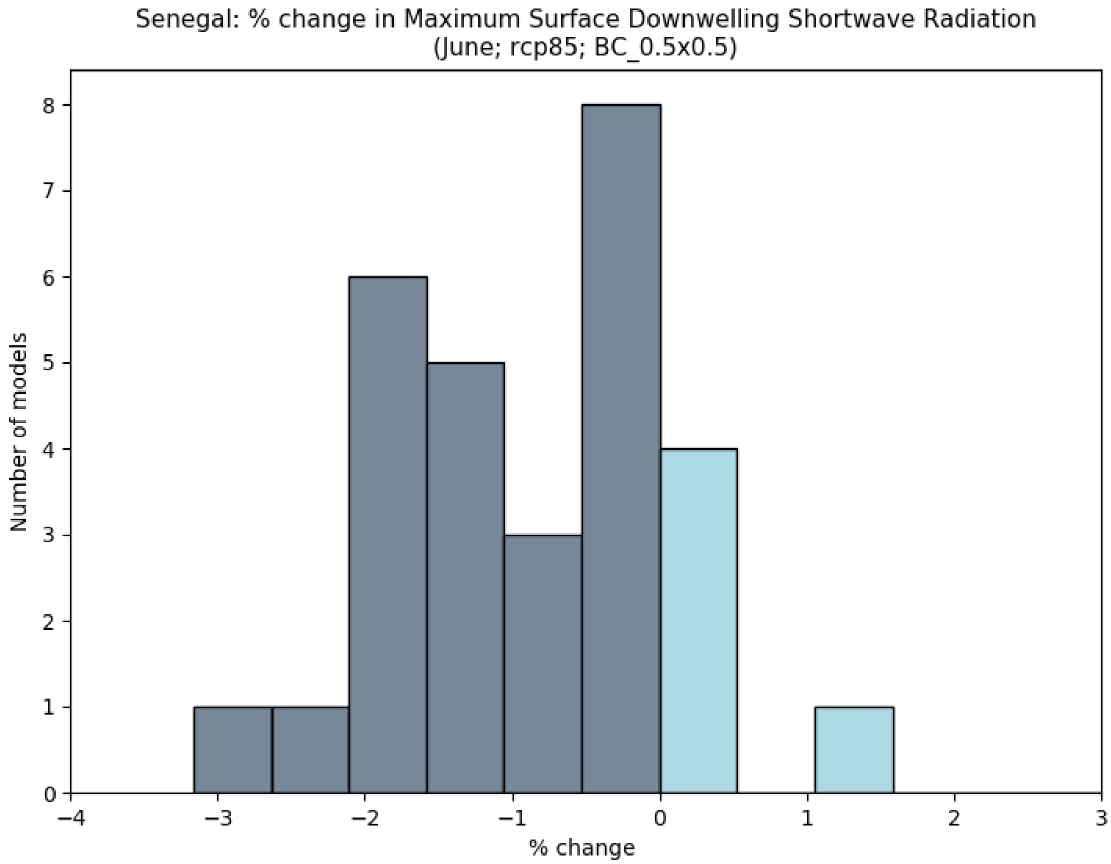

Figure 34: This histogram shows the number of models that agree on the percentage change in Maximum Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

10.3 Boxplots

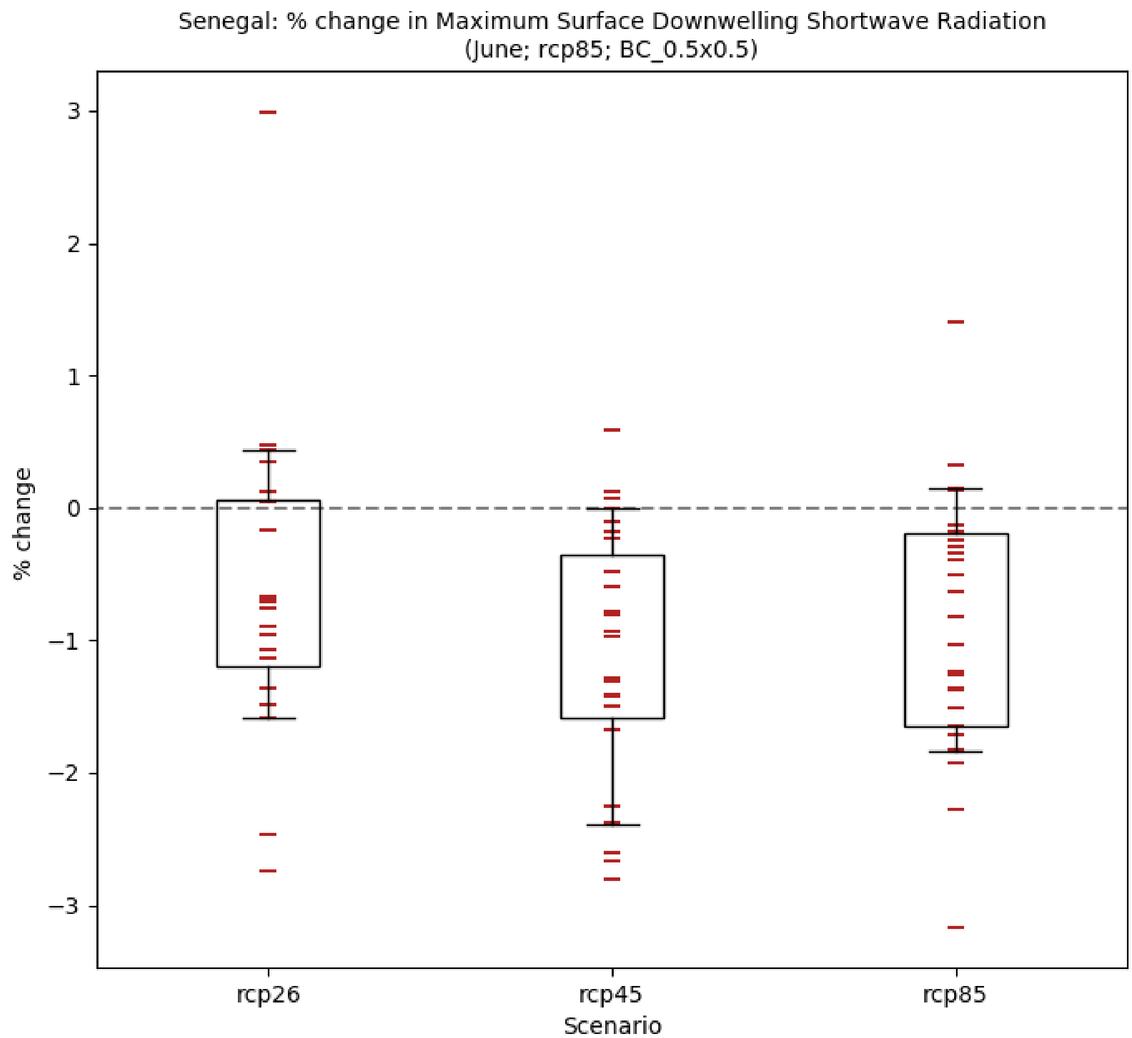

Figure 35: This boxplot shows the percentage change (all available scenarios) in Maximum Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

10.4 Model ranking scatterplots

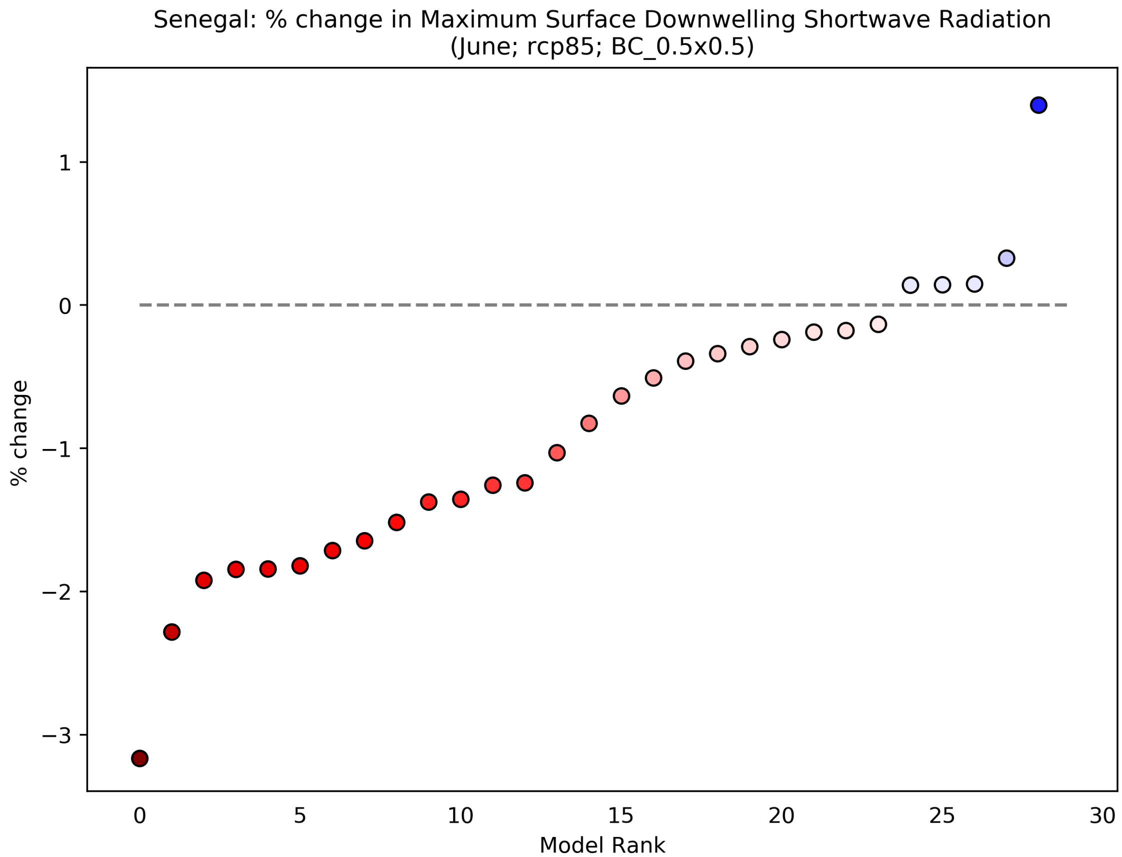

Figure 36: This scatterplot shows the percentage change in Maximum Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

11 Minimum Daily Minimum Temperature

This metric shows the minimum daily value for each variable, for the period shown.

11.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

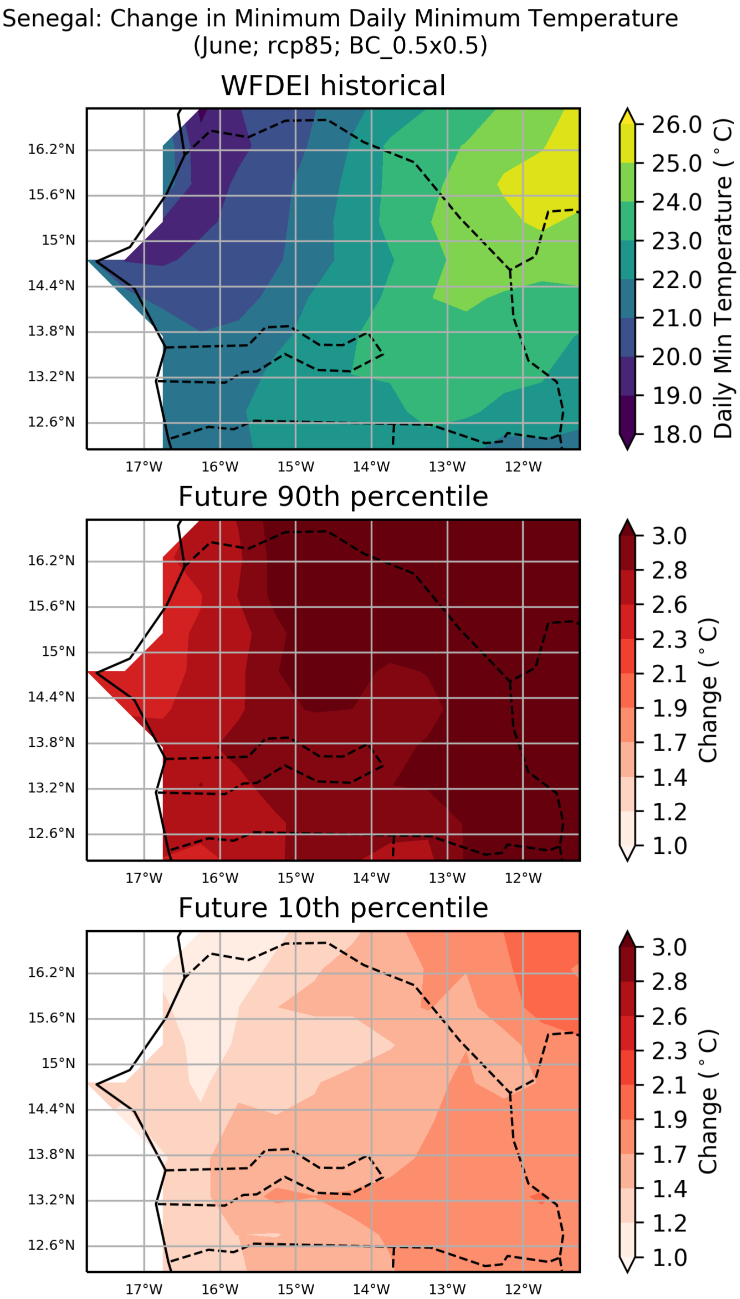

Figure 37: These maps show the ensemble spread in the absolute change in Minimum Daily Minimum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

11.2 'Number of model' histograms

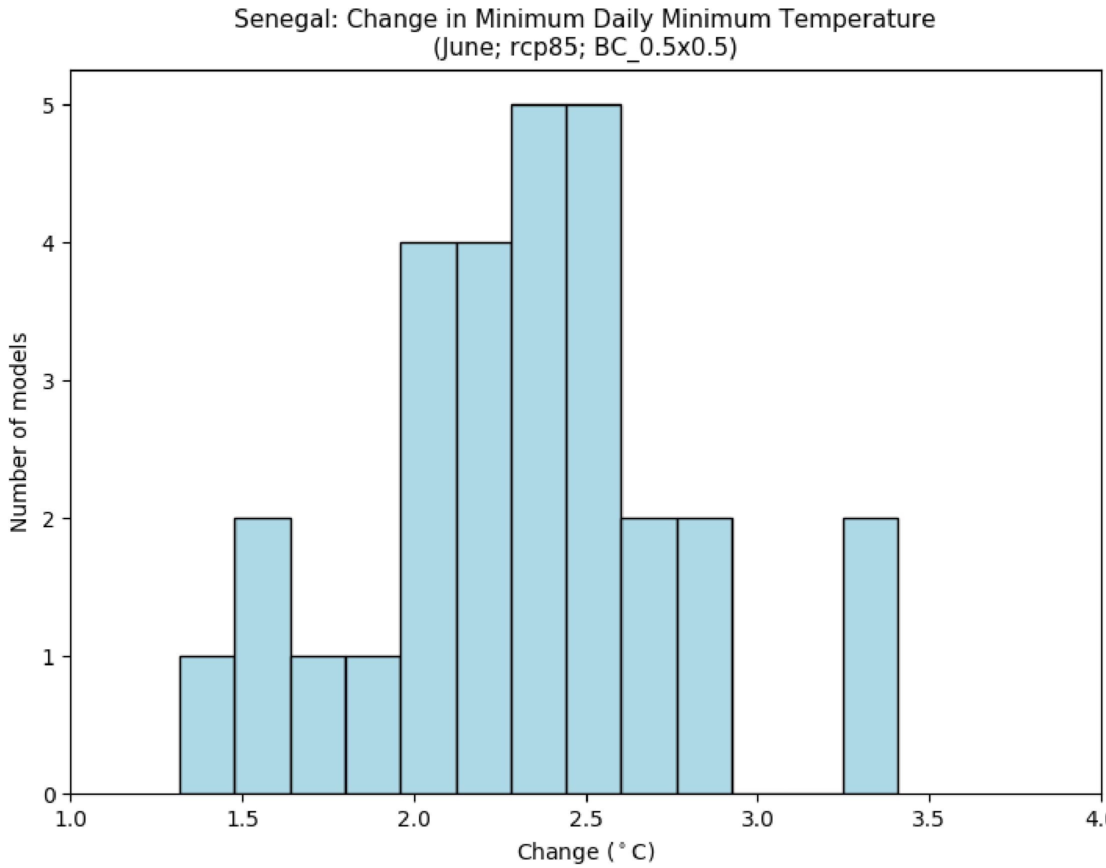

Figure 38: This histogram shows the number of models that agree on the absolute change in Minimum Daily Minimum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

11.3 Boxplots

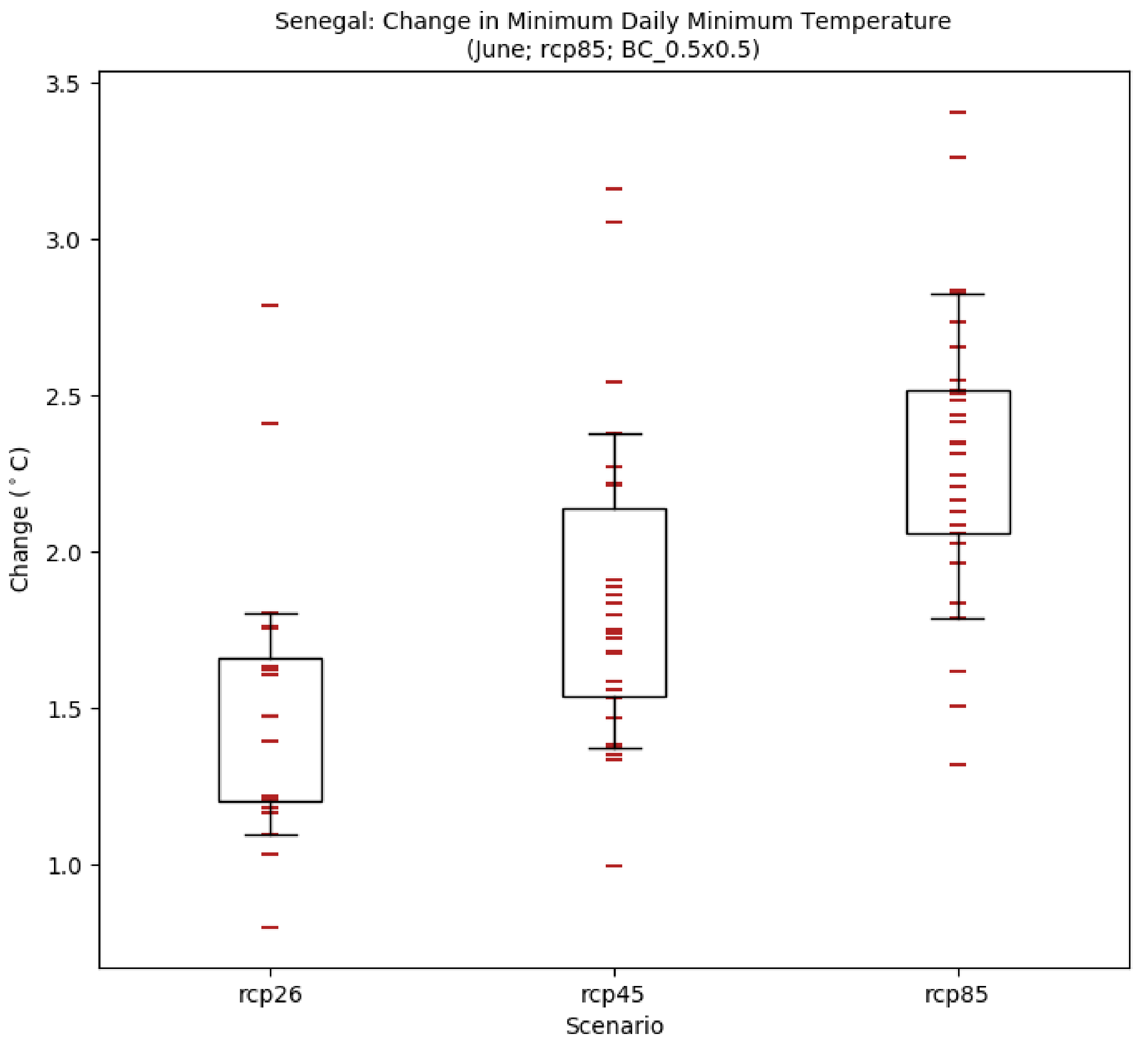

Figure 39: This boxplot shows the absolute change (all available scenarios) of Minimum Daily Minimum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

11.4 Model ranking scatterplots

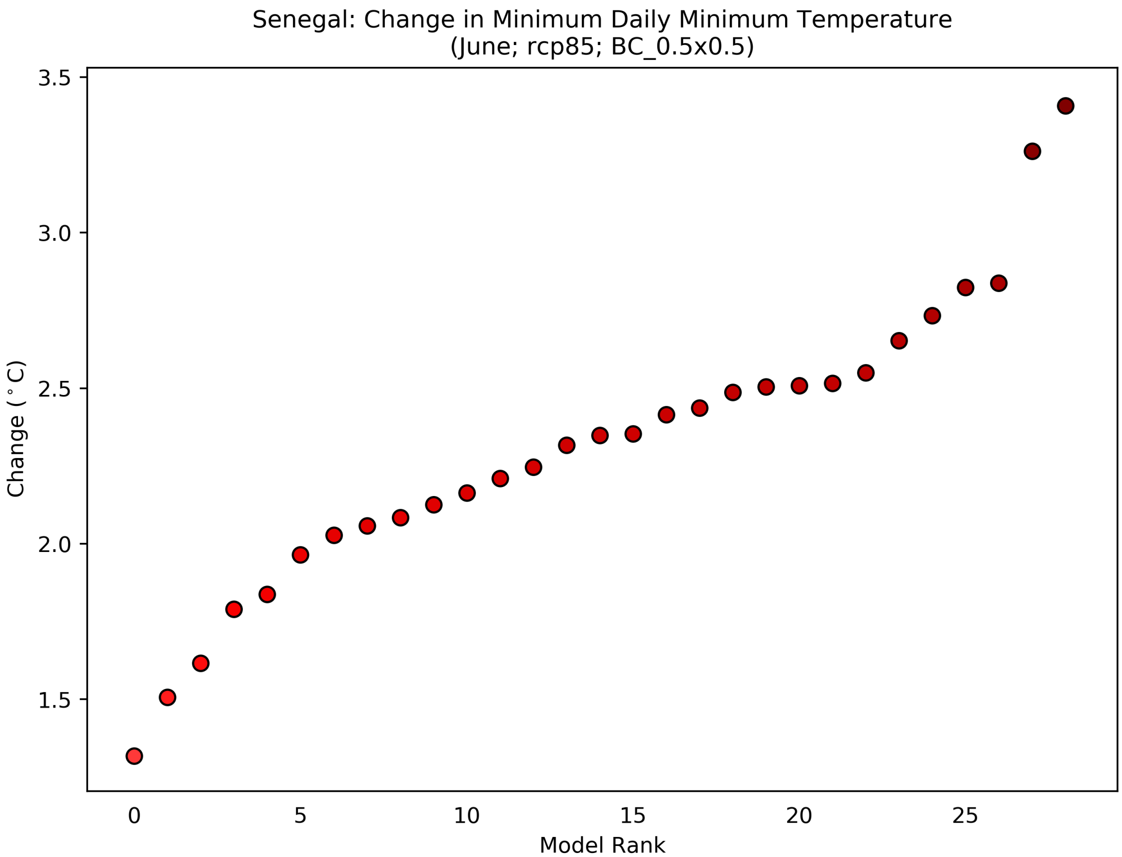

Figure 40: This scatterplot shows the absolute change in Minimum Daily Minimum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

12 Total Rainfall

This metric shows the total accumulated rainfall for the period shown.

