Appendices

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Impact of increased climate variability on Australian feedlots

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Appendix 1 - Selection of feedlot locations

A1.1 Introduction

There are approximately 450 accredited feedlots throughout Australia based on current available records[1]. The project required that five representative locations for feedlots were to be modelled for future climate change scenarios. The selection criteria for these locations included consideration of:

- current feedlot zones
- climatic zones
- annual rainfall zones
- season rainfall zones
- potential heat stress.

These selection criteria are discussed in detail in the following sections.

A1.2 Lot feeding zones across Australia

The majority of Australian feedlots are located in areas that are in close proximity to cattle and grain supplies. The main regions include:

- central and southern Queensland
- northern tablelands and Liverpool Plains of NSW
- the Riverina area of NSW
- Victoria and eastern South Australia
- south-west Western Australia.

The five locations chosen are situated along the Australian grain belt and provide a good cross section of the major lot feeding regions in Australia. Figure A1. 1 shows the modelling locations in relation to the Grain Belt.

A1.3 Climatic zones within Australia

Australia has a wide range of climatic zones from the tropical regions of the north through to the arid expanses of the interior, to the temperate regions of the south. Australia's climate is divided into climate zones according to average temperatures and average rainfall.

The Bureau of Meteorology has divided Australia into six climate zones based on temperature and humidity[2]. A brief description of these climate zones is given below:

- **Hot Humid Summer, Warm Winter Zone** – where average January maximum temperatures exceed 30°C and average 3 pm January water vapour pressure exceeds 2.1 kPa.

[1] www.feedlots.com.au

[2] http://www.bom.gov.au/jsp/ncc/climate_averages/climate-classifications/index.jsp

- **Warm Humid Summer, Mild Winter Zone** – where average January maximum temperatures does not exceed 30°C and average 3 pm January water vapour pressure exceeds 2.1 kPa.
- **Hot, Dry Summer, Warm Winter Zone** – where average January maximum temperatures exceed 30°C, average 3 pm January water vapour pressure does not exceed 2.1 kPa and average July mean temperature exceeds 14°C. .
- **Hot, Dry Zone with Cool Winter** - where average January maximum temperatures exceed 30°C, average 3 pm January water vapour pressure does not exceed 2.1 kPa and average July mean temperature don't go above 14°C. .
- **Warm Summer, Cool Winter (Temperate Zone)** - where average January maximum temperatures don't go above 30°C, average 3 pm January water vapour pressure does not exceed 2.1 kPa and average annual heating degree days does not exceed 2000, using base 18°C.
- **Mild to Warm Summer, Cold Winter (Cool Temperate Zone)** - where average January maximum temperatures does not above 30°C, average 3 pm January water vapour pressure does not exceed 2.1 kPa and average annual heating degree days exceed 2000, using base 18°C.

Figure A1. 2 shows the five modelling locations chosen lie in different climatic zones across Australia.

A1.4 Rainfall Zones within Australia

An important aspect when choosing modelling locations is rainfall. As the vast majority of lot-fed cattle in Australia are housed in open opens, this climatic parameter, in conjunction with evaporation, affects environmental performance. High rainfall causes wet pens with subsequent odour generation and runoff. Runoff is contaminated so it must be contained and prevented from entering watercourses.

Australian feedlots are required to have holding ponds to retain contaminated runoff. The performance criteria for holding ponds is overtopping frequency. A site with an annual rainfall of less than 750 mm is generally recommended. Furthermore, sites where rainfall exceeds evaporation are difficult to manage as the pens remain wet for prolonged periods. This occurs in locations with rainfall in winter when evaporation rates are low.

There are two ways of categorizing rainfall – annual rainfall and seasonal rainfall. These are both explained in relation to Australia's zones below.

A1.4.1 Seasonal Rainfall Zones within Australia

There are six distinct seasonal rainfall zones within Australia, namely arid, summer, summer dominant, uniform, winter and winter dominant[3]. The main features of the seasonal rainfall distribution as defined are:

- Marked wet summer and dry winter of northern Australia.