12.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

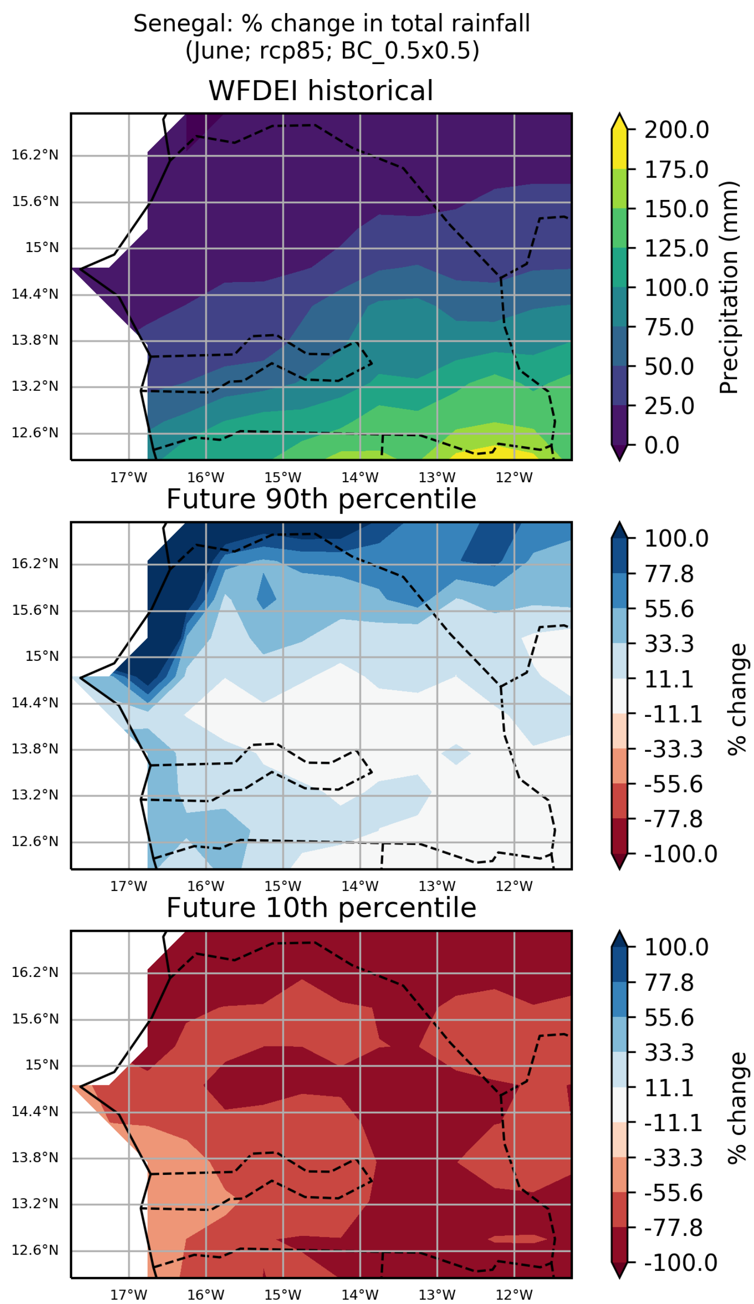

Figure 41: These maps show the ensemble spread in the percentage change in Total Rainfall for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

12.2 'Number of model' histograms

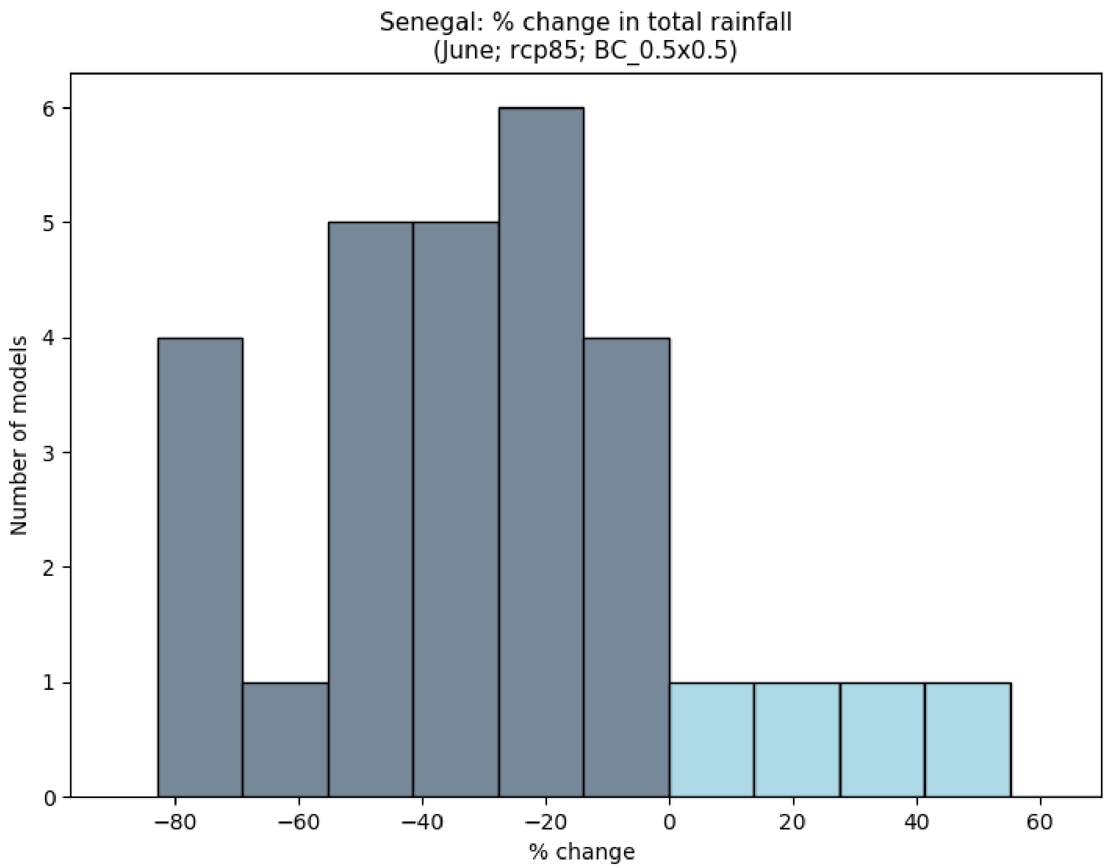

Figure 42: This histogram shows the number of models that agree on the percentage change in Total Rainfall for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

12.3 Boxplots

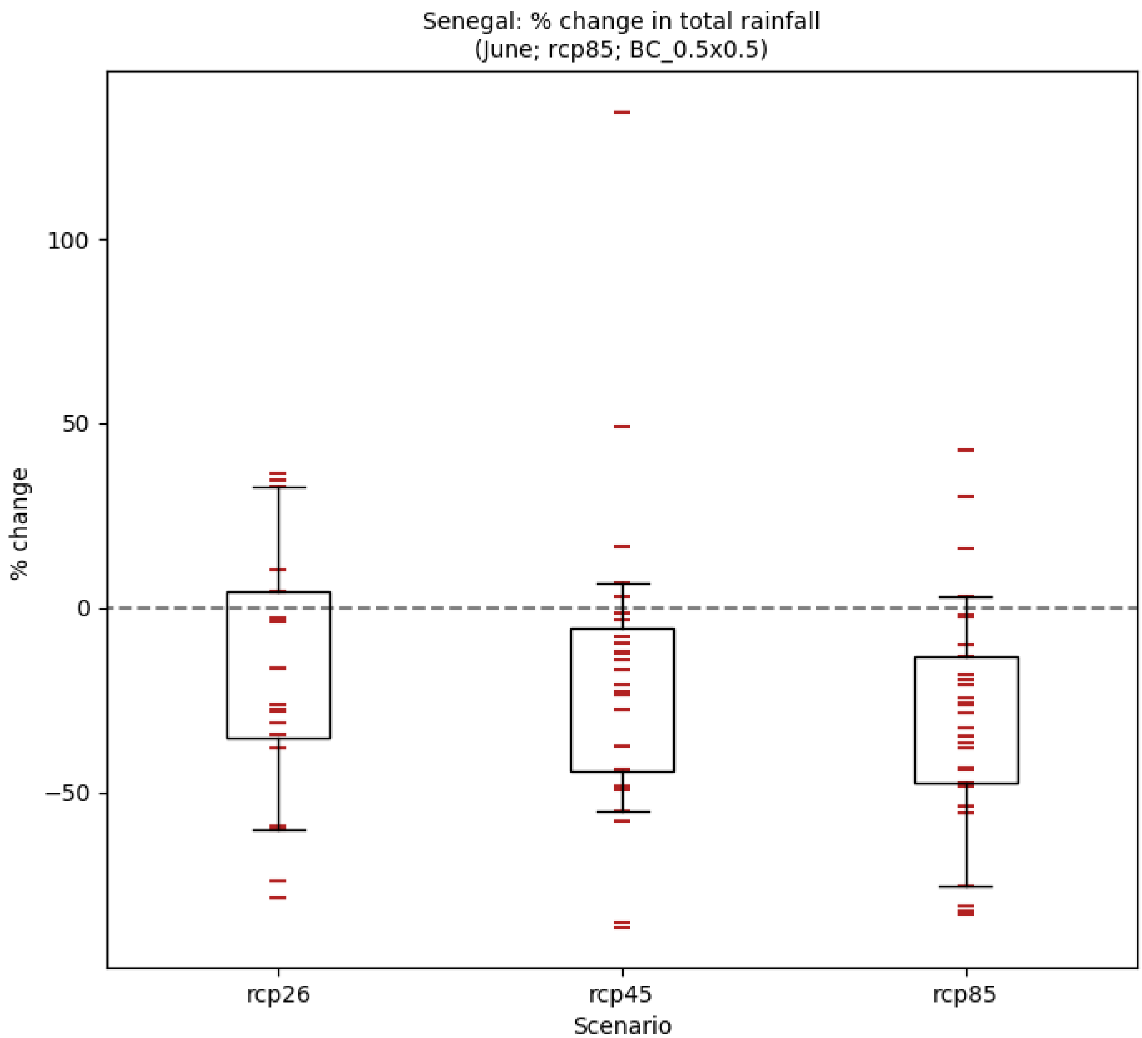

Figure 43: This boxplot shows the percentage change (all available scenarios) in Total Rainfall for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

12.4 Model ranking scatterplots

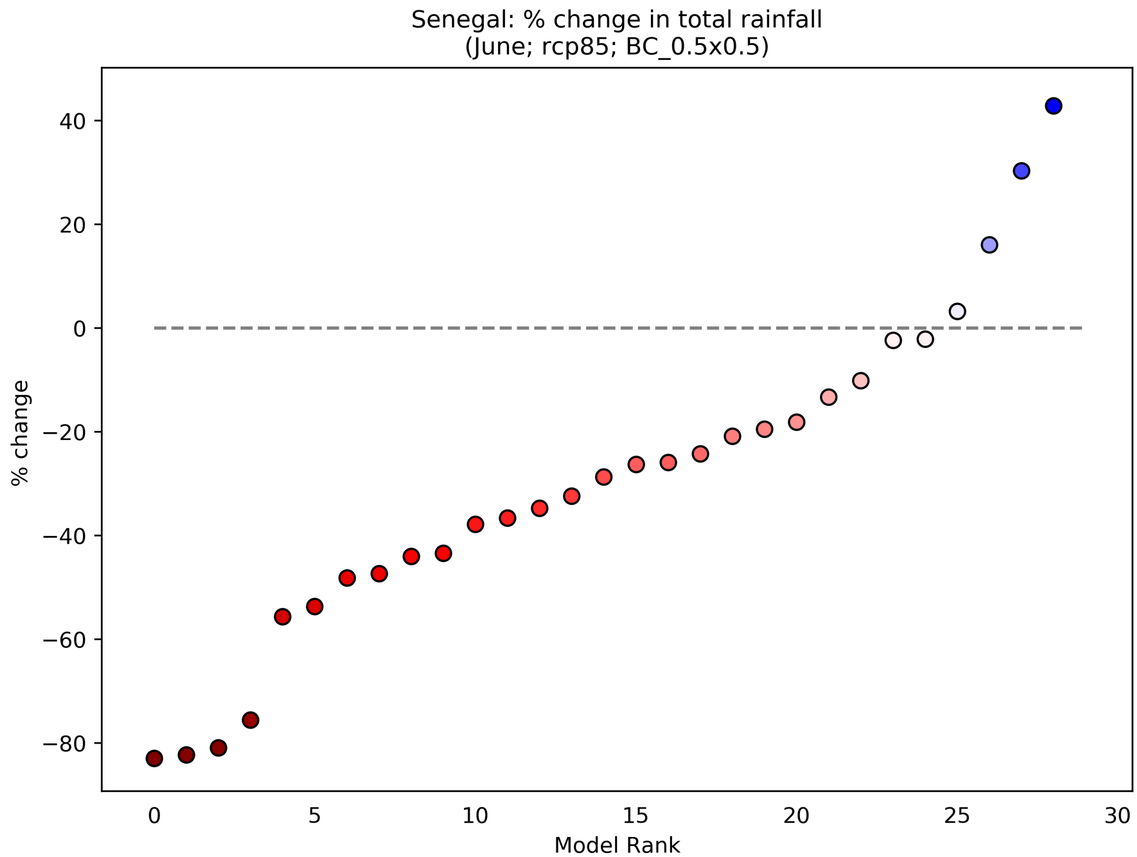

Figure 44: This scatterplot shows the percentage change in Total Rainfall for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

13 Average Daily Mean Temperature

This metric shows the mean daily value for each variable, for the period shown.

13.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

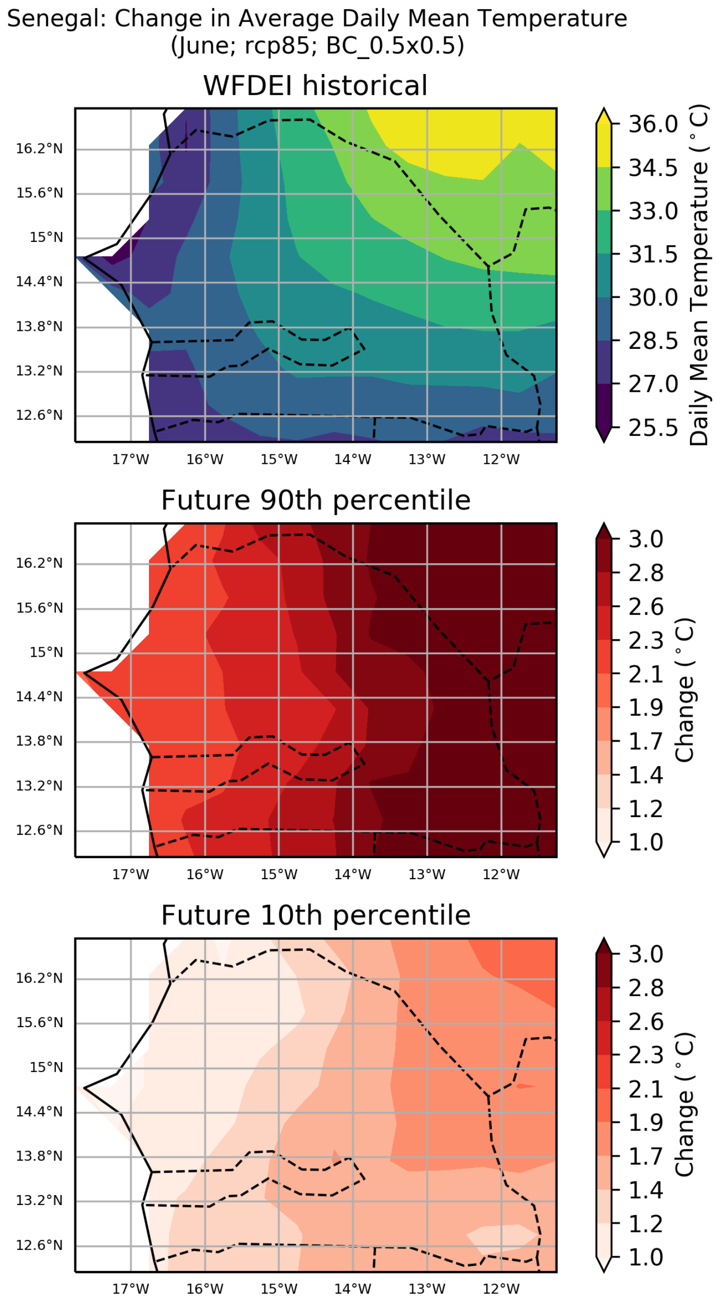

Figure 45: These maps show the ensemble spread in the absolute change in Average Daily Mean Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

13.2 'Number of model' histograms

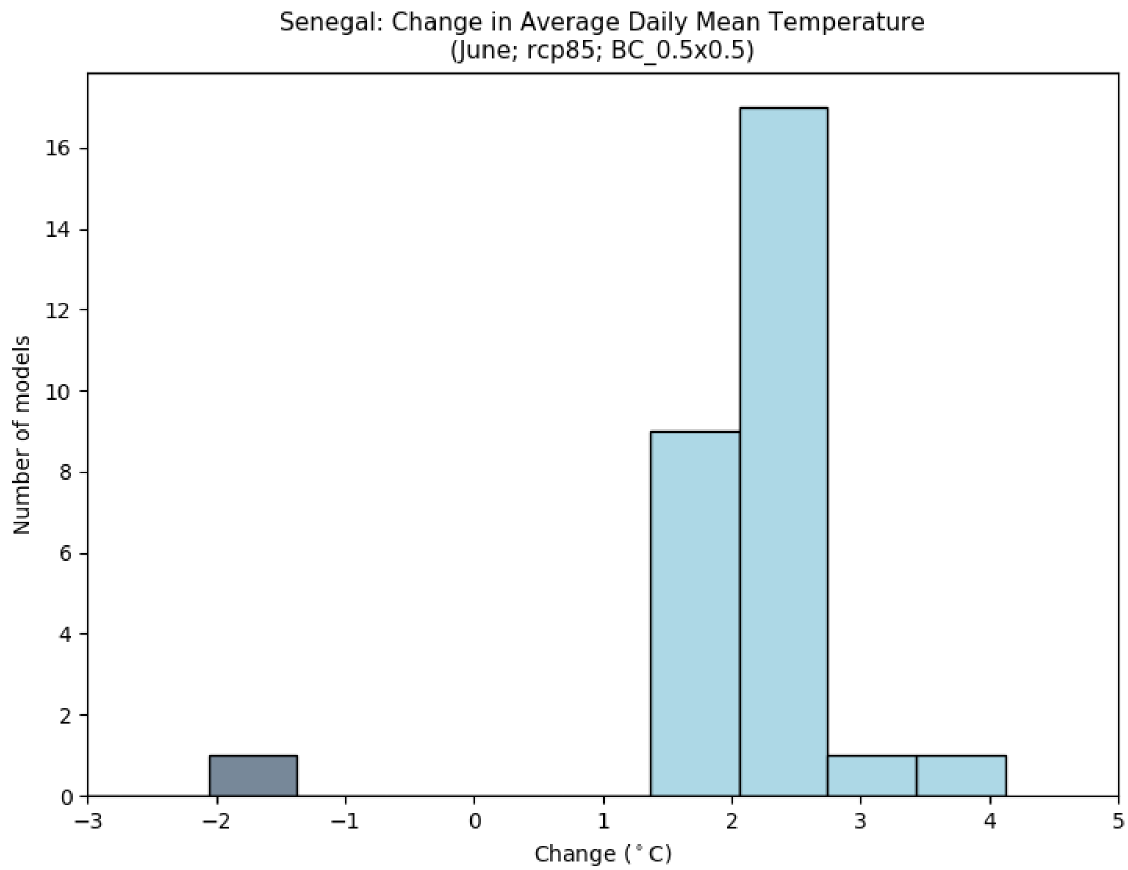

Figure 46: This histogram shows the number of models that agree on the absolute change in Average Daily Mean Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

13.3 Boxplots

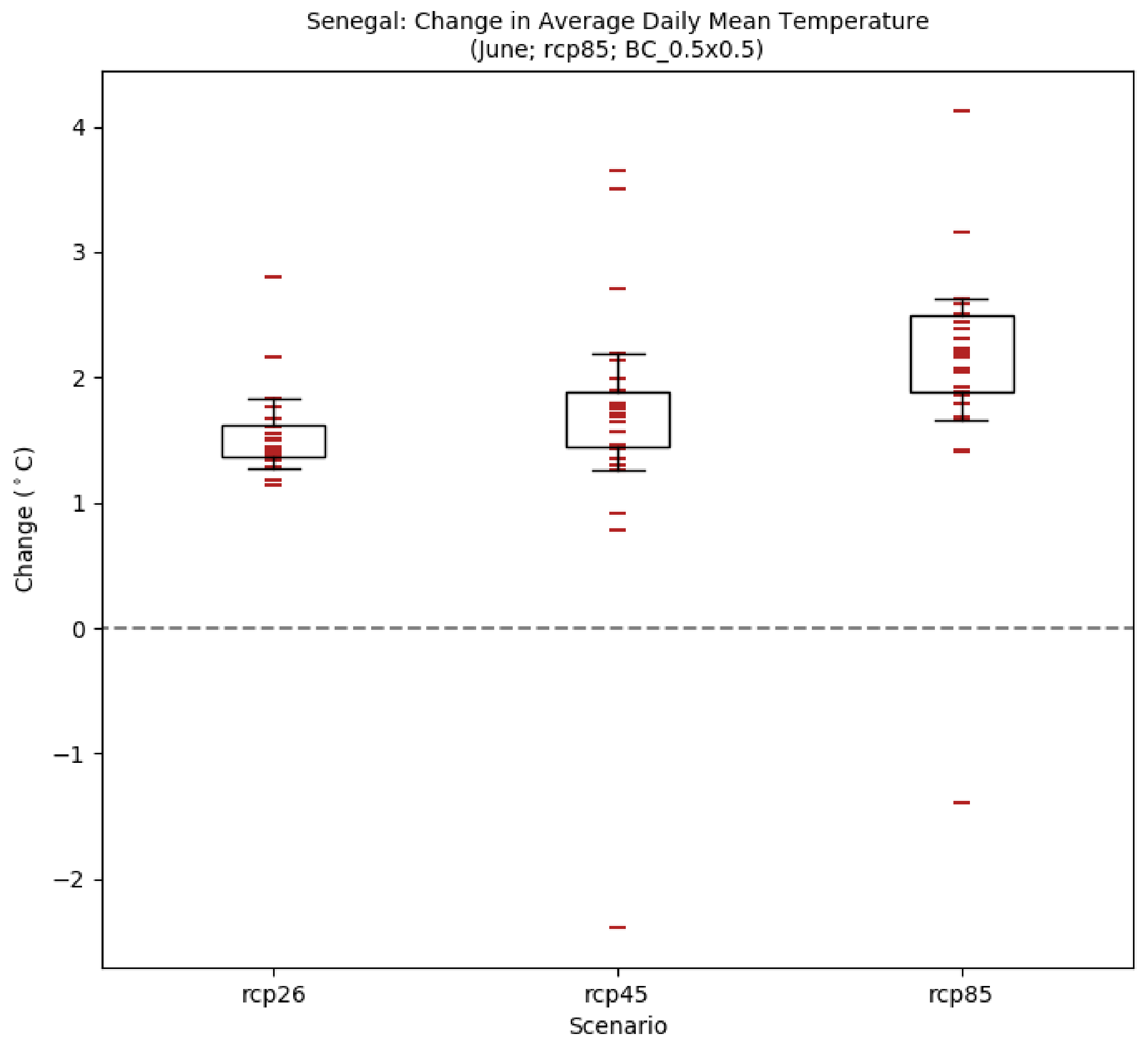

Figure 47: This boxplot shows the absolute change (all available scenarios) of Average Daily Mean Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

13.4 Model ranking scatterplots

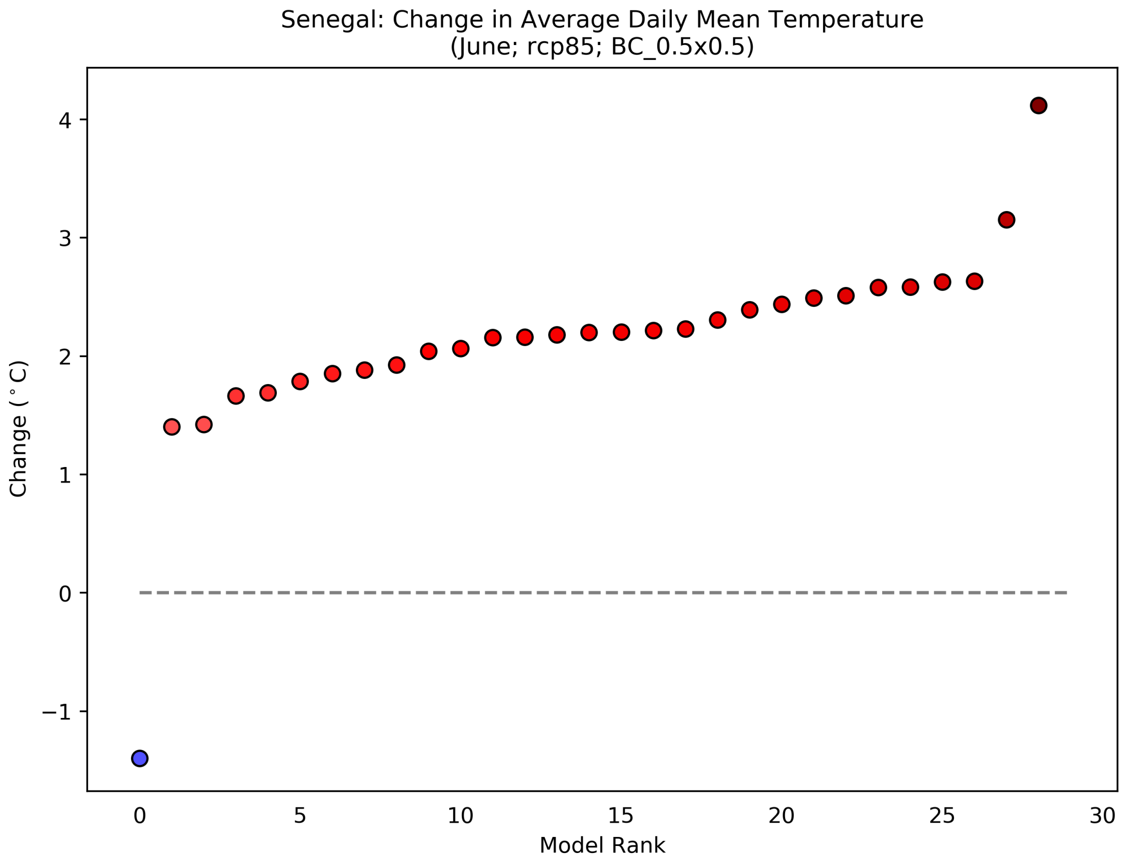

Figure 48: This scatterplot shows the absolute change in Average Daily Mean Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

14 Average Surface Downwelling Shortwave Radiation

This metric shows the mean daily value for each variable, for the period shown.

14.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

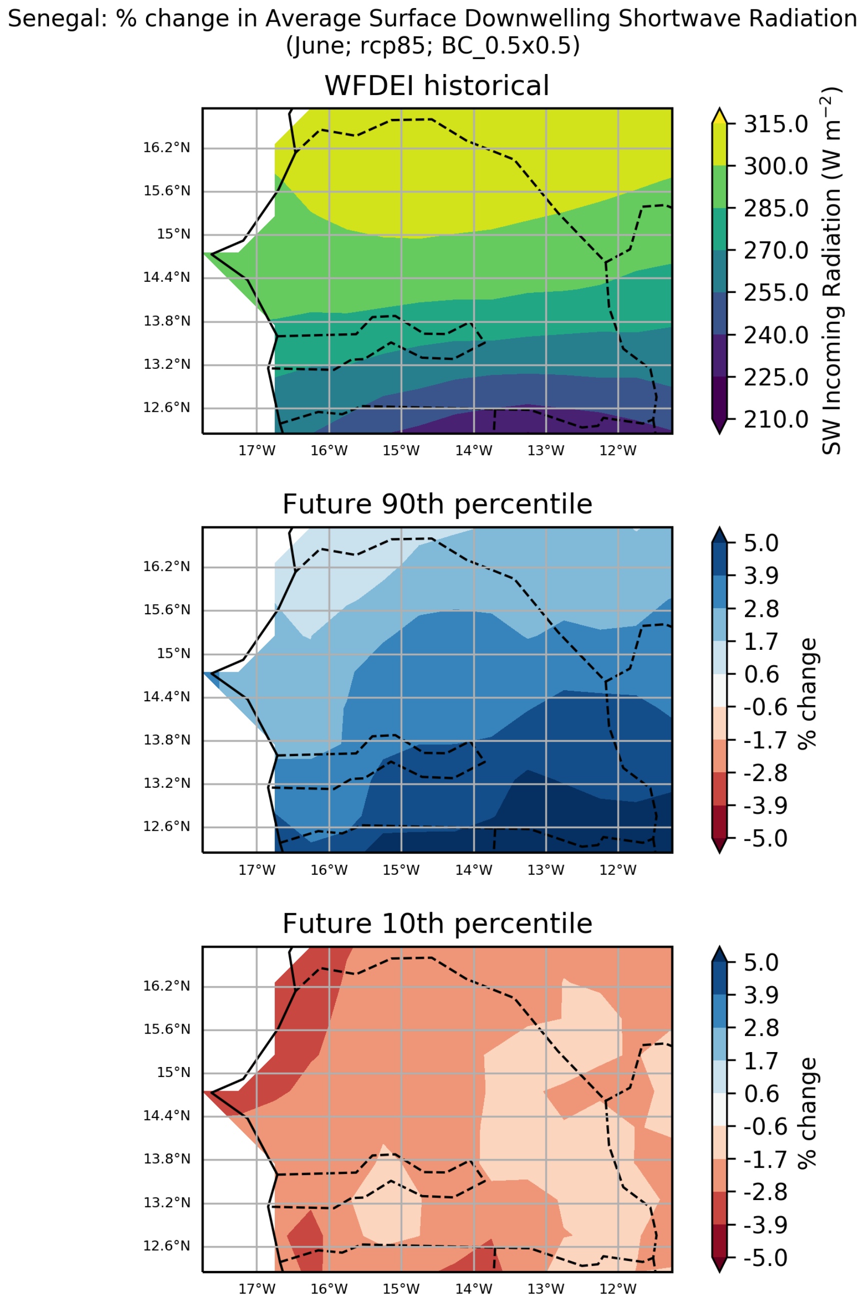

Figure 49: These maps show the ensemble spread in the percentage change in Average Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

14.2 'Number of model' histograms

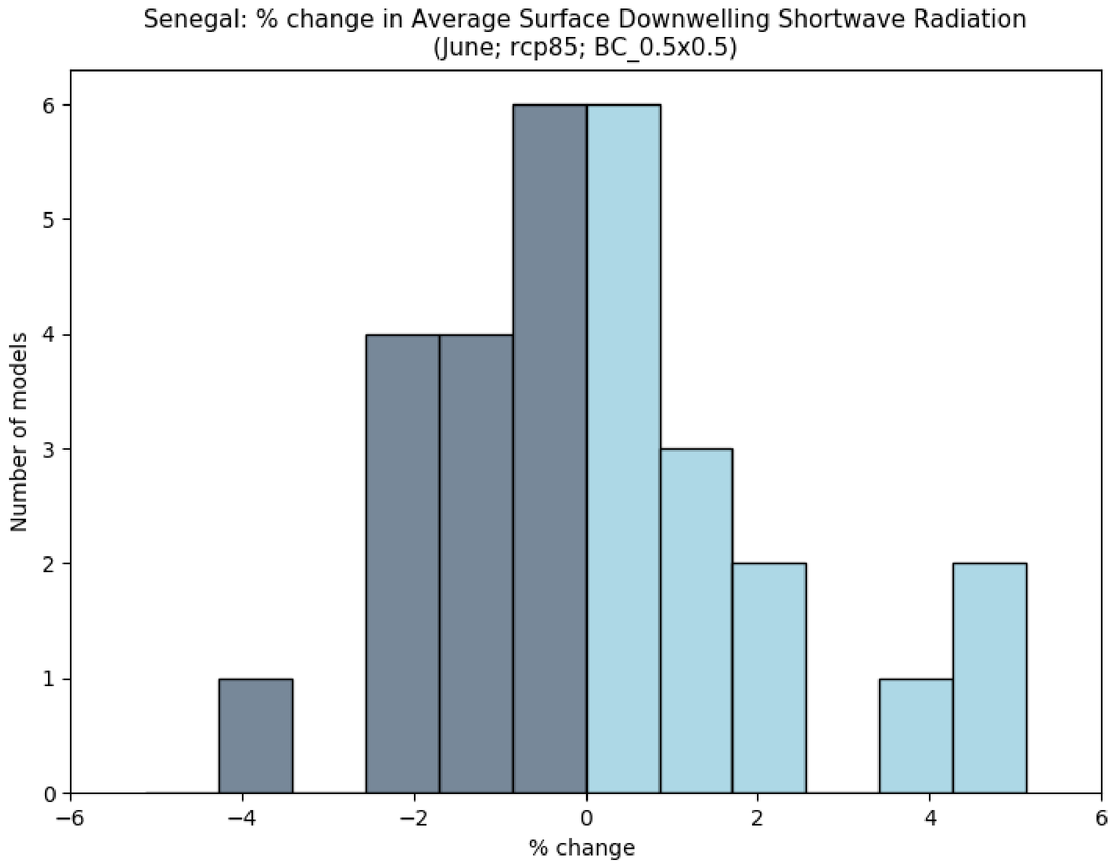

Figure 50: This histogram shows the number of models that agree on the percentage change in Average Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

14.3 Boxplots

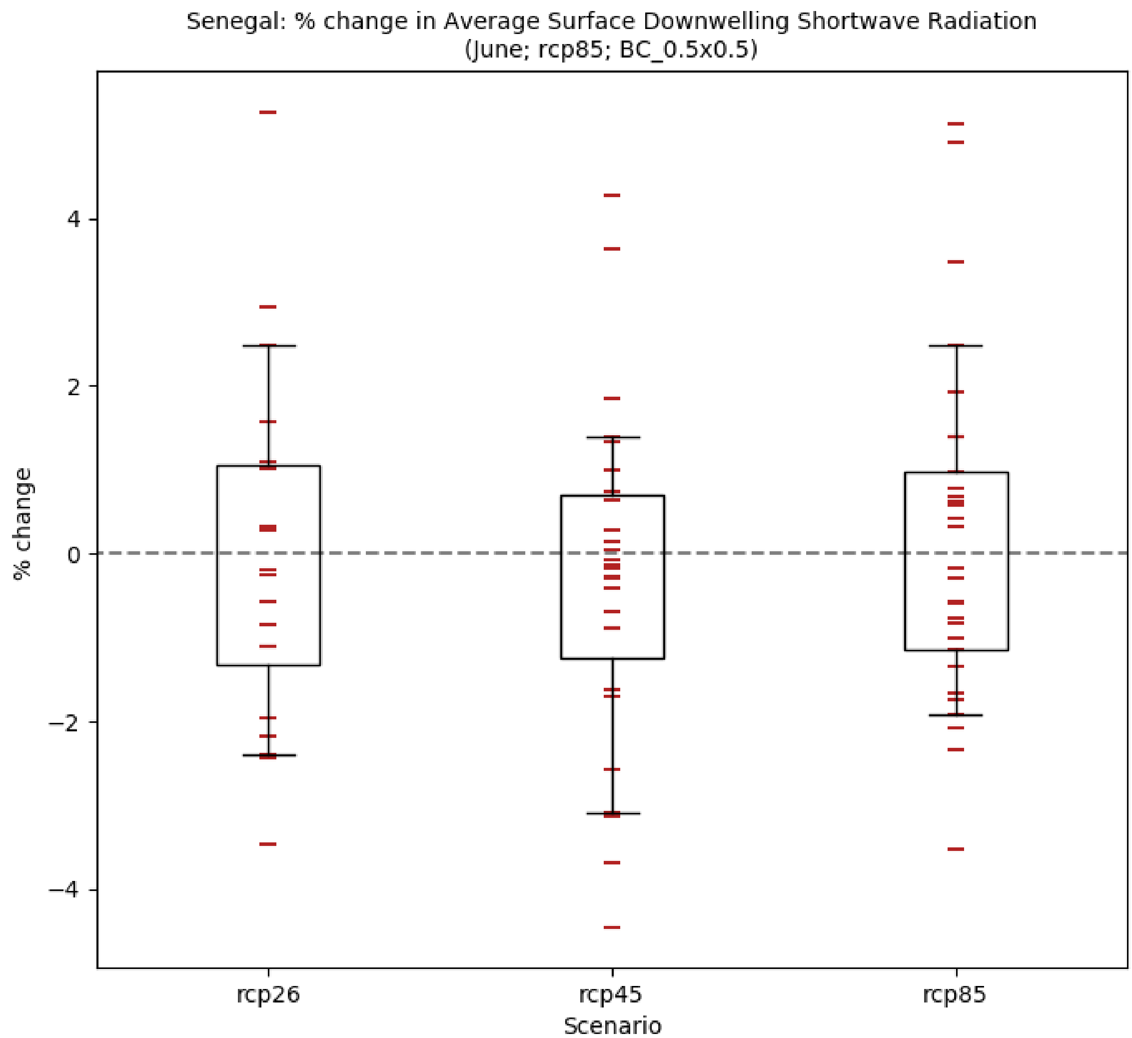

Figure 51: This boxplot shows the percentage change (all available scenarios) in Average Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

14.4 Model ranking scatterplots

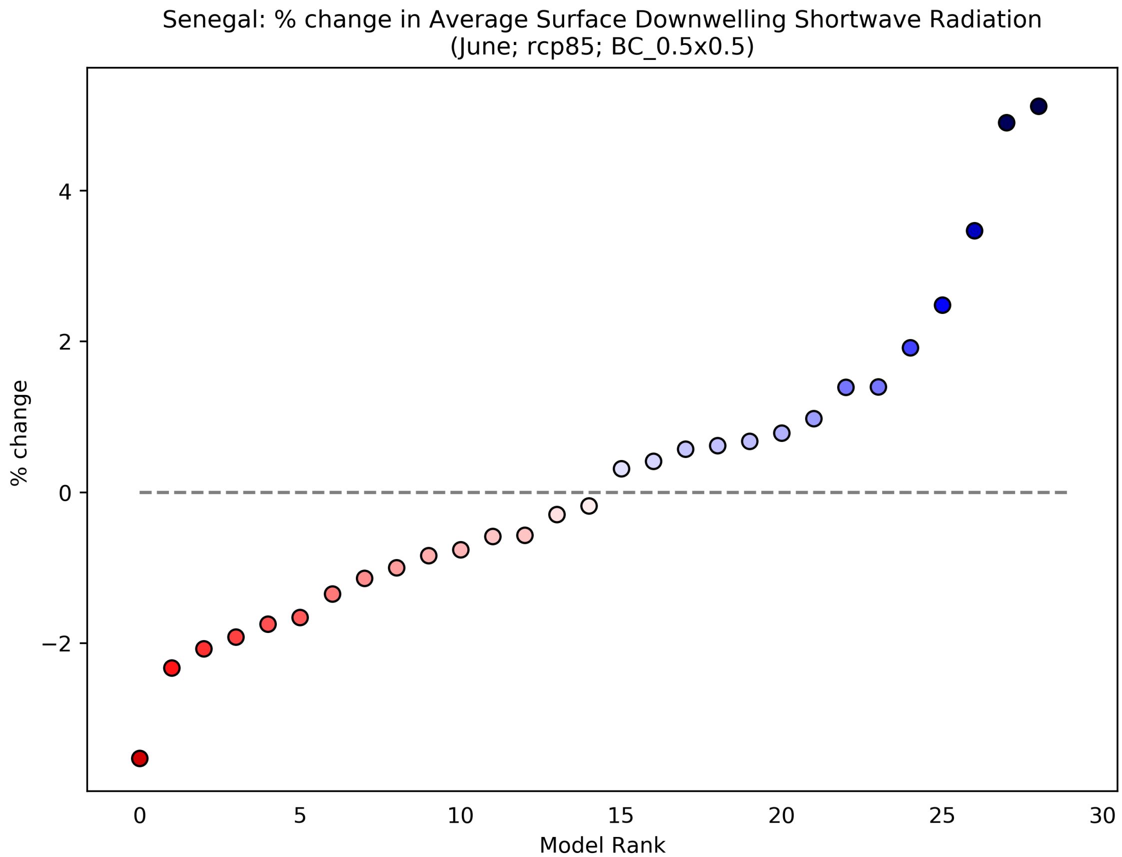

Figure 52: This scatterplot shows the percentage change in Average Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

15 Mean Daily Rainfall on Rainy Days

This metric shows the mean rainfall on the days that it rained during the period shown.

15.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

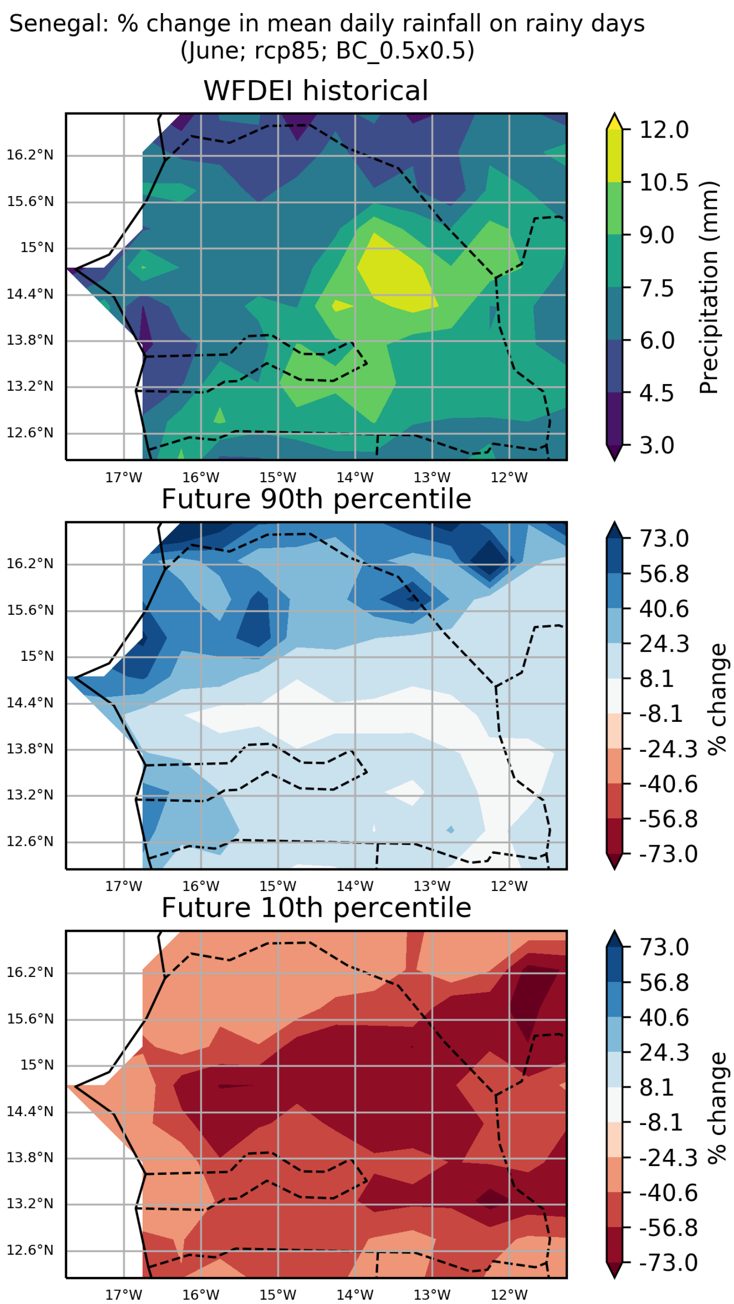

Figure 53: These maps show the ensemble spread in the percentage change in Mean Daily Rainfall on Rainy Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

15.2 'Number of model' histograms

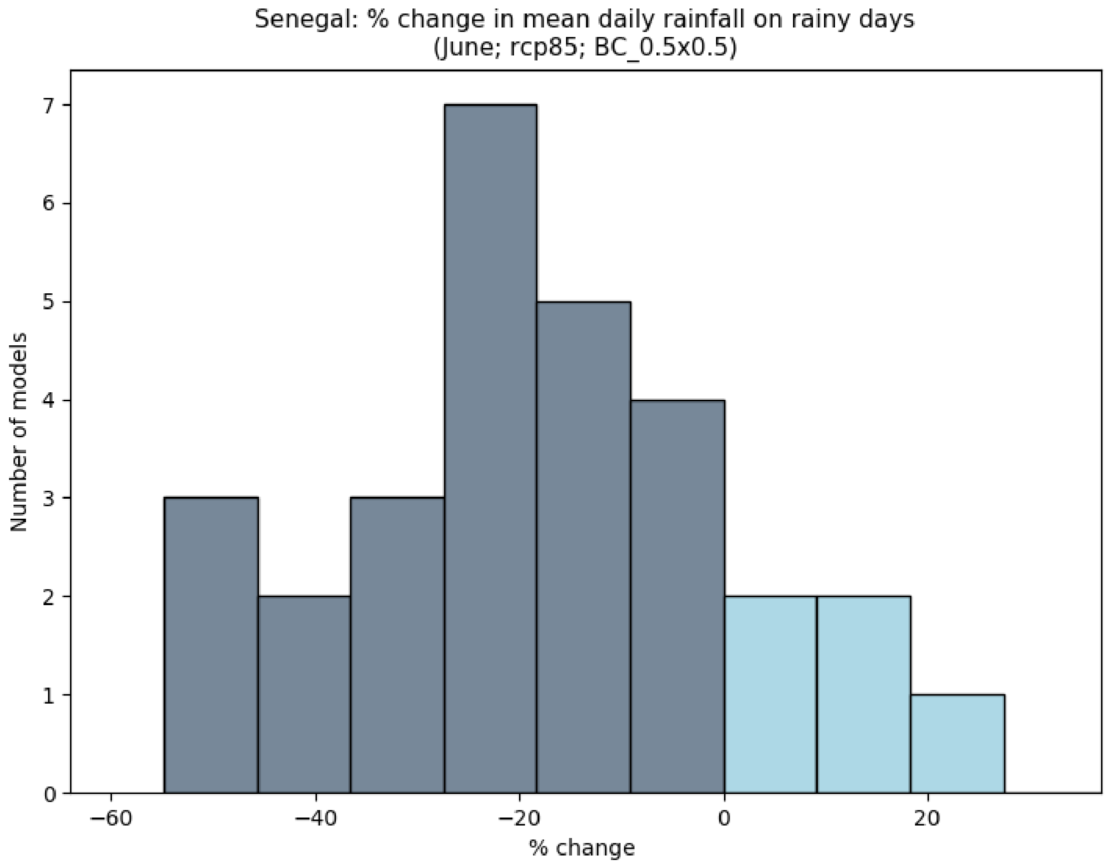

Figure 54: This histogram shows the number of models that agree on the percentage change in Mean Daily Rainfall on Rainy Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

15.3 Boxplots

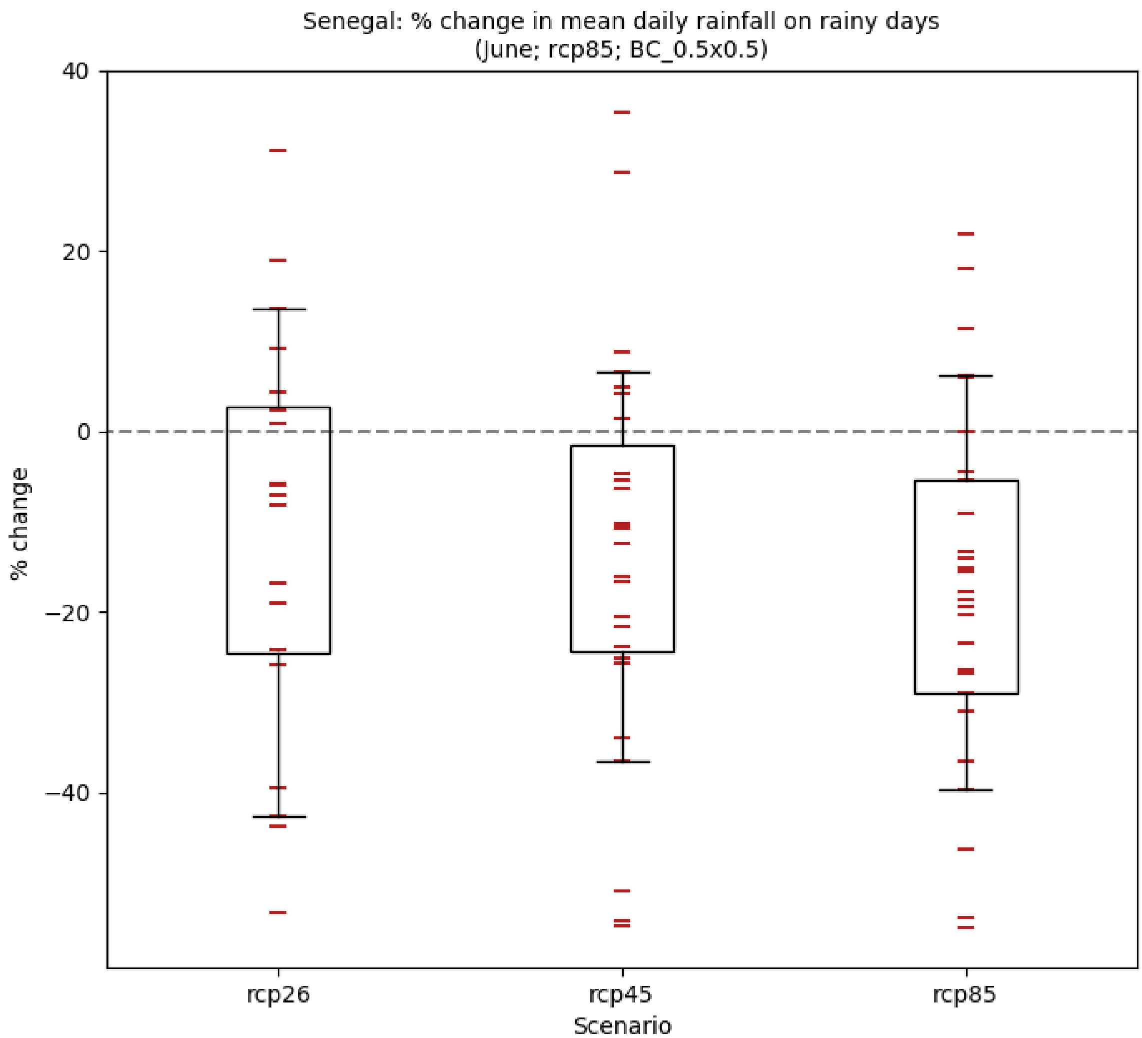

Figure 55: This boxplot shows the percentage change (all available scenarios) in Mean Daily Rainfall on Rainy Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

15.4 Model ranking scatterplots

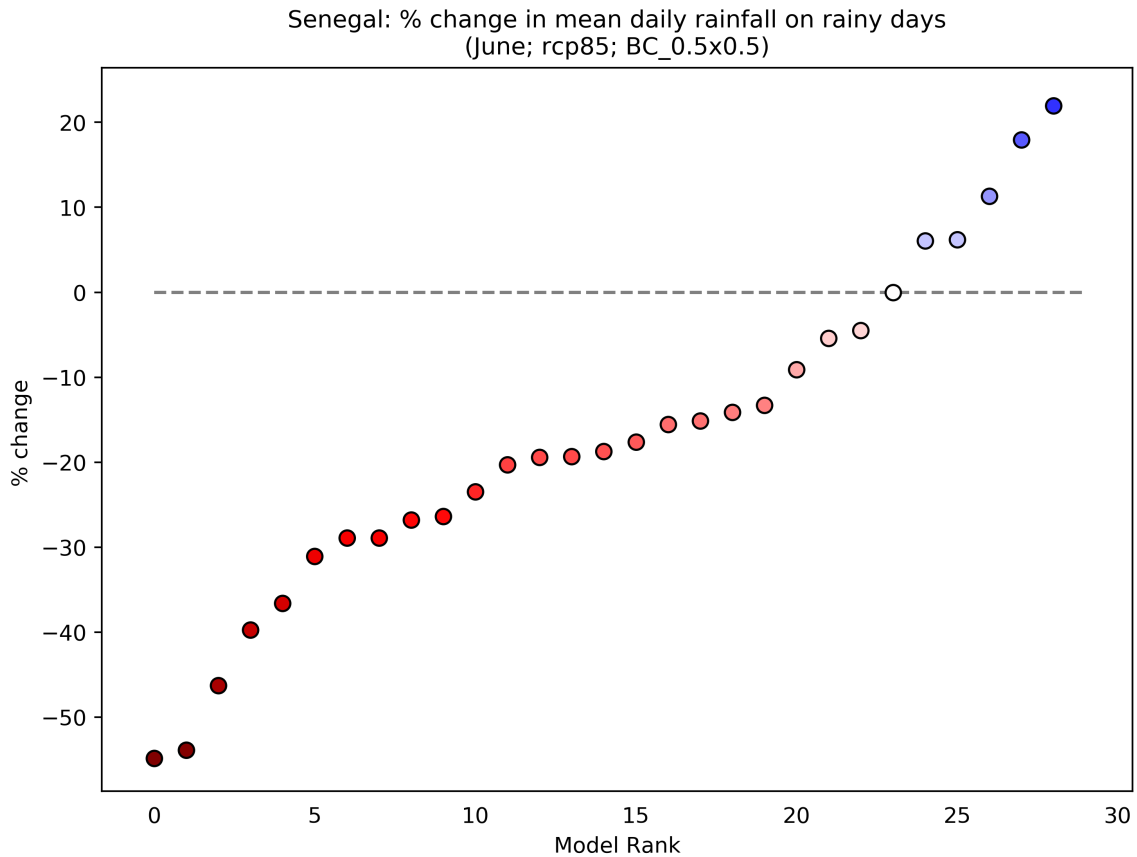

Figure 56: This scatterplot shows the percentage change in Mean Daily Rainfall on Rainy Days for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

16 Monthly Climatological Mean Daily Precipitation

This metric shows the climatology for each variable for each month within the period shown.