[3] http://www.bom.gov.au/jsp/ncc/climate_averages/climate-classifications/index.jsp?maptype=seasgrpb

- Wet summer and low winter rainfall of southeast Queensland and northeast New South Wales.
- Uniform rainfall in southeast Australia extending through much of New South Wales and part of eastern Victoria.
- Wet winter and low summer rainfall areas extending through southern parts of New South Wales, much of Victoria, part of South Australia and part of southern Western Australia.
- Marked wet winter and dry summer of southwest Western Australia.
- Arid area comprising about half of the continent extending from the northwest coast across the interior and reaching the south coast at the head of the Great Australian Bight.

Figure A1. 3 shows Australia's feedlots in relation to seasonal rainfall zones. Currently, 22.8% of individual feedlots are located in winter dominant rainfall areas.

A1.4.2 Annual Rainfall Zones within Australia

Figure A1. 4**Error! Reference source not found.** shows the distribution of Australia's feedlots in areas with above and below 750 mm of annual rainfall. The majority of feedlots are located in areas that have annual rainfall of <750 mm.

A1.5 Zones of potential heat load across Australia

Heat stress on cattle is an important issue for Australian feedlots. Considerable research has been undertaken into this issue. In principle, "global warming" could exacerbate heat stress events.

An attempt was made to produce a map of potential heat load zones to allow assessment of selected modelling locations in relation to potential for heat stress in feedlot cattle. The approach involved combining the climatic zones map of Australia with a map of cooling degree-days zones. The climate zone map identified areas with high humidity and cooling degree-days identify the accumulation of degrees Celsius above a base temperature in a year. A cooling degree-day map with a base temperature of 18^{o}C was selected for our purposes. From this analysis, ten potential heat load zones within Australia were created. Figure A1. 5 shows a summary of Australia's current feedlots in the potential heat stress zones.

The majority of feedlots are located in the mild, non-humid zone and the selected modelling locations are all located in the mild, not humid zone.