16.1 Monthly climatological mean

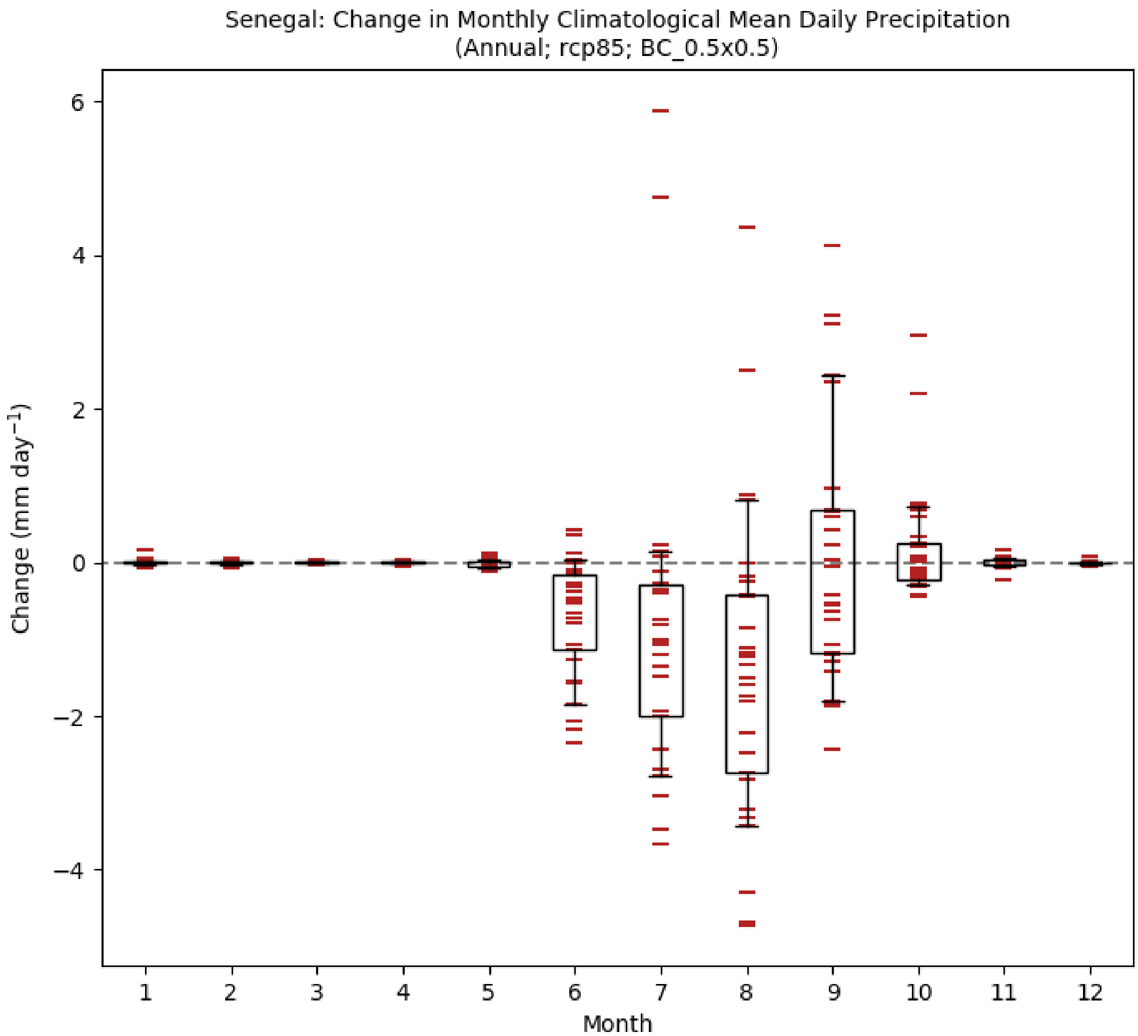

Figure 57: This boxplot of the monthly climatology shows the absolute change in Monthly Climatological Mean Daily Precipitation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for the RCP8.5 scenario.

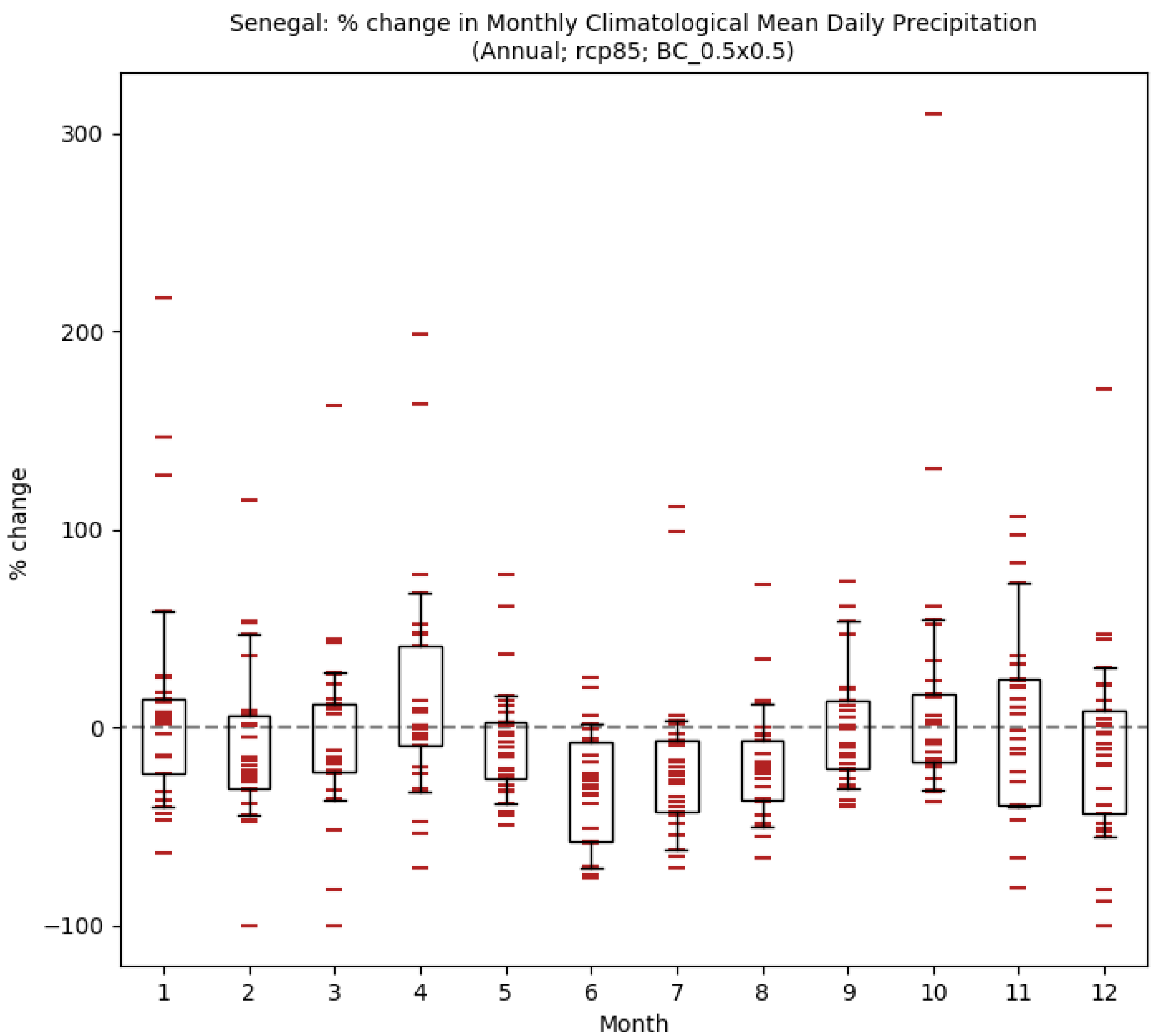

Figure 58: This boxplot of the monthly climatology shows the percentage change in Monthly Climatological Mean Daily Precipitation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for the RCP8.5 scenario.

17 Monthly Climatological Mean Daily Minimum Temperature

This metric shows the climatology for each variable for each month within the period shown.

17.1 Monthly climatological mean

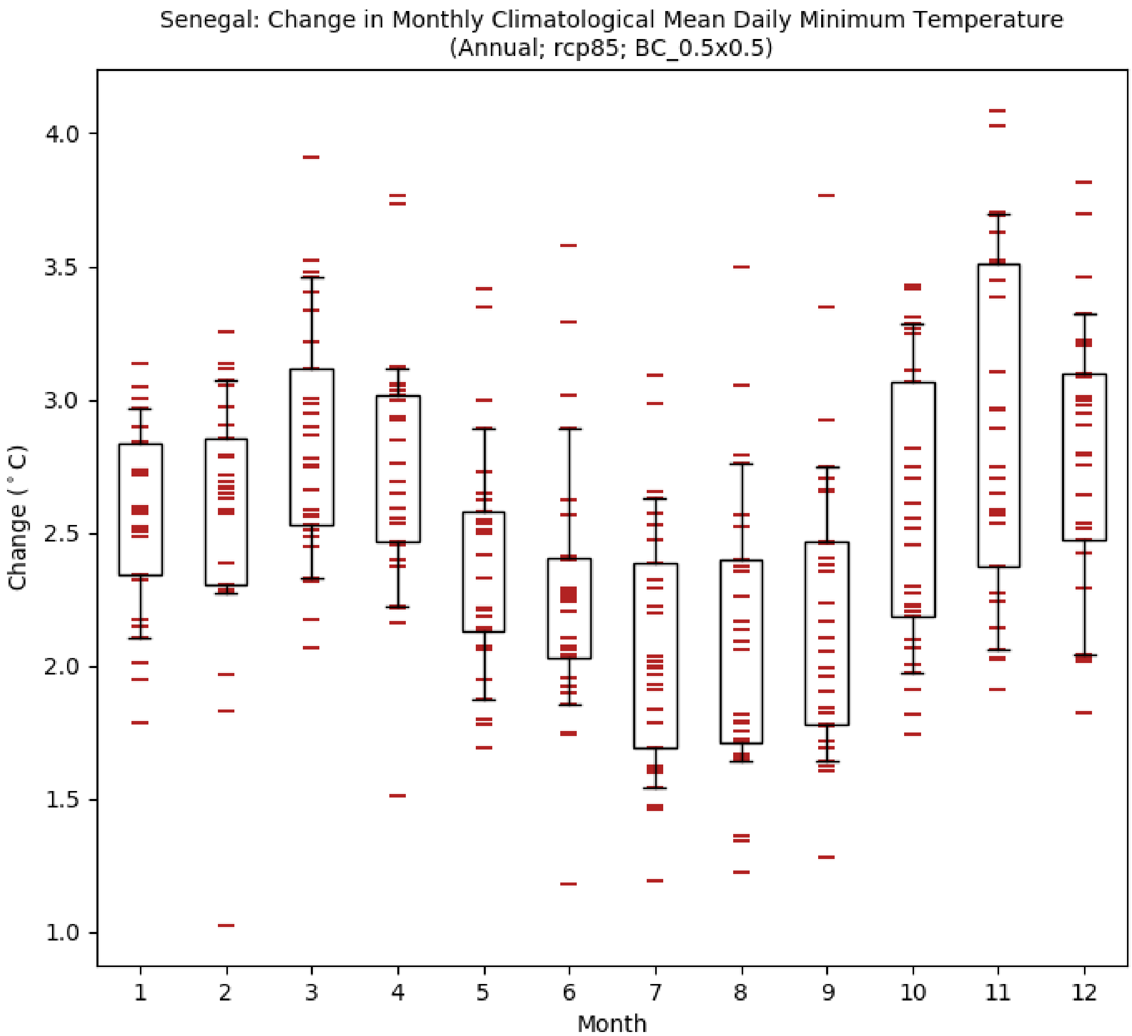

Figure 59: This boxplot of the monthly climatology shows the absolute change in Monthly Climatological Mean Daily Minimum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for the RCP8.5 scenario.

18 Monthly Climatological Mean Daily Mean Temperature

This metric shows the climatology for each variable for each month within the period shown.

18.1 Monthly climatological mean

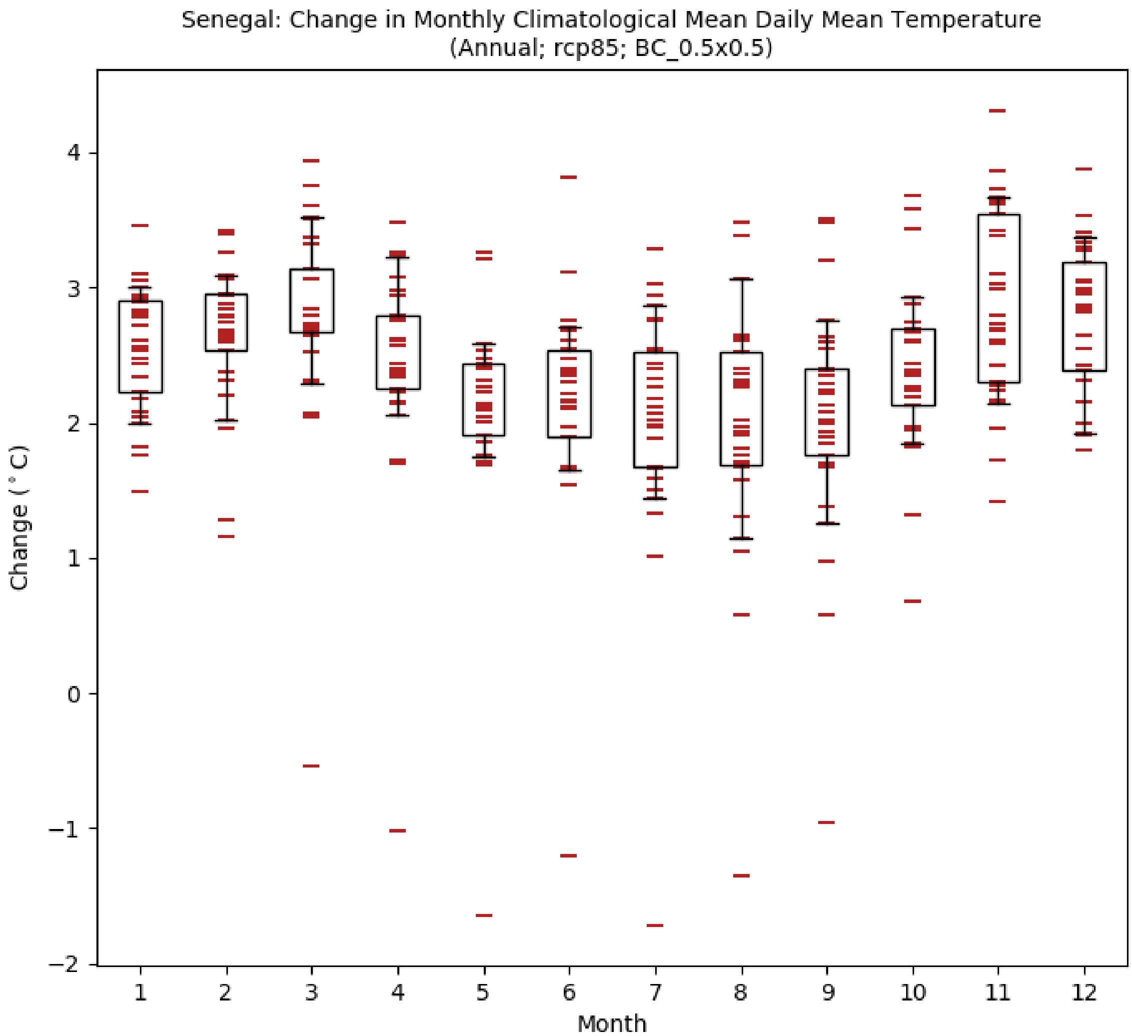

Figure 60: This boxplot of the monthly climatology shows the absolute change in Monthly Climatological Mean Daily Mean Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for the RCP8.5 scenario.

19 Monthly Climatological Mean Daily Maximum Temperature

This metric shows the climatology for each variable for each month within the period shown.

19.1 Monthly climatological mean

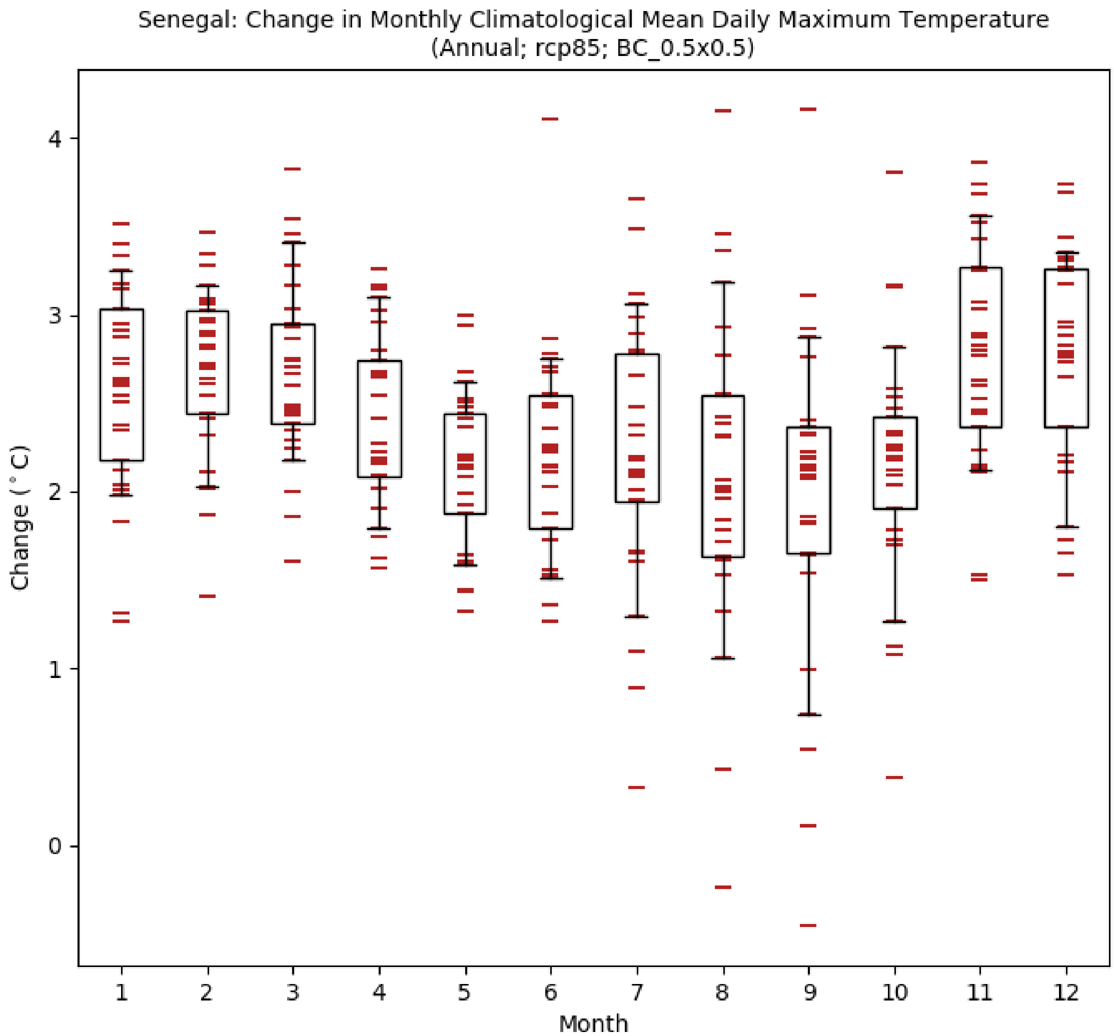

Figure 61: This boxplot of the monthly climatology shows the absolute change in Monthly Climatological Mean Daily Maximum Temperature for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for the RCP8.5 scenario.

20 Monthly Climatological Mean Surface Downwelling Shortwave Radiation

This metric shows the climatology for each variable for each month within the period shown.

20.1 Monthly climatological mean

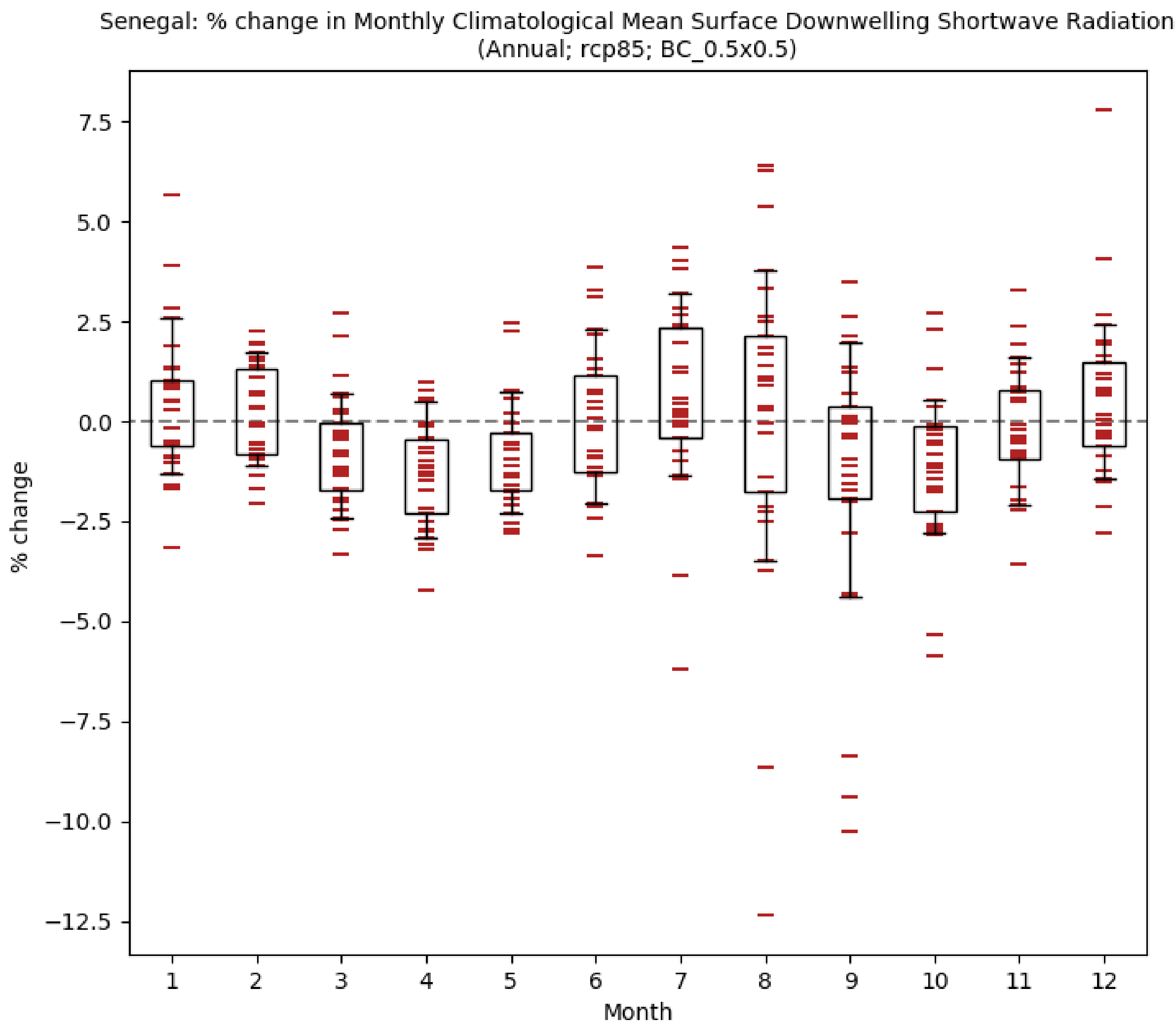

Figure 62: This boxplot of the monthly climatology shows the percentage change in Monthly Climatological Mean Surface Downwelling Shortwave Radiation for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for the RCP8.5 scenario.

21 Monthly Climatological Mean Near Surface Wind Speed

This metric shows the climatology for each variable for each month within the period shown.