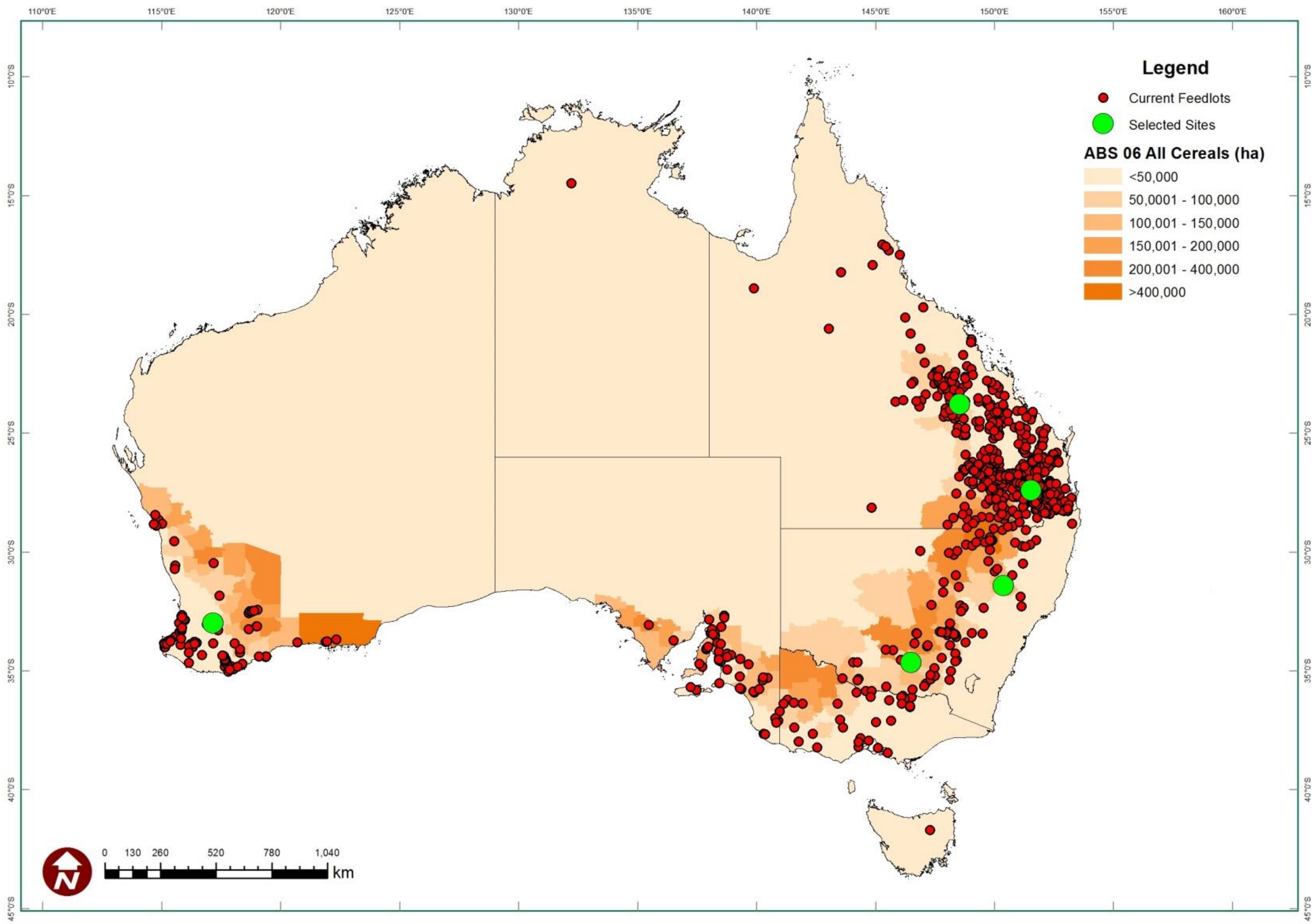

Figure A1. 1: Map of Australia showing the grain belt (shading), feedlot distribution (red dots) and five selected modelling sites (green circles)