21.1 Monthly climatological mean

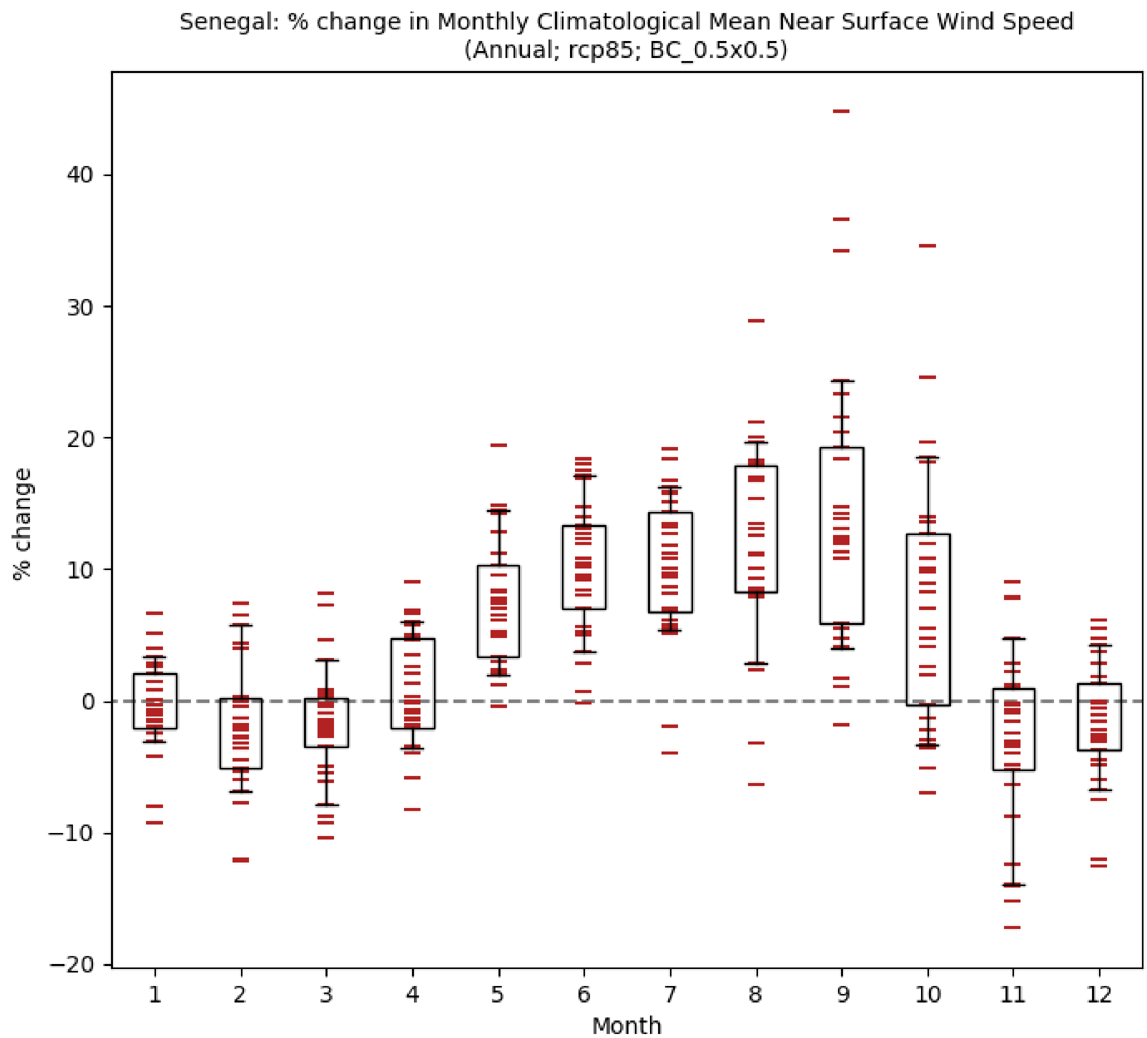

Figure 63: This boxplot of the monthly climatology shows the percentage change in Monthly Climatological Mean Near Surface Wind Speed for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) . Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for the RCP8.5 scenario.

22 Number of Rainy Days (>1mm day^{-1})

This metric shows the number of days for the selected period when rainfall was above a threshold of 1mm day^{-1}.

22.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

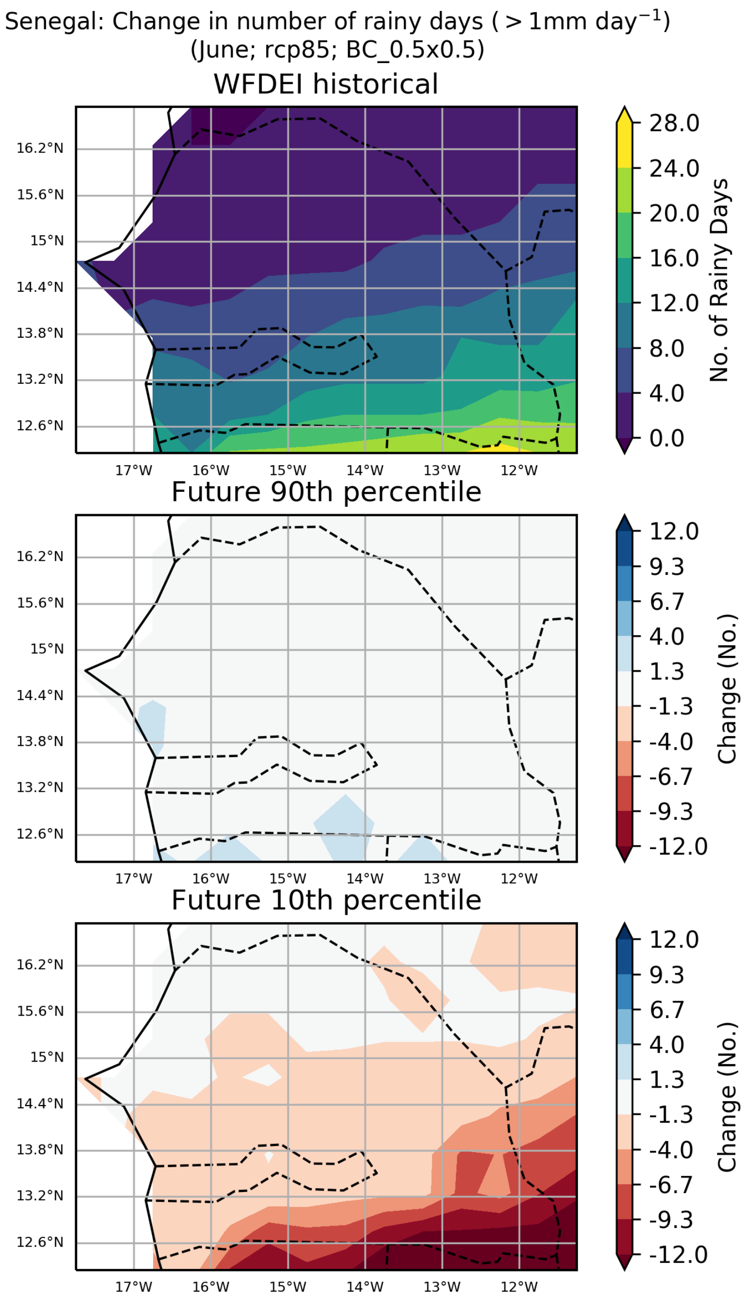

Figure 64: These maps show the ensemble spread in the absolute change in Number of Rainy Days (>1mm day^{-1}) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

22.2 'Number of model' histograms

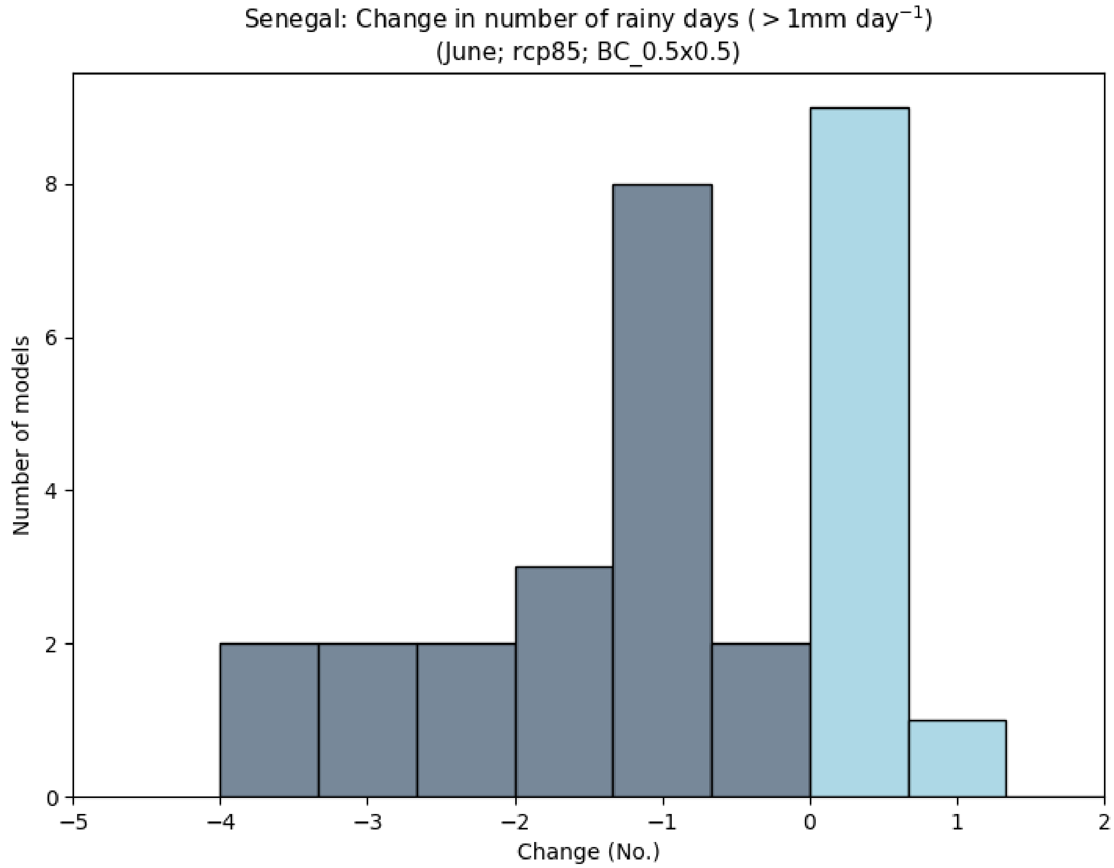

Figure 65: This histogram shows the number of models that agree on the absolute change in Number of Rainy Days (>1mm day^{-1}) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

22.3 Boxplots

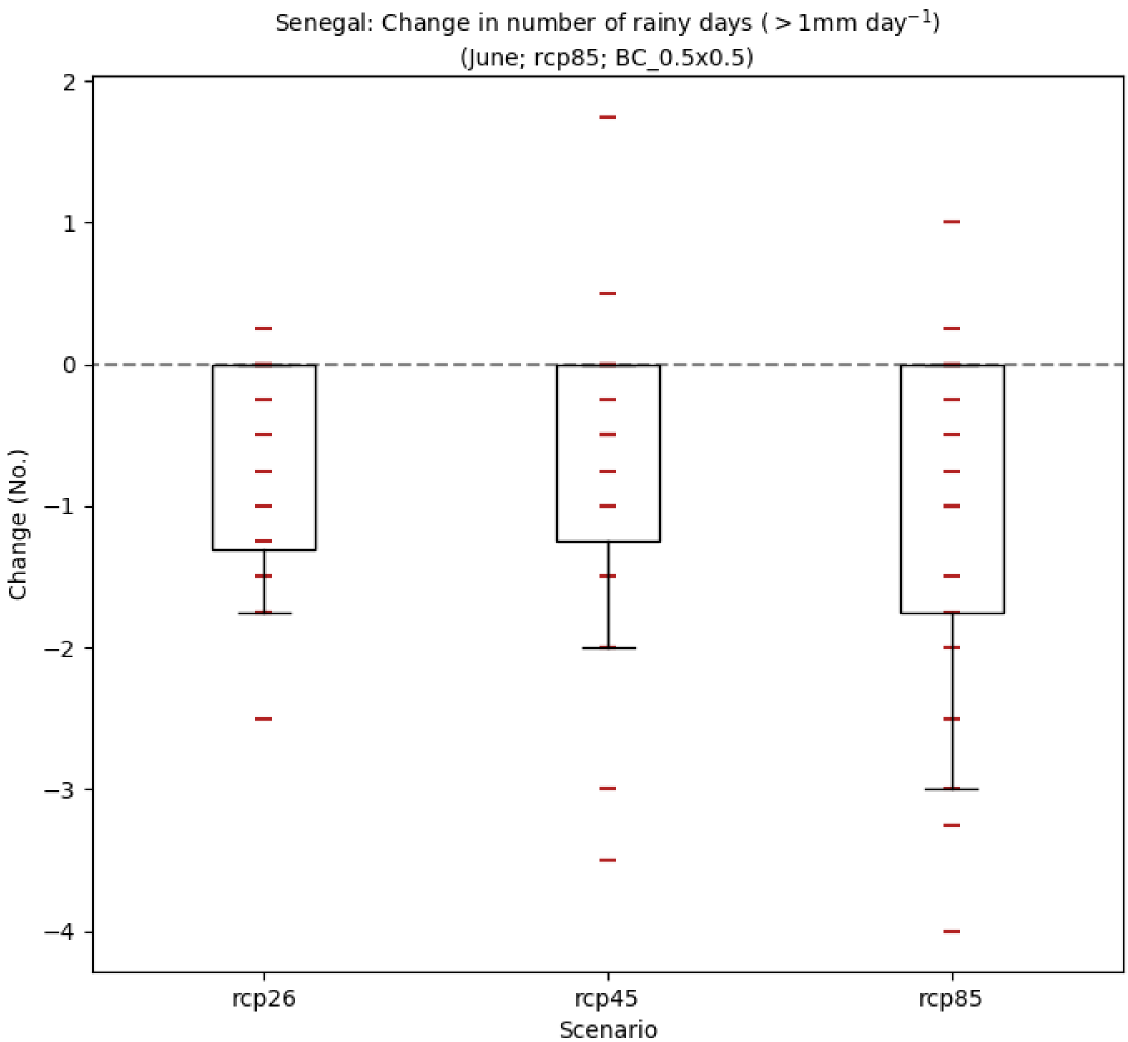

Figure 66: This boxplot shows the absolute change (all available scenarios) of Number of Rainy Days (>1mm day^{-1}) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

22.4 Model ranking scatterplots

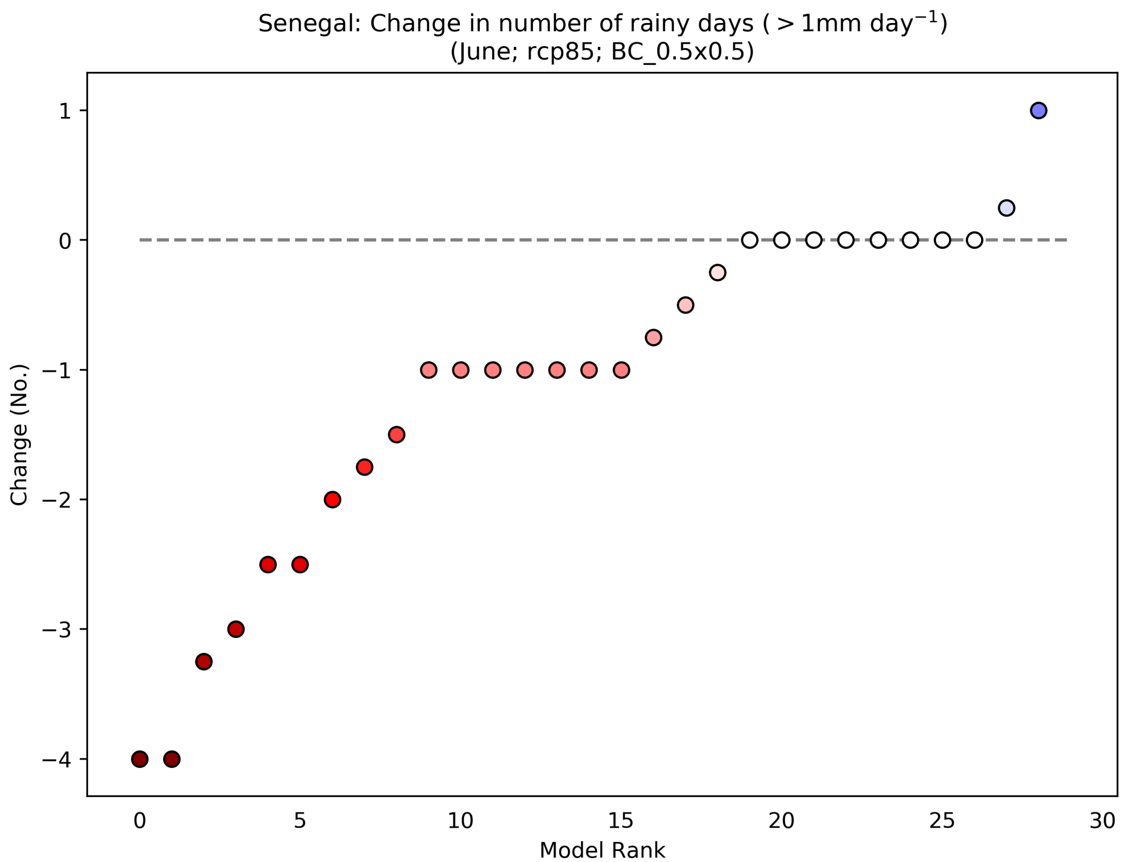

Figure 67: This scatterplot shows the absolute change in Number of Rainy Days (>1mm day^{-1}) for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

23 Number of Days with a Maximum Temperature > 40°C

This metric shows the number of daysfor the selected period with a Daily Maximum Temperature exceeding 40°C.

23.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

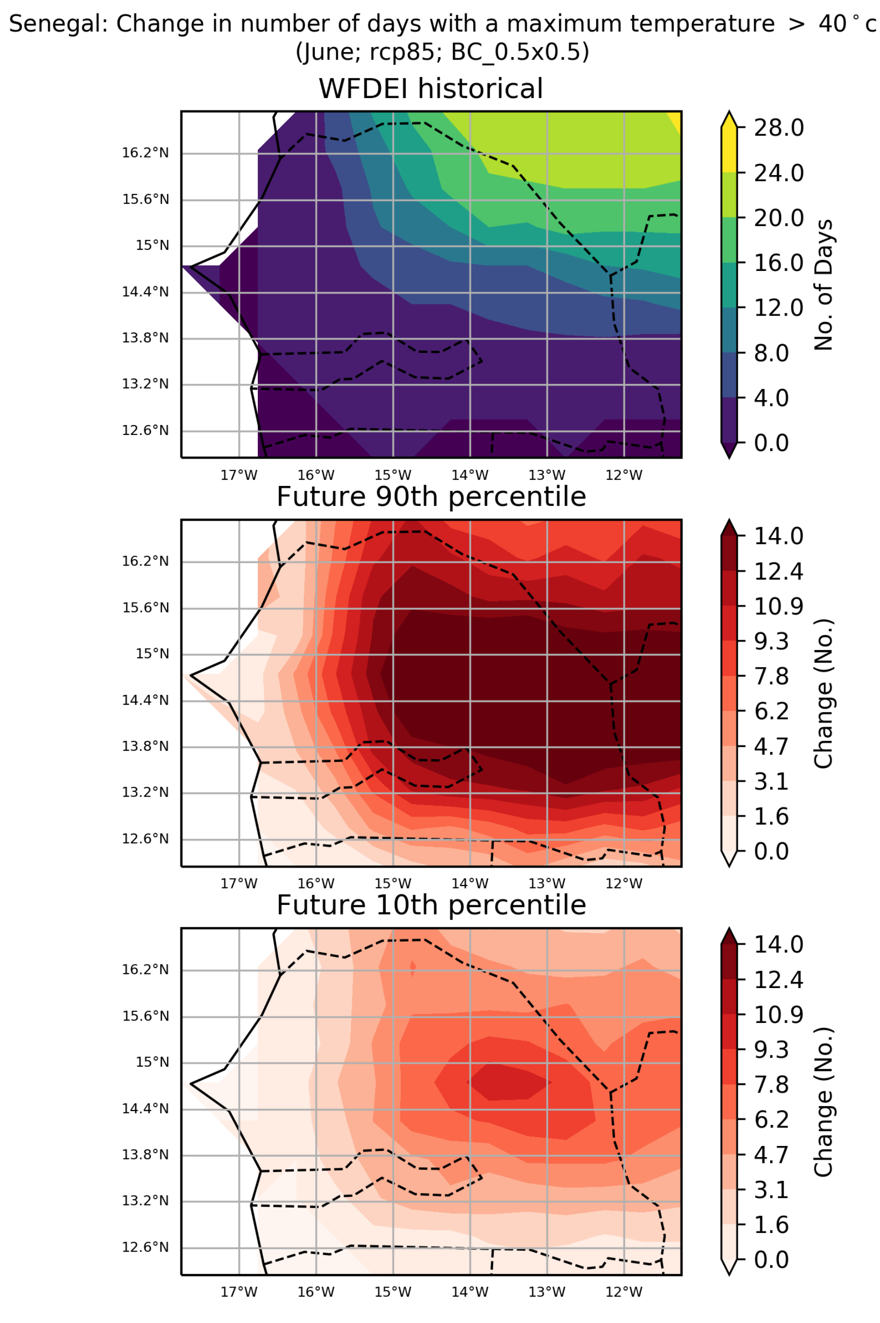

Figure 68: These maps show the ensemble spread in the absolute change in Number of Days with a Maximum Temperature > 40°C for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

23.2 'Number of model' histograms

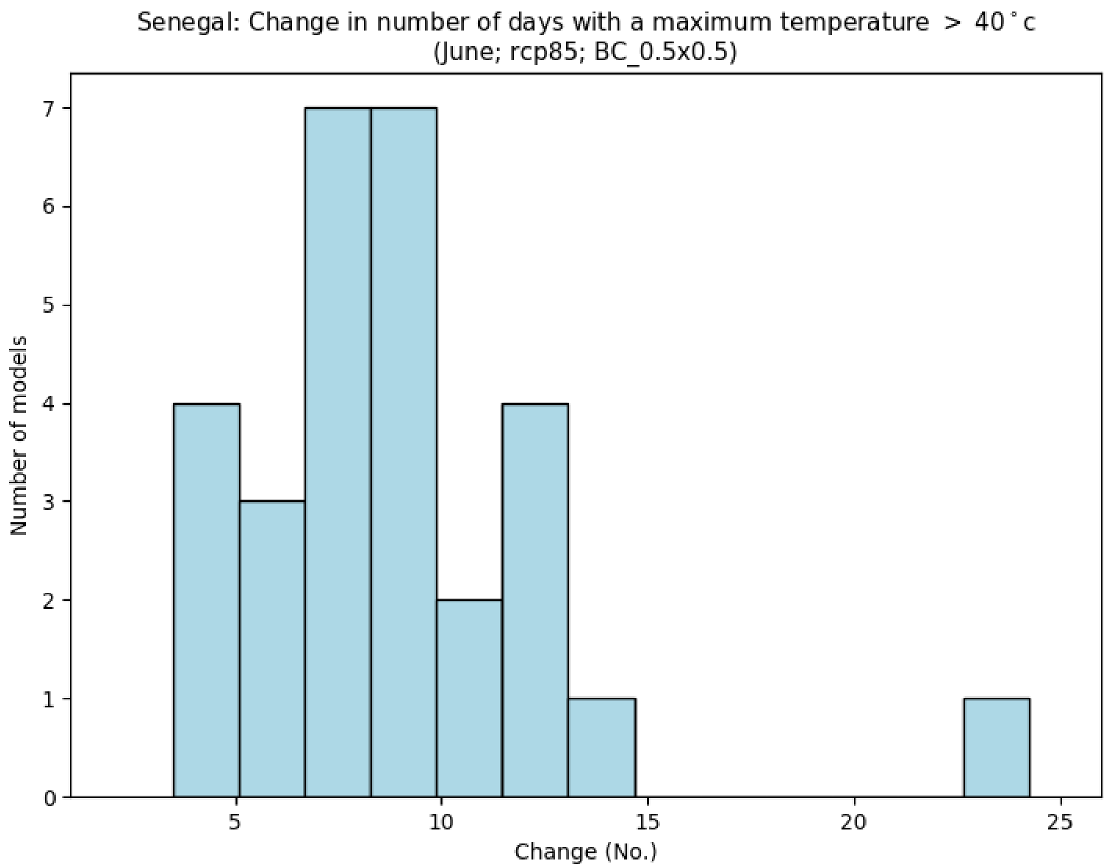

Figure 69: This histogram shows the number of models that agree on the absolute change in Number of Days with a Maximum Temperature > 40°C for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

23.3 Boxplots

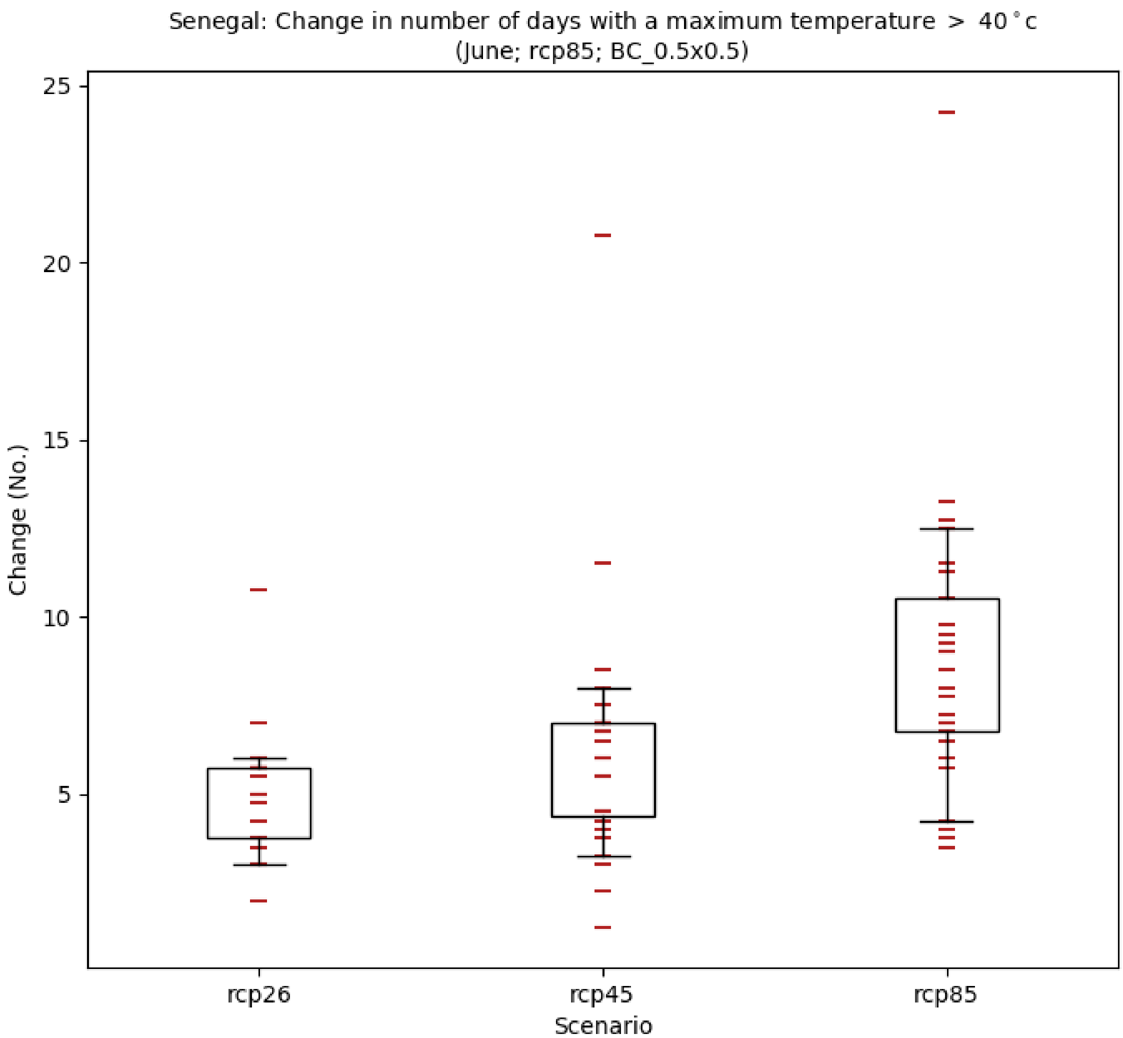

Figure 70: This boxplot shows the absolute change (all available scenarios) of Number of Days with a Maximum Temperature > 40°C for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

23.4 Model ranking scatterplots

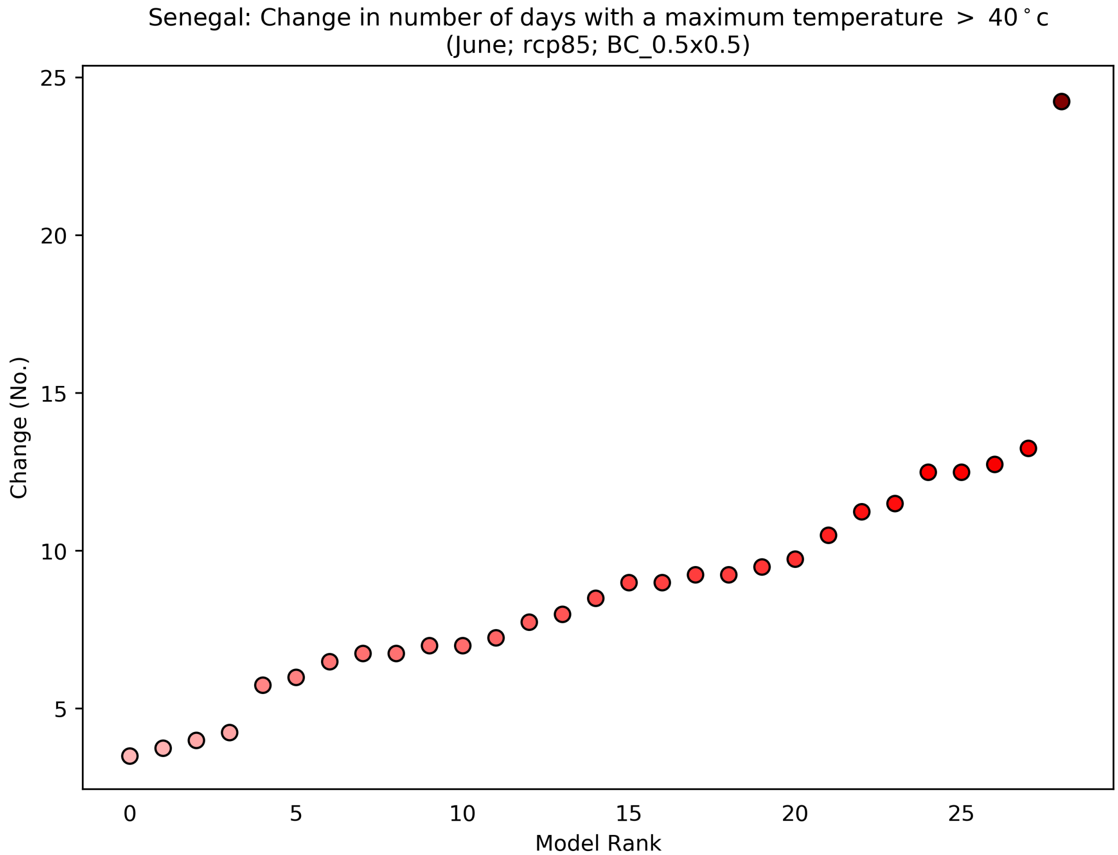

Figure 71: This scatterplot shows the absolute change in Number of Days with a Maximum Temperature $> 40°$C for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

24 Number of Days with Rainfall > 30mm day^{-1}

This metric shows the number of days for the selected period when rainfall exceeds a threshold of 30mm day^{-1}

24.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

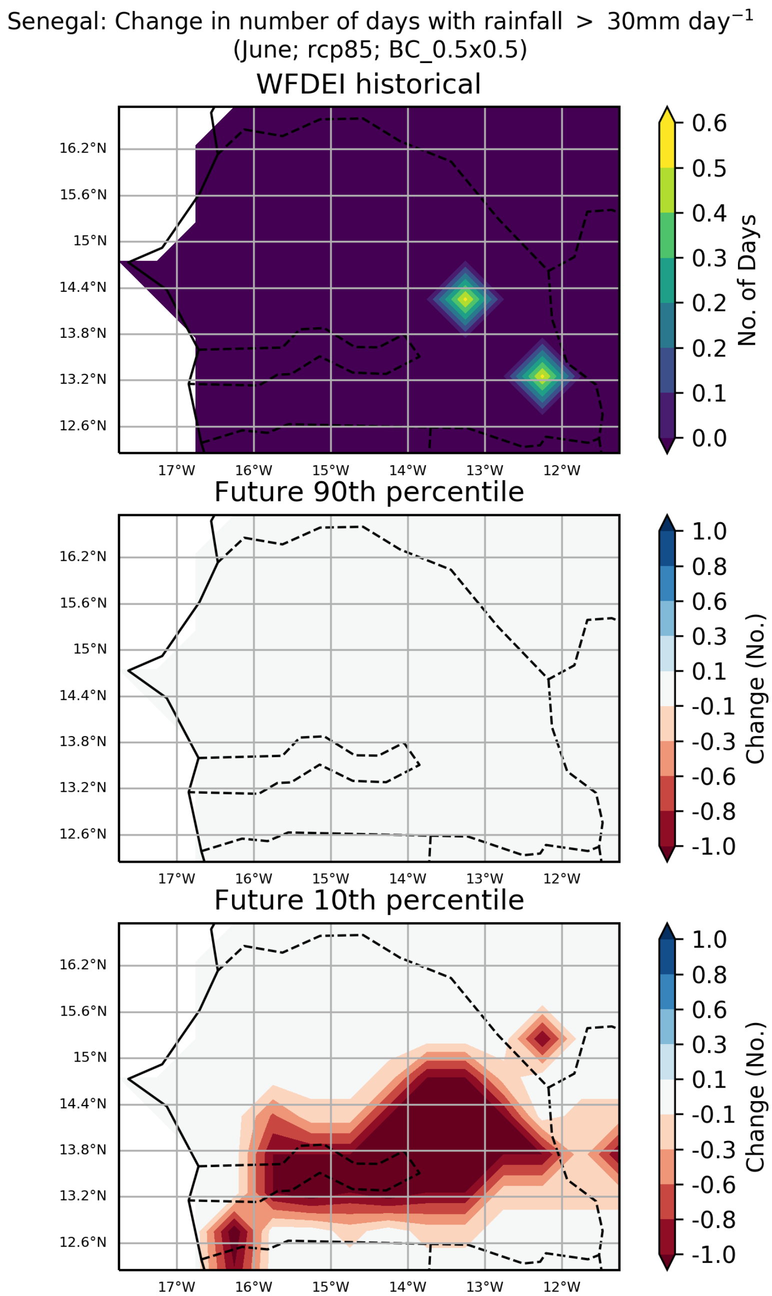

Figure 72: These maps show the ensemble spread in the absolute change in Number of Days with Rainfall > 30mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

24.2 'Number of model' histograms

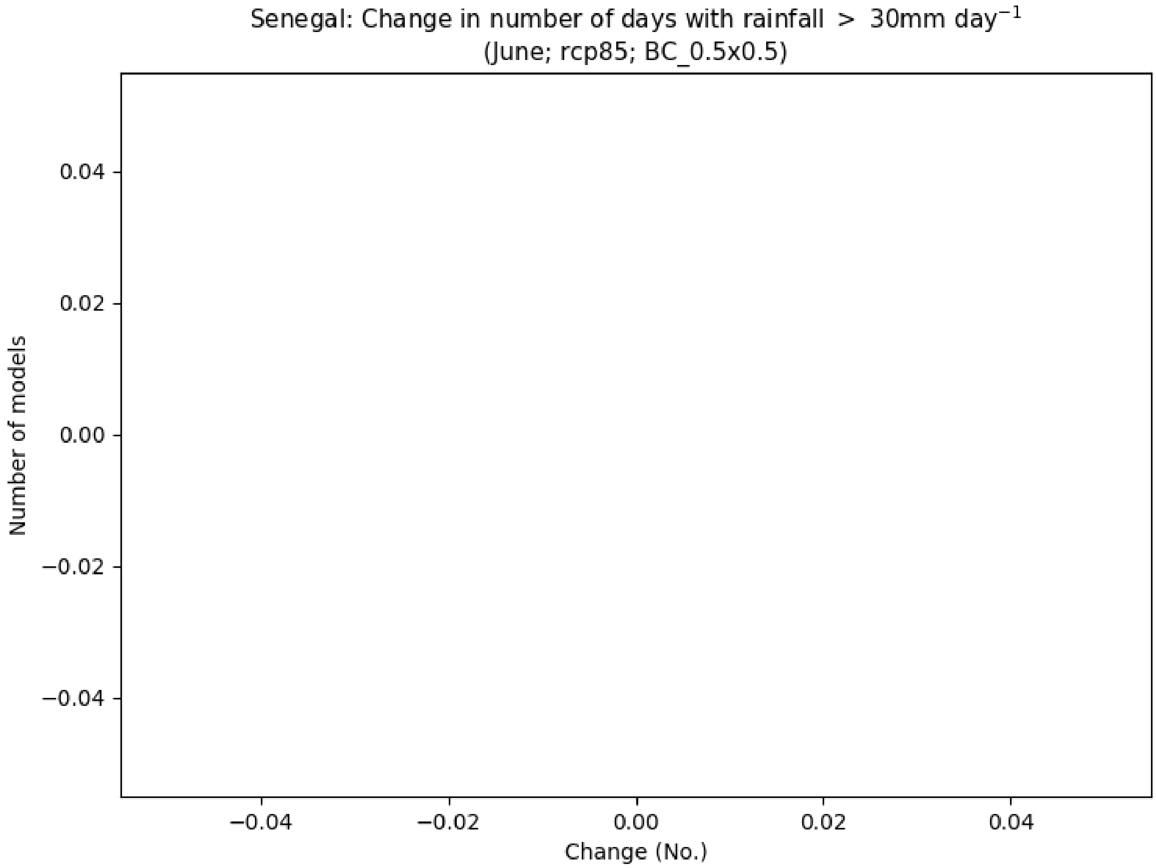

Figure 73: This histogram shows the number of models that agree on the absolute change in Number of Days with Rainfall > 30mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

24.3 Boxplots

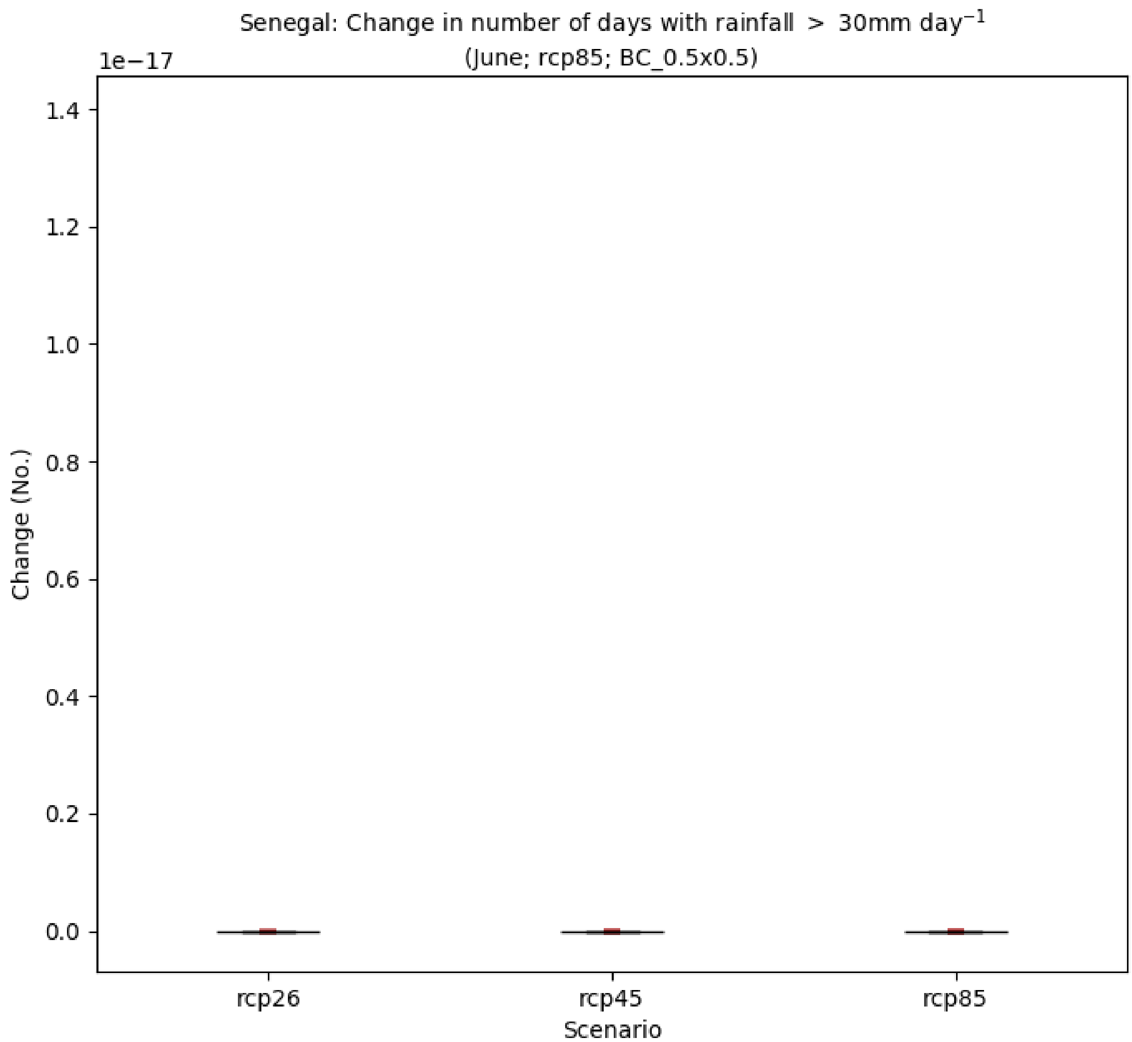

Figure 74: This boxplot shows the absolute change (all available scenarios) of Number of Days with Rainfall > 30mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

24.4 Model ranking scatterplots

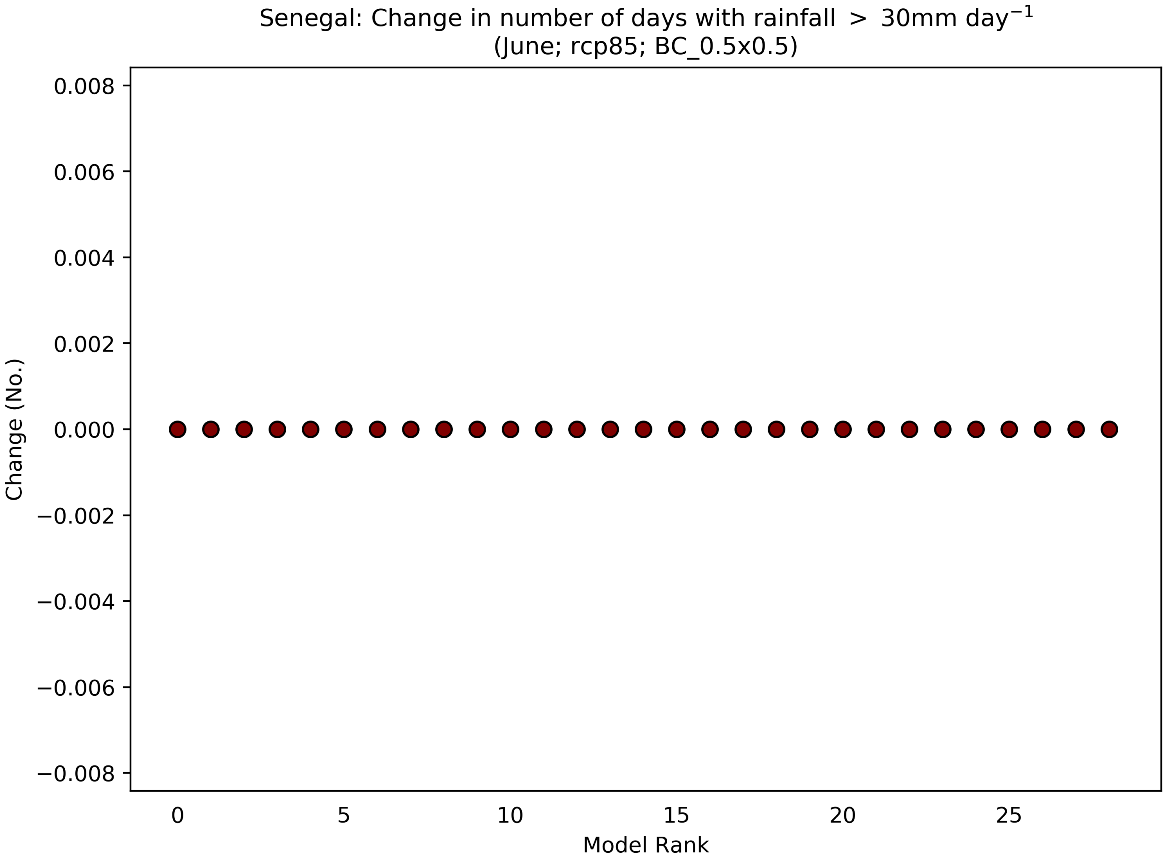

Figure 75: This scatterplot shows the absolute change in Number of Days with Rainfall > 30mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

25 Number of Days with Rainfall > 50mm day^{-1}

This metric shows the number of days for the selected period when rainfall exceeds a threshold of 50mm day^{-1}

25.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

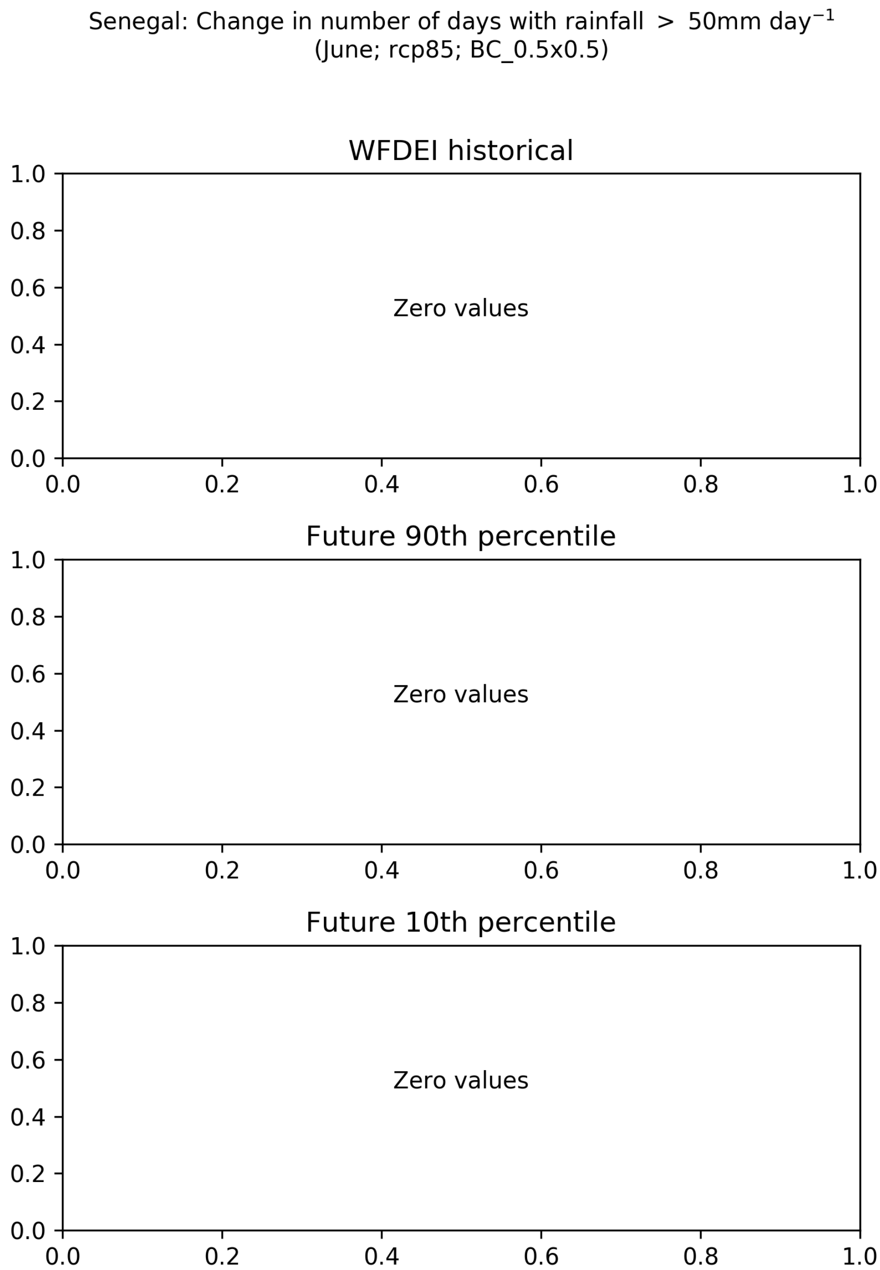

Figure 76: These maps show the ensemble spread in the absolute change in Number of Days with Rainfall > 50mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

25.2 'Number of model' histograms

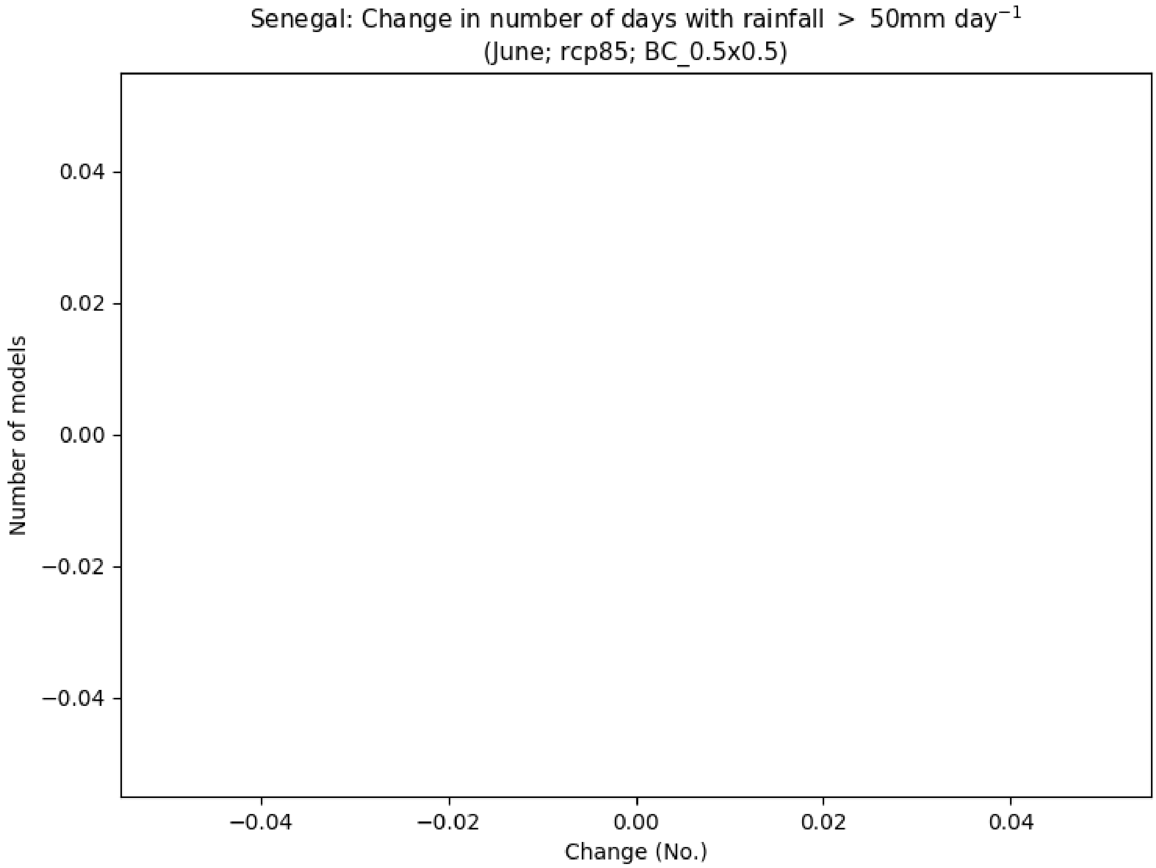

Figure 77: This histogram shows the number of models that agree on the absolute change in Number of Days with Rainfall > 50mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the absolute change for the RCP8.5 scenario.