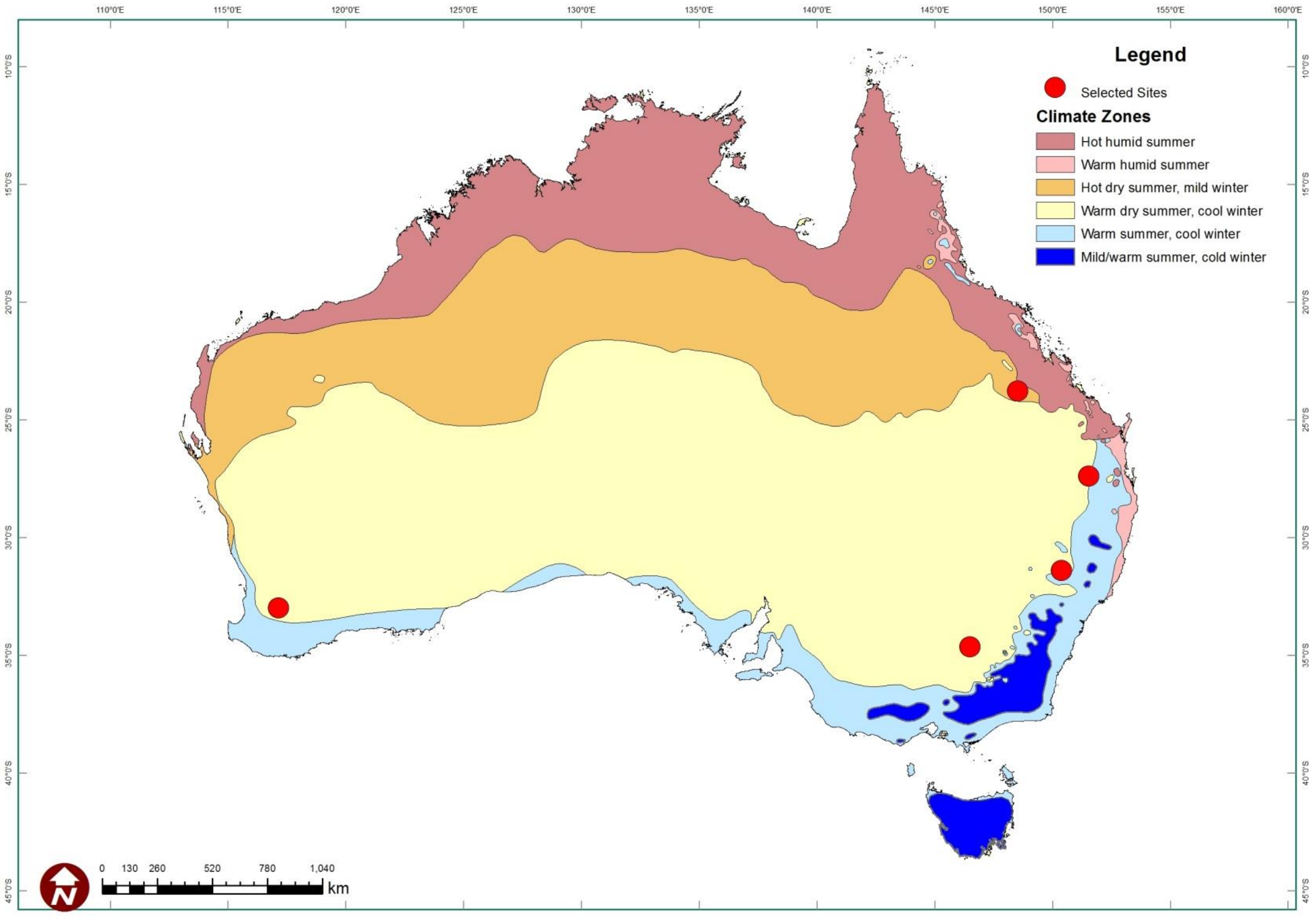

Figure A1. 2: Map of Australia showing climatic zones in relation to selected modelling locations.

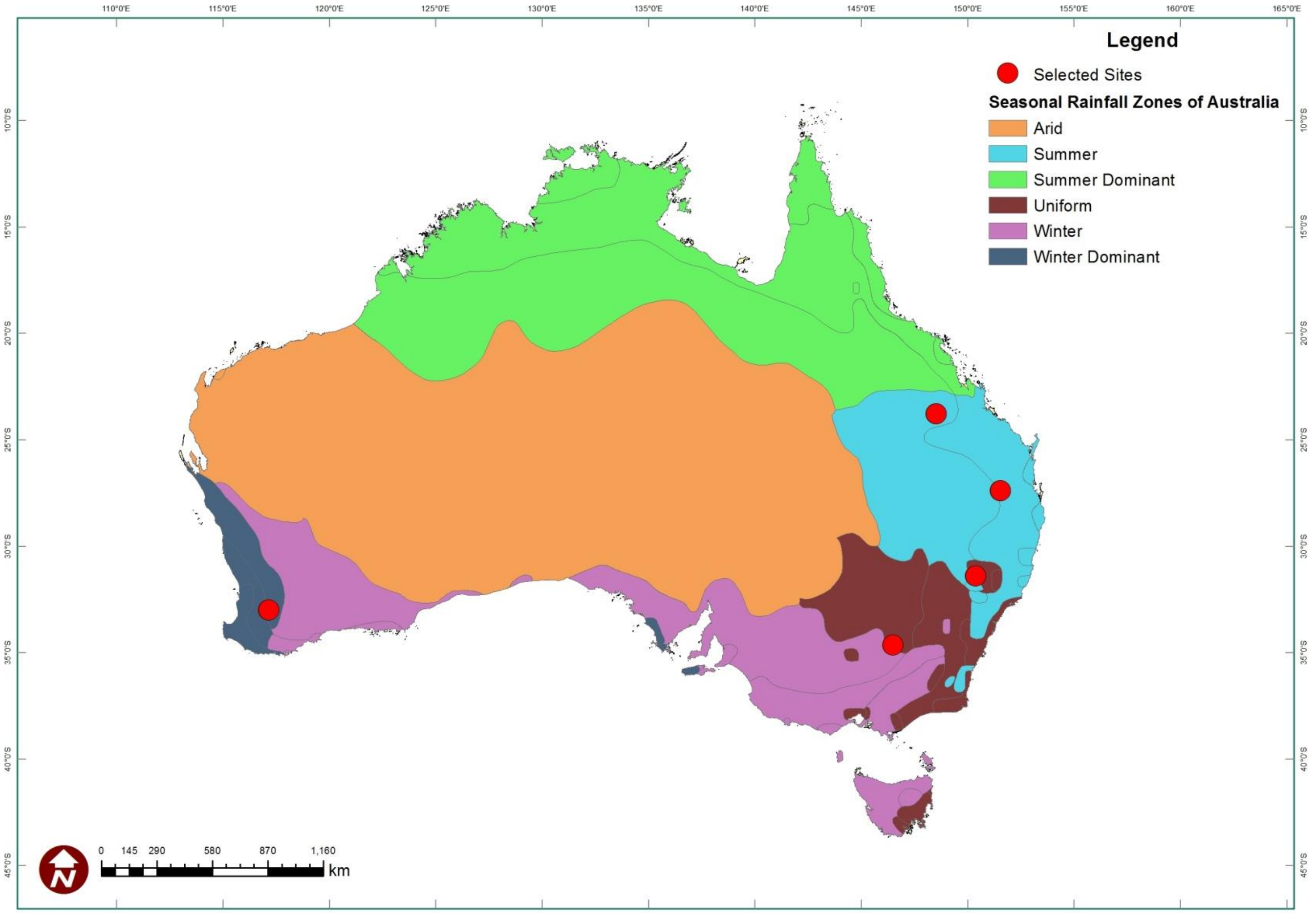

Figure A1. 3: Map of Australia showing seasonal rainfall zones in relation to selected feedlot modelling locations.

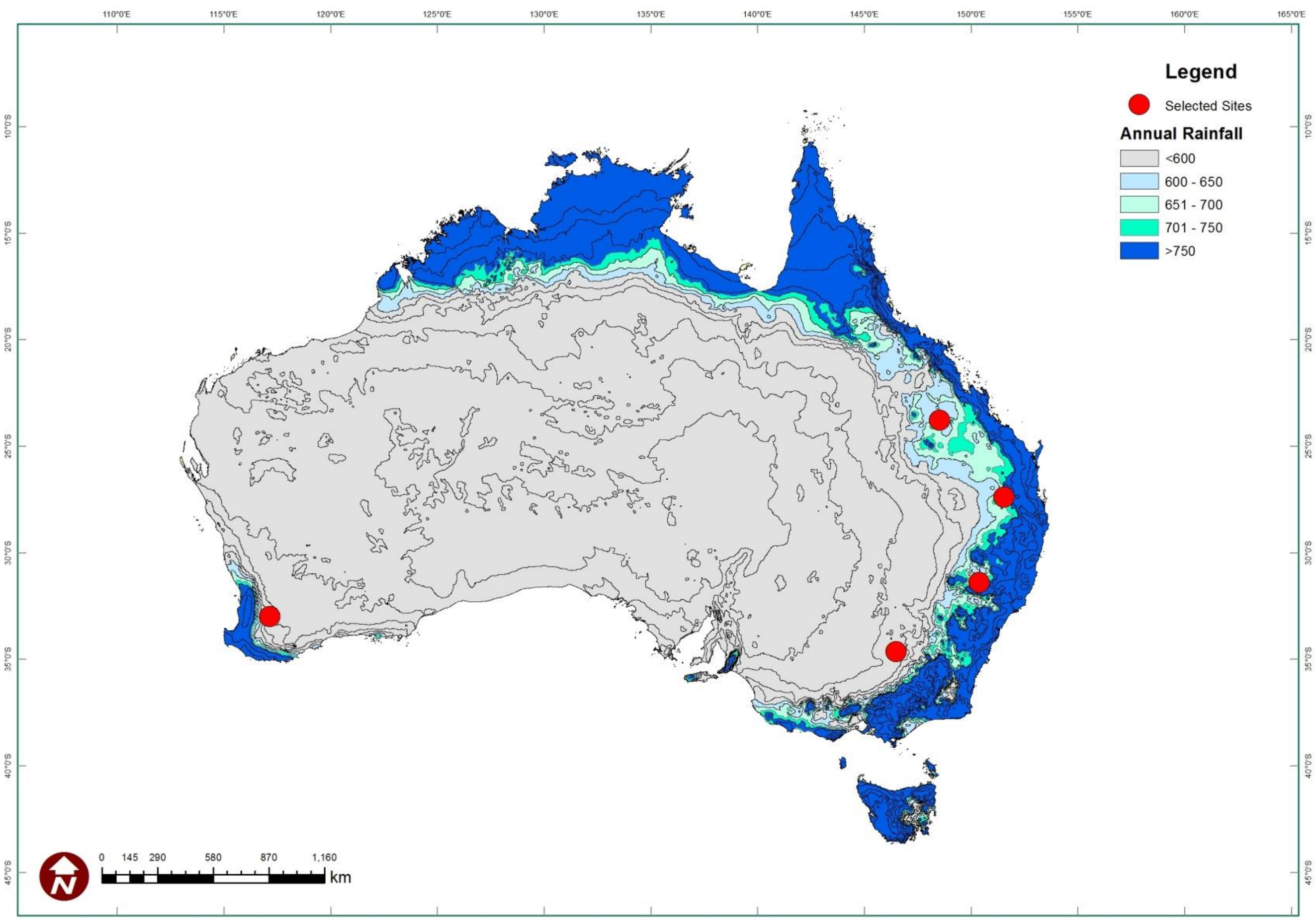

Figure A1. 4: Map of Australia showing annual rainfall distribution in relation to selected feedlot modelling locations.

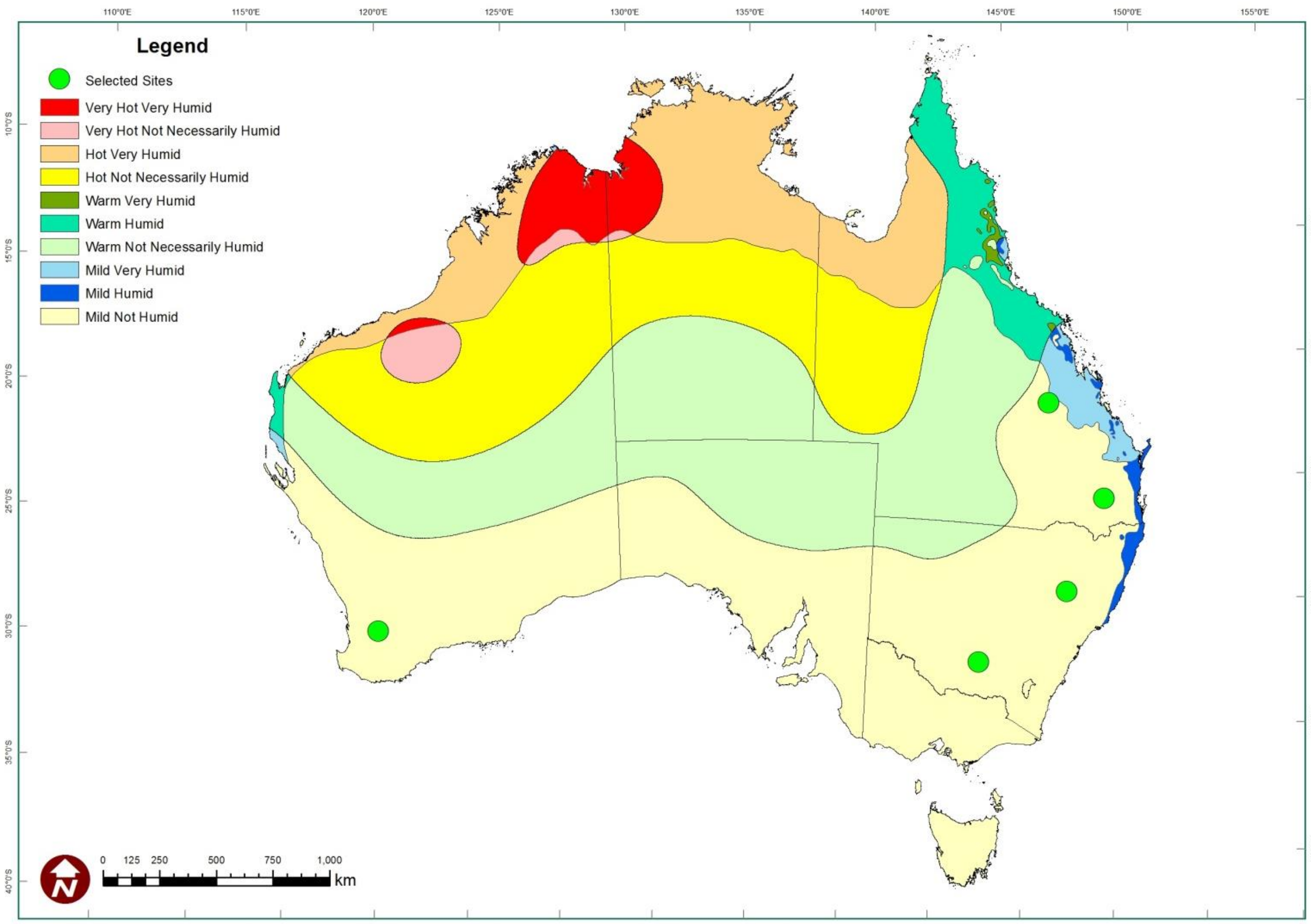

Figure A1. 5: Map of Australia showing heat load index zones in relation to selected feedlot modelling locations.

Appendix 2 Climate model selection and assessment

A2.1 Introduction

This project involved selection of the most suitable climate change models for the Australian region and the specific requirements of this project. Selected models were used to generate appropriate long term datasets for a range of climate-based variables and scenarios, on a daily and sub-daily basis, suitable for inputs into animal effluent and heat stress modelling.

Following selection of five most appropriate climate models, predicted climate data were extracted and downscaled using statistical techniques incorporating the daily distributions of the modelled data.

The resulting datasets were presented in a format suitable for direct input into the MEDLI effluent model and hourly data suitable for heat stress analysis.

A2.2 Selection of climate change models

In 2007 the Intergovernmental Panel on Climate Change (IPCC) released the Fourth Assessment Report (AR4) which was intended to assess scientific, technical and socio-economic information concerning climate change. Much of the underlying material for that report was based on Phase 3 of the Coupled Model Intercomparison Project (CMIP3) which included "realistic" scenarios for both past and present climate forcing contributed by leading modelling centres around the world.

The data provided by CMIP3 were largely monthly averages and 30 year anomalies based on historical control runs. A few models also provided daily model runs for selected time periods and a small number of variables.

The fifth phase of the Coupled Model Intercomparison Project (CMIP5) is now underway which will provide a much larger range of modelled outputs including daily and sub-daily time scales.

Due to the nature of this project it was deemed important to include the extra statistical distributions that the daily and sub-daily data provided so the CMIP5 dataset was chosen instead of CMIP3.

At the time this report was completed CMIP5 included data from 32 centres, 64 models, and 108 experiments (Table A2. 1). This dataset is expected to grow until the release of the AR5 report due at the end of 2014.

Table A2. 1: Initial General Circulation Model (GCMs) selection based on data availability and model suitability

	MONTHLY				DAILY				3 HOURLY			
Model	hist	rcp26	rcp45	rcp85	hist	rcp26	rcp45	rcp85	hist	rcp26	rcp45	rcp85
ACCESS1-0	2	0	2	2	4	0	4	4	0	0	0	0
bcc-csm1-1-m	6	2	2	2	0	0	0	0	0	0	0	0
BNU-ESM	1	1	1	1	5	5	5	5	2	2	2	2
CanCM4	10	0	10	0	10	0	10	0	0	0	0	0
CanESM2	10	10	10	10	29	33	36	30	0	0	0	0
CCSM4	6	6	6	6	5	6	6	6	1	1	1	1
CESM1(BGC)	1	0	1	1	2	0	1	1	0	0	0	0
CESM1(CAM5)	3	3	3	3	0	0	0	0	0	0	0	0
CESM1(WACCM)	4	0	3	1	0	0	0	0	0	0	0	0
CMCC-CM	2	0	2	2	5	0	5	5	3	0	3	3
CNRM-CM5	11	2	2	6	39	5	6	13	3	3	3	3
CSIRO-Mk3.6	20	20	20	20	45	33	33	33	0	0	0	0
EC-EARTH	12	3	11	8	15	2	10	9	15	2	13	13
FGOALS-g2	5	1	1	1	13	9	9	9	8	4	4	4
FGOALS-s2	6	2	6	6	9	2	7	7	3	1	3	3
FIO-ESM	3	3	3	3	0	0	0	0	0	0	0	0
GFDL-CM3	5	1	1	1	15	3	2	2	1	0	1	1
GFDL-ESM2G	1	1	1	1	5	5	5	5	1	1	1	1
GFDL-ESM2M	1	1	1	1	5	5	5	5	1	1	1	1
GISS-E2-R	40	6	32	6	10	0	5	0	10	0	6	0
HadCM3	20	0	20	0	50	0	40	0	0	0	0	0
HadGEM2-AO	1	1	1	1	0	0	0	0	0	0	0	0
HadGEM2-CC	4	0	2	4	21	0	10	20	0	0	0	0
HadGEM2-ES	8	5	8	5	21	16	20	13	6	4	4	4
INM-CM4	2	0	2	2	5	0	5	5	3	0	3	3
IPSL-CM5A-LR	11	3	8	7	29	9	12	12	26	8	14	16
IPSL-CM5A-MR	2	1	1	1	8	3	3	3	8	4	4	4
IPSL-CM5B-LR	1	0	1	1	3	0	3	3	2	0	0	0
MIROC-ESM	3	0	3	0	18	6	6	6	9	3	3	3
MIROC-ESM-CHEM	10	6	6	6	6	6	6	6	3	3	3	3
MIROC4h	6	2	2	2	11	0	11	0	6	0	6	0
MIROC5	2	2	2	2	45	18	18	18	28	18	16	18
MPI-ESM-LR	3	3	3	3	15	15	15	15	0	0	0	0
MPI-ESM-MR	3	1	3	1	15	5	15	5	0	0	0	0
MRI-CGCM3	5	2	2	2	13	6	6	6	15	3	3	3
NorESM1-M	3	1	1	1	24	5	5	5	12	4	4	4
NorESM1-ME	1	1	1	1	1	1	1	1	0	0	0	0
Total # of models	40	27	37	34	35	23	33	29	23	17	22	20
Total # of datasets	269	90	184	120	538	205	332	259	175	65	101	93

* hist= historic, RCP= Representative Concentration Pathways (RCP)

The selection of the most appropriate climate change models was based on a comprehensive performance evaluation of major climate change GCMs and the applicability of those GCMs in the selected feedlot modelling locations.

Models were excluded using methods that apply the provision of 'demerit points' for certain models as a means of deleting less suitable GCMs. This approach (Whetton et al. 2005) provides one point for a root mean square error greater than two or a pattern correlation less than 0.8 in any given season. Suppiah et al. (2007) provide a very useful appraisal of this approach where a high number of demerit points were allocated to GCMs that did not reproduce observed rainfall and temperature patterns in Australia, as well as a total appraisal of the allocation of demerit points across a wider range of climatic indicators.

Based on this approach, and the limited number of models capable of generating data outputs for the required time scale, experiments, and variables, seven candidate models were identified as being potentially suitable for this project. Interim modelling of predicted climate data through both the MEDLI and heat stress models indicated that two of these seven models were producing