25.3 Boxplots

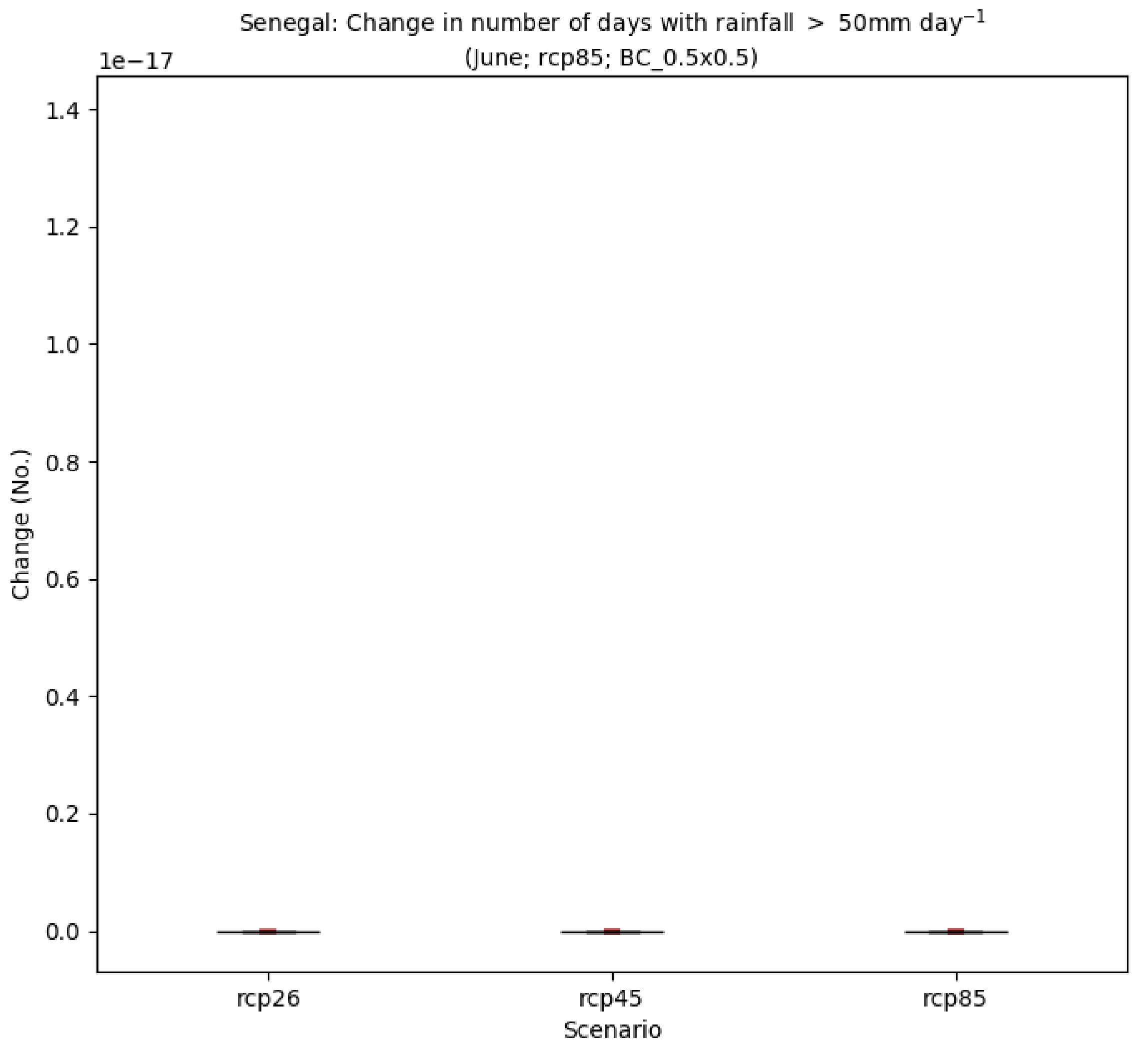

Figure 78: This boxplot shows the absolute change (all available scenarios) of Number of Days with Rainfall > 50mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the absolute change for all available scenarios.

25.4 Model ranking scatterplots

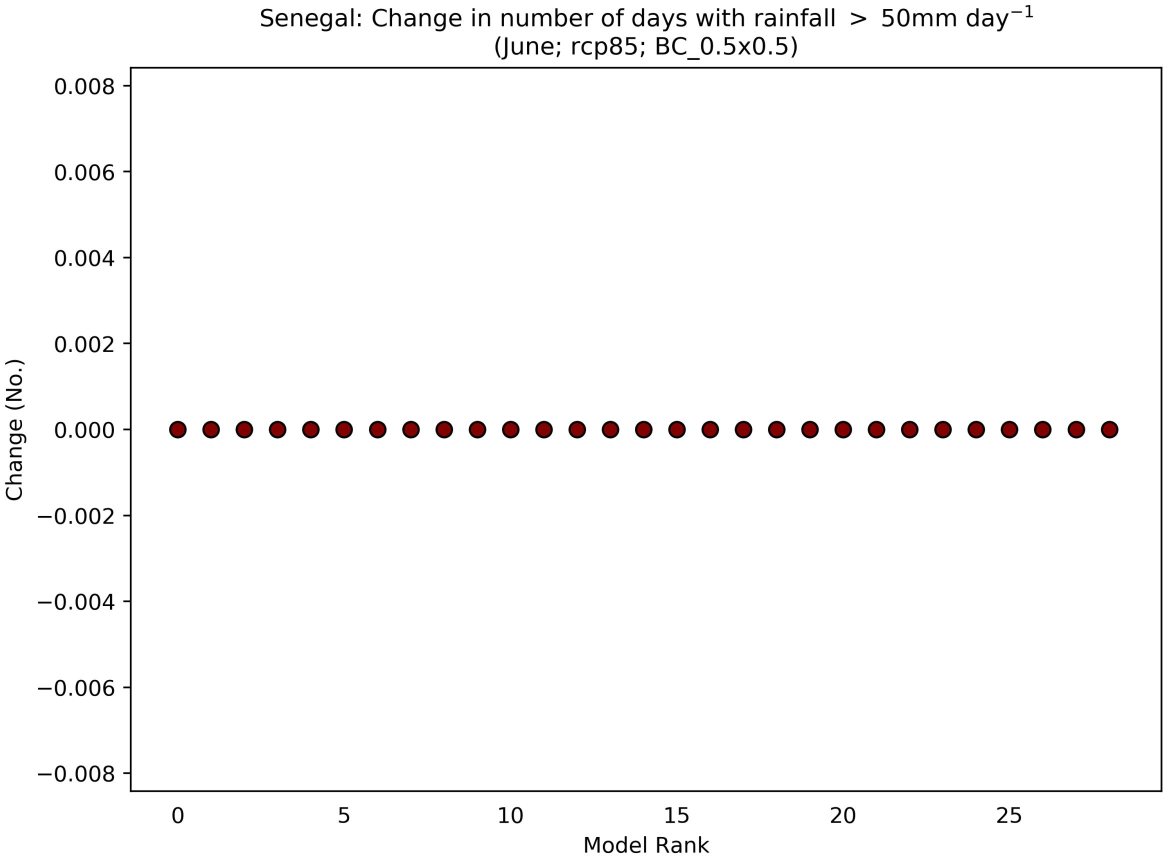

Figure 79: This scatterplot shows the absolute change in Number of Days with Rainfall > 50mm day^{-1} for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the absolute change for the RCP8.5 scenario.

26 Maximum Rainfall Total in a 5-day Period

Maximum Rainfall Total in a 5-day Period

26.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

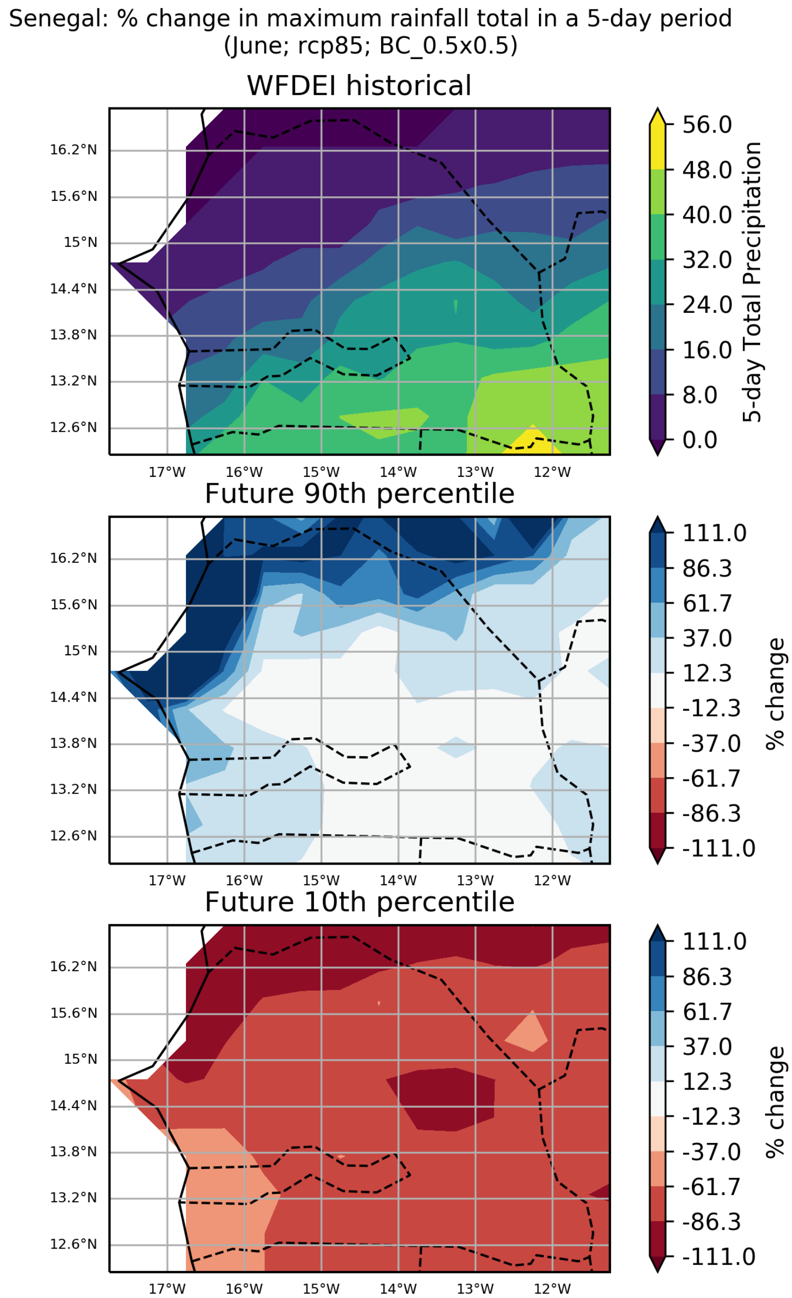

Figure 80: These maps show the ensemble spread in the percentage change in Maximum Rainfall Total in a 5-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

26.2 'Number of model' histograms

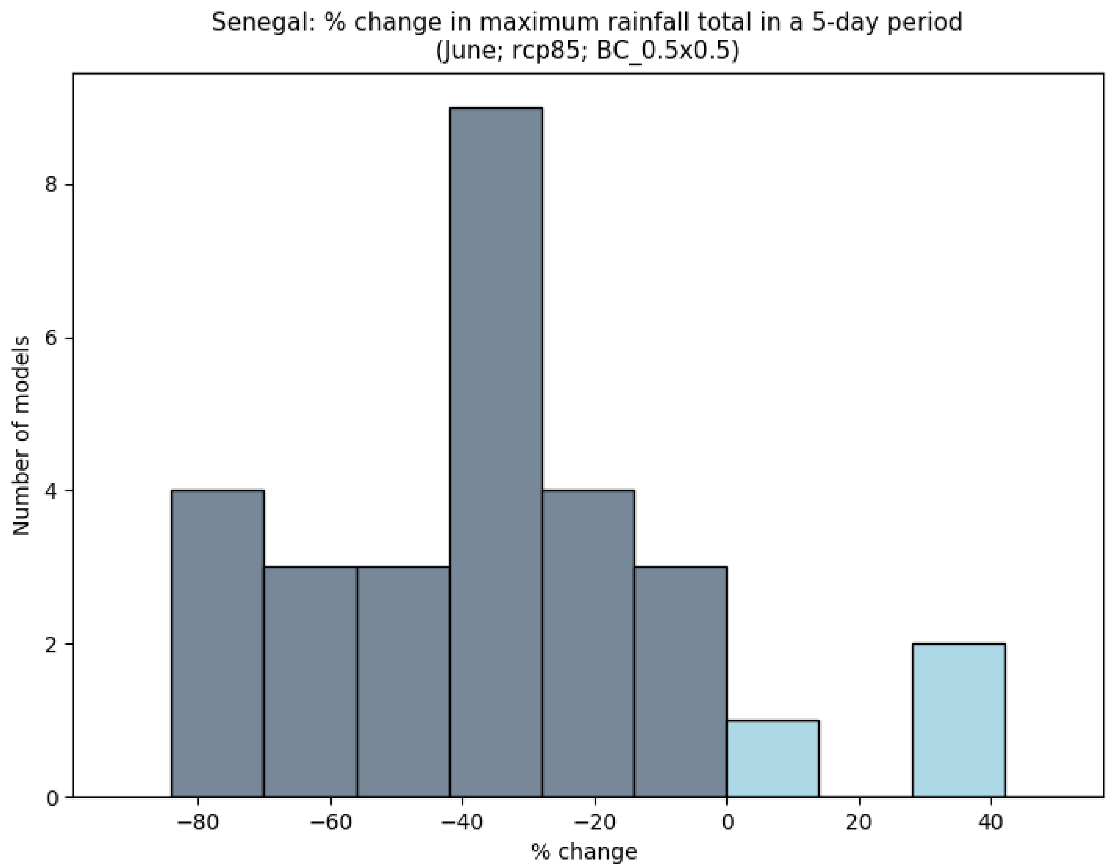

Figure 81: This histogram shows the number of models that agree on the percentage change in Maximum Rainfall Total in a 5-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

26.3 Boxplots

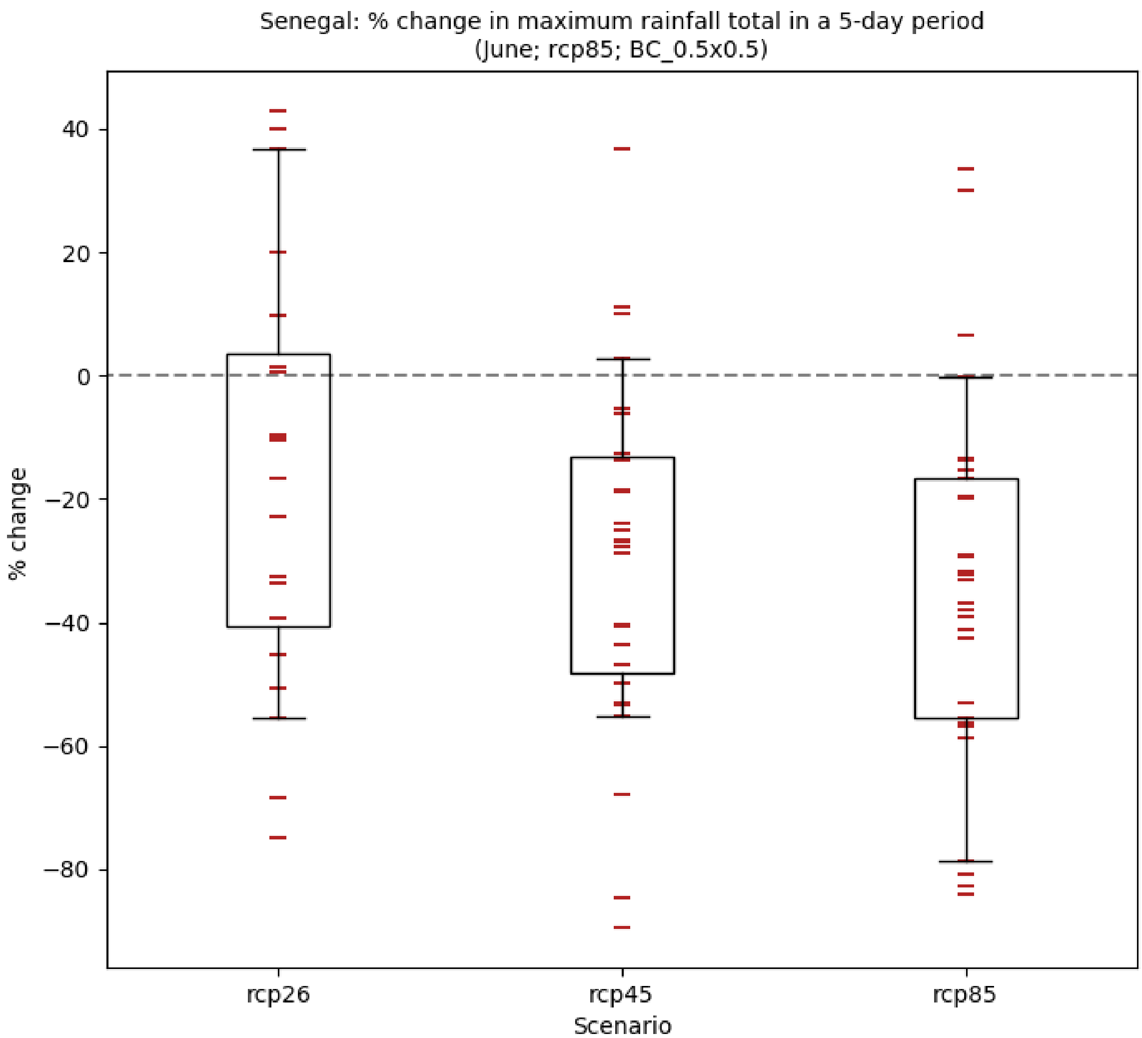

Figure 82: This boxplot shows the percentage change (all available scenarios) in Maximum Rainfall Total in a 5-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

26.4 Model ranking scatterplots

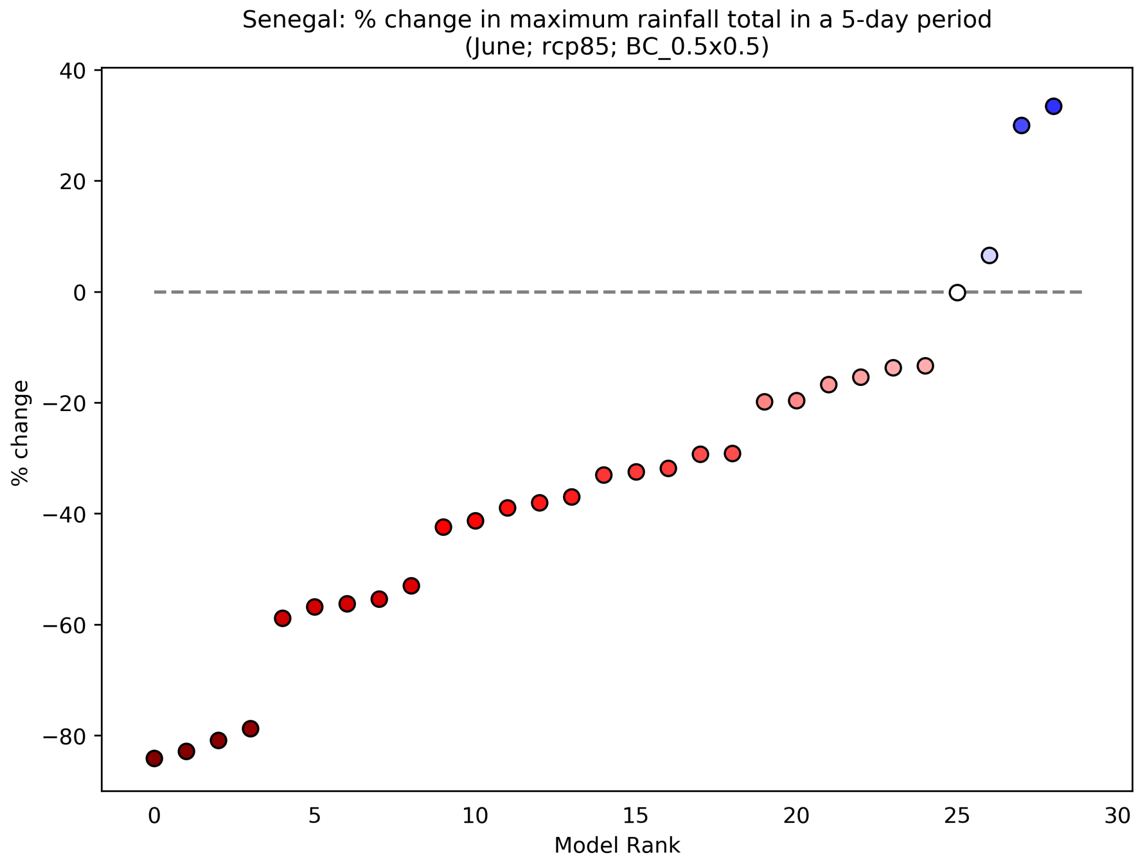

Figure 83: This scatterplot shows the percentage change in Maximum Rainfall Total in a 5-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

27 Maximum Rainfall Total in a 3-day Period

Maximum Rainfall Total in a 3-day Period

27.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

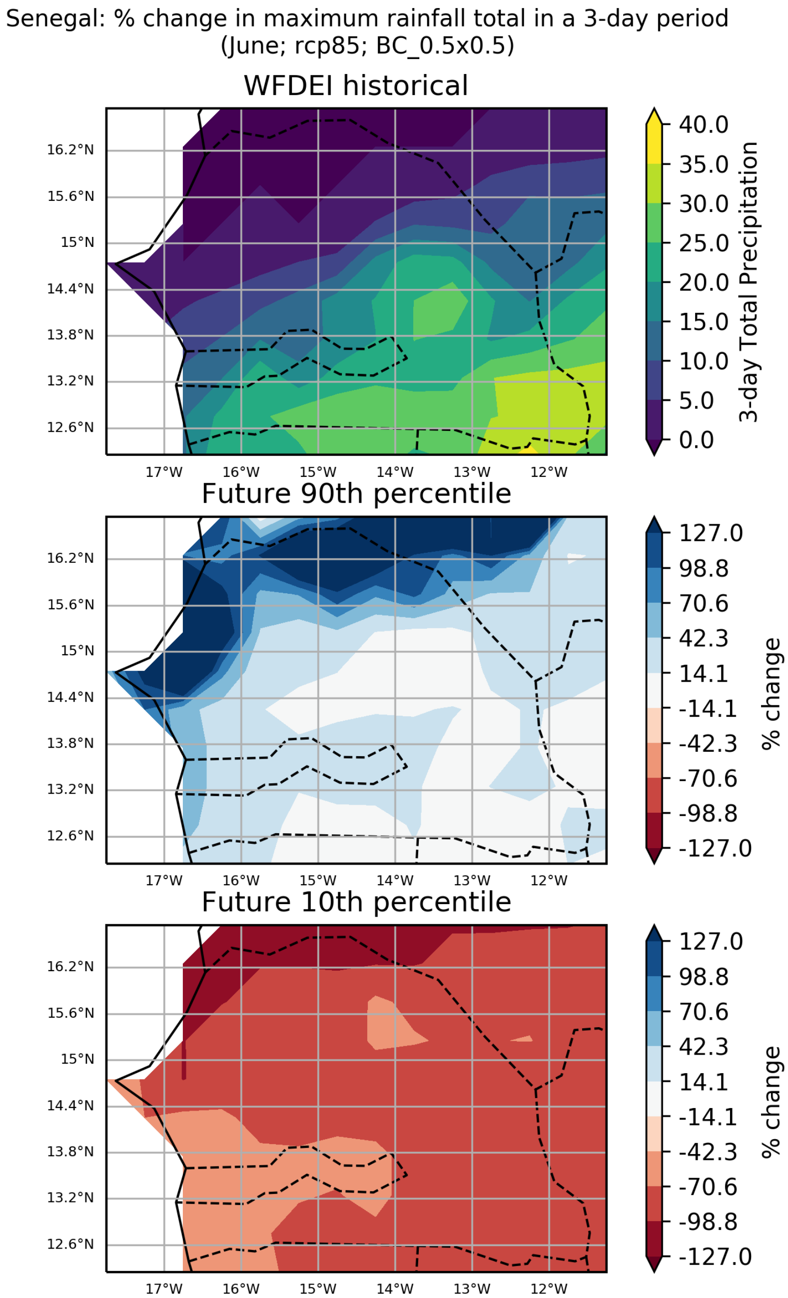

Figure 84: These maps show the ensemble spread in the percentage change in Maximum Rainfall Total in a 3-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

27.2 'Number of model' histograms

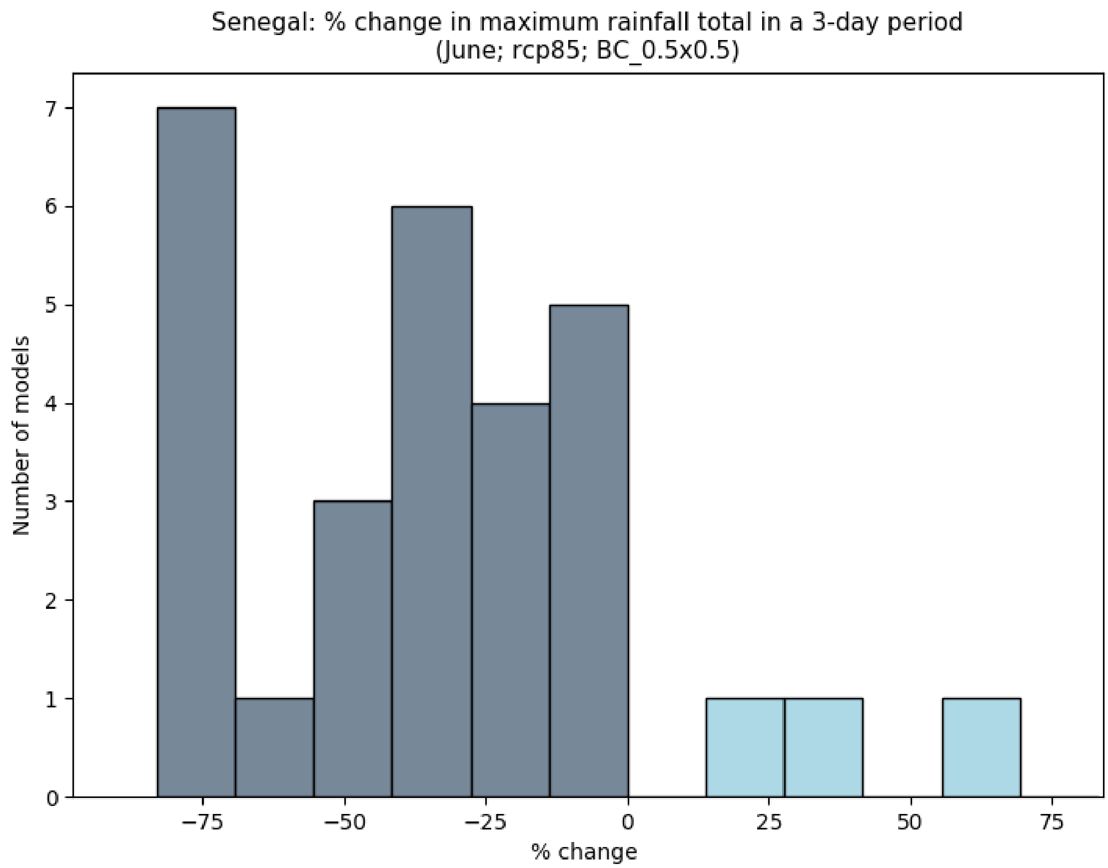

Figure 85: This histogram shows the number of models that agree on the percentage change in Maximum Rainfall Total in a 3-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

27.3 Boxplots

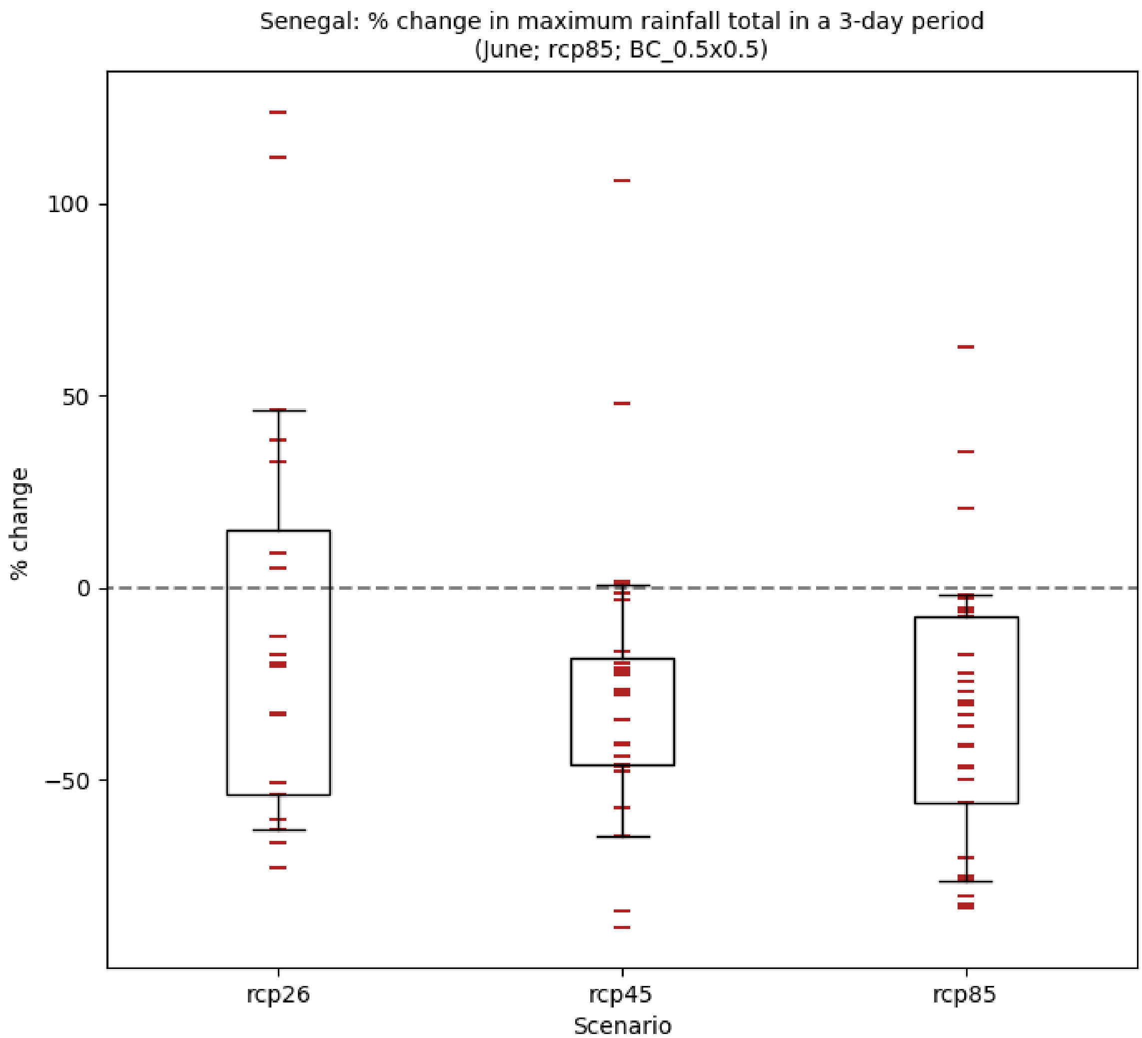

Figure 86: This boxplot shows the percentage change (all available scenarios) in Maximum Rainfall Total in a 3-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

27.4 Model ranking scatterplots

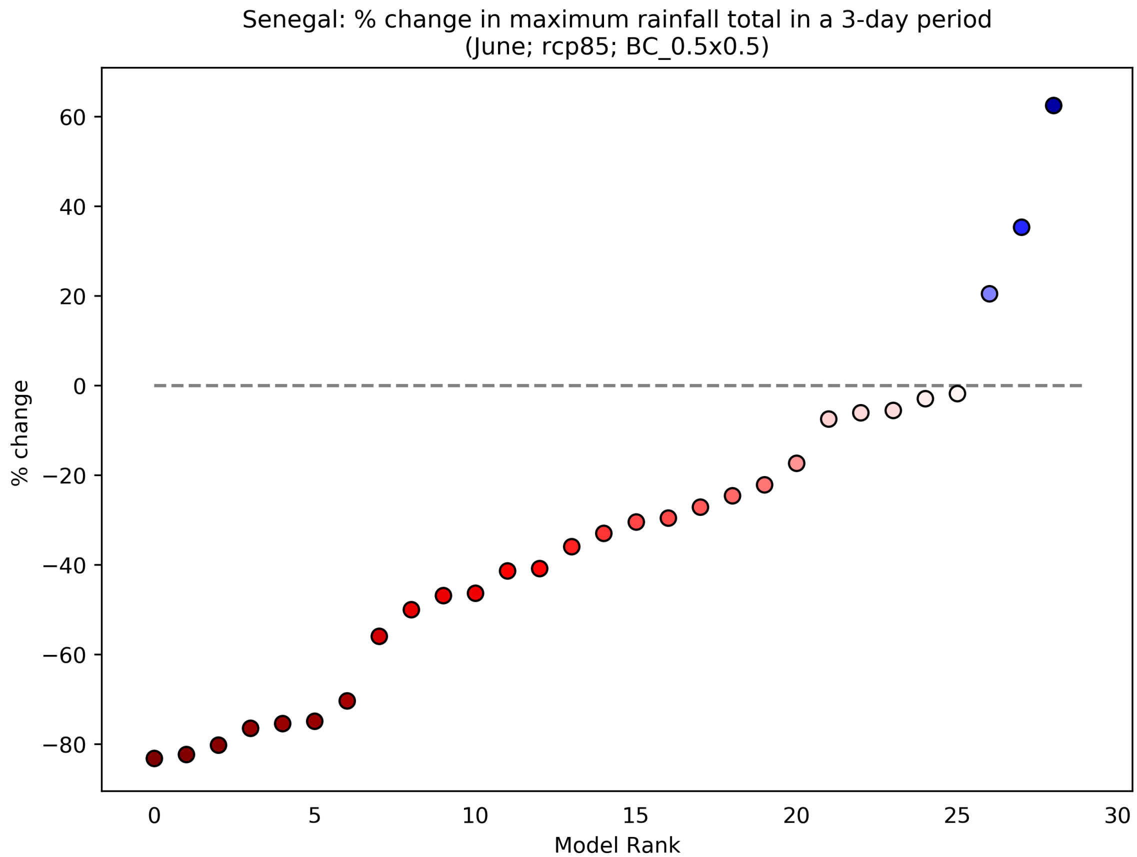

Figure 87: This scatterplot shows the percentage change in Maximum Rainfall Total in a 3-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.

28 Maximum Rainfall Total in a 2-day Period

Maximum Rainfall Total in a 2-day Period

28.1 Maps of present climate and future ensemble spread (10th and 90th percentiles)

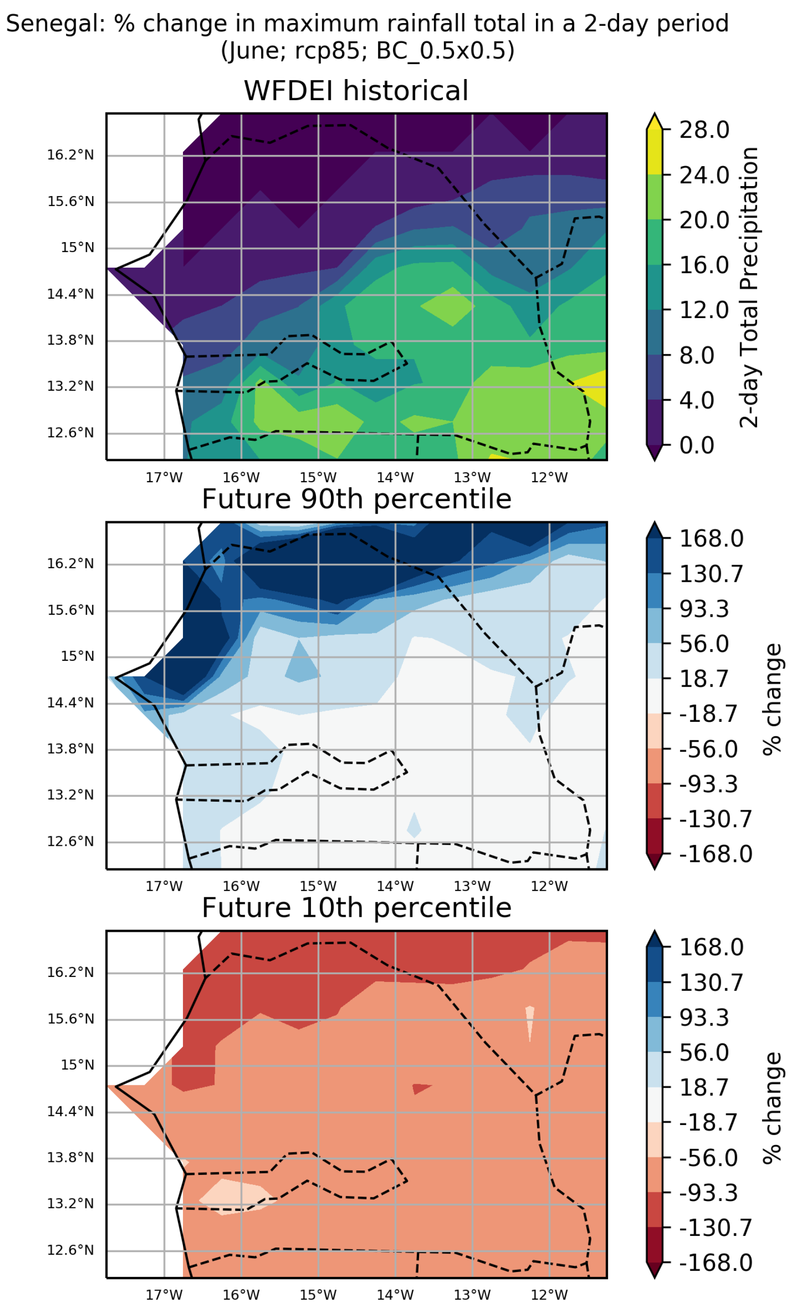

Figure 88: These maps show the ensemble spread in the percentage change in Maximum Rainfall Total in a 2-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. They show the 90th and 10th percentiles of the distribution across the model ensemble, computed separately at each grid point, for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

28.2 'Number of model' histograms

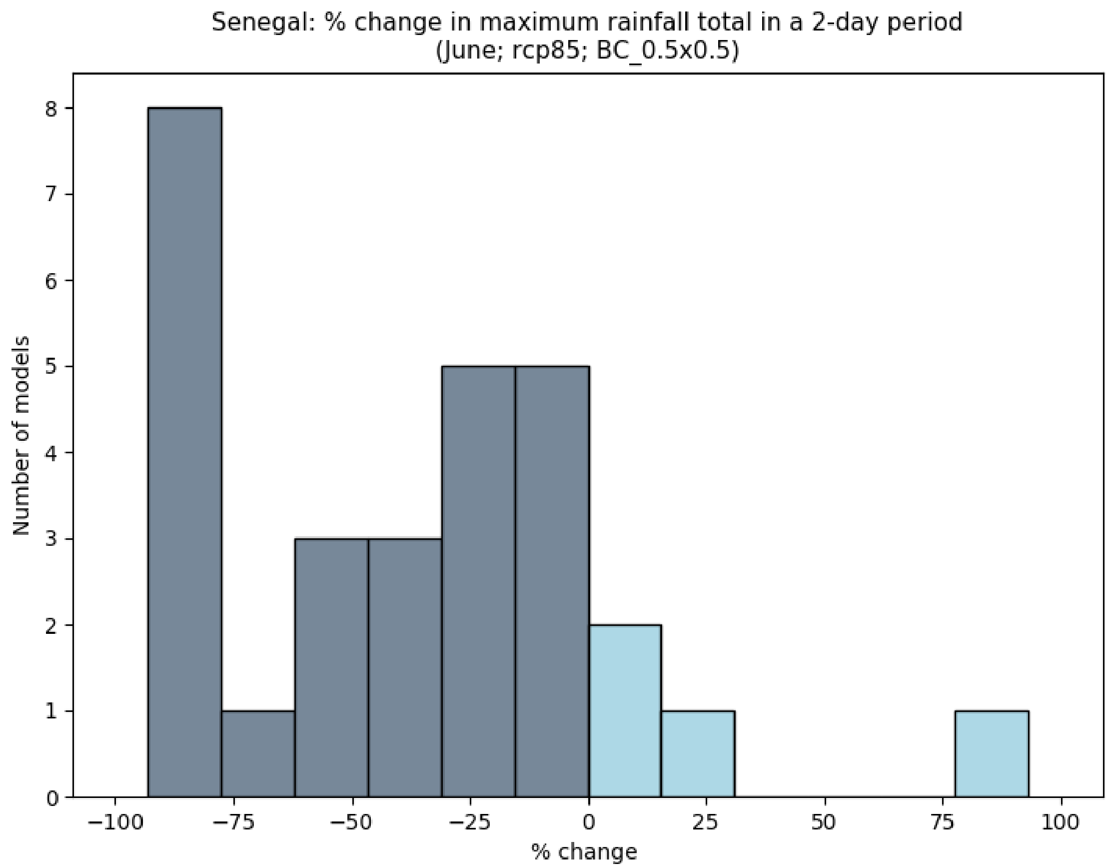

Figure 89: This histogram shows the number of models that agree on the percentage change in Maximum Rainfall Total in a 2-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each vertical bar shows the number of models that agree on the range of values shown on the x-axis for the Senegal region. This particular plot shows the percentage change for the RCP8.5 scenario.

28.3 Boxplots

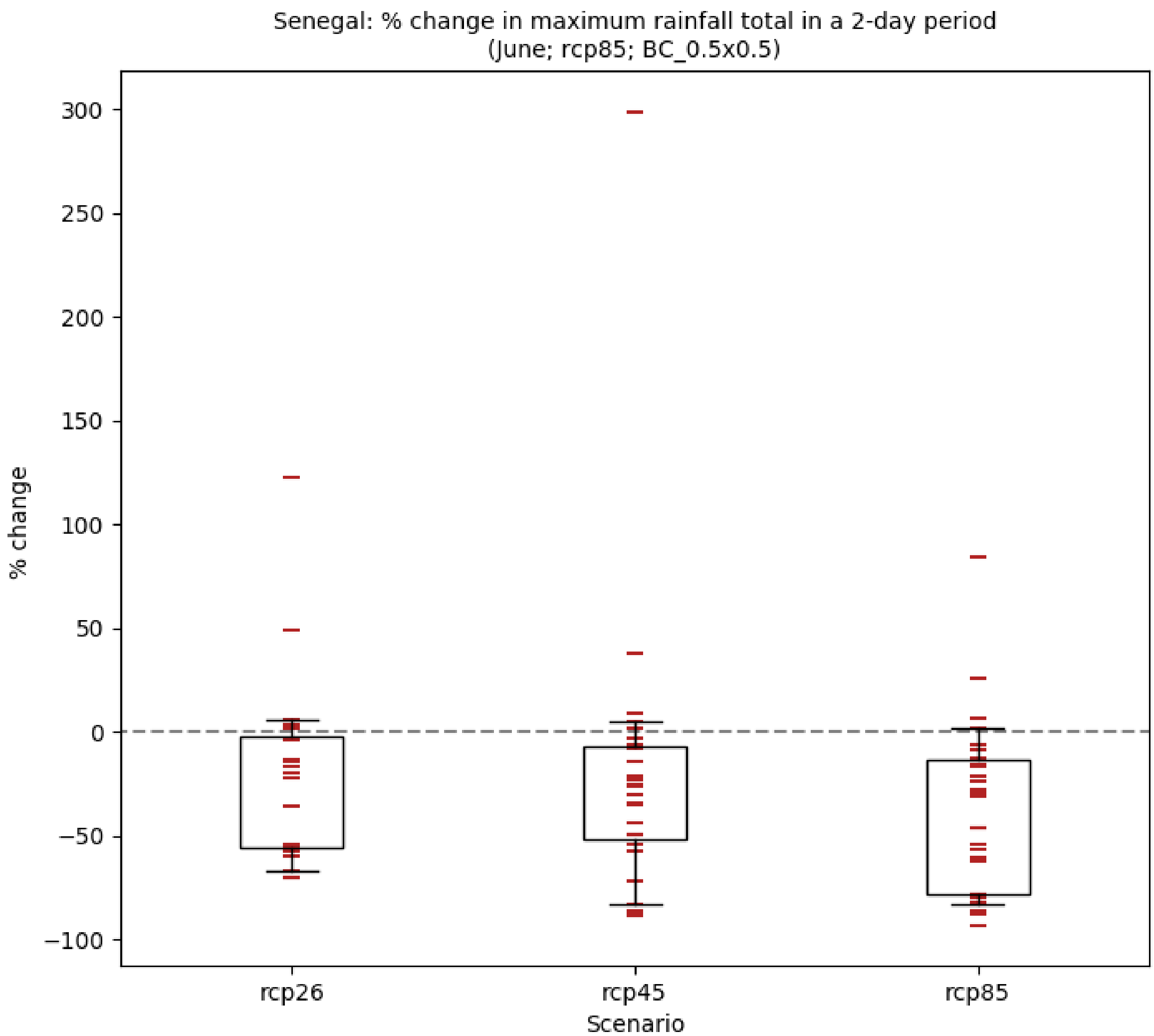

Figure 90: This boxplot shows the percentage change (all available scenarios) in Maximum Rainfall Total in a 2-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point (horizontal red line) shows an individual model averaged over the Senegal region, with the solid box representing the 25th to 75th percentile range, and the whiskers the 10th to 90th percentile range. This particular plot shows the percentage change for all available scenarios.

28.4 Model ranking scatterplots

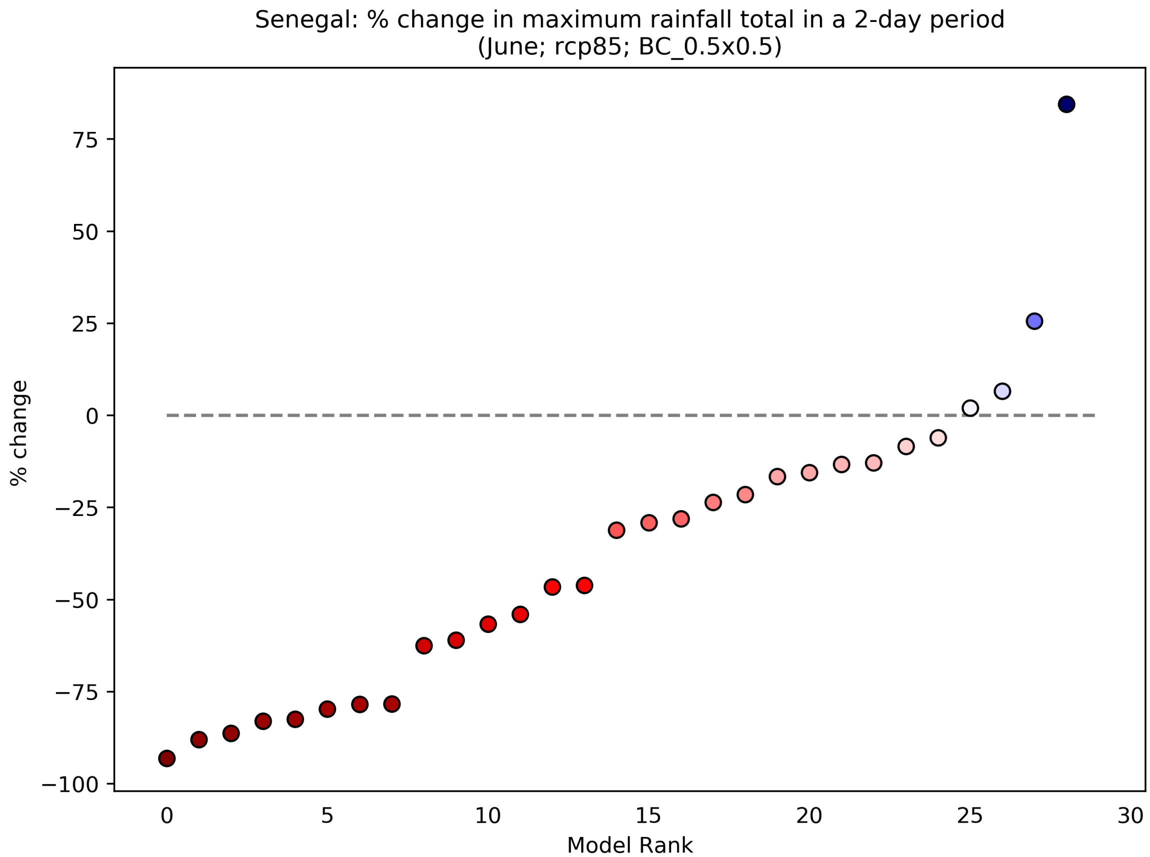

Figure 91: This scatterplot shows the percentage change in Maximum Rainfall Total in a 2-day Period for the period 2040 to 2059 (compared to a baseline period of 1950 - 2000) for the June season. Each data point shows an individual model averaged over Senegal, and ranked according to the magnitude of the value on the y-axis. This particular plot shows the percentage change for the RCP8.5 scenario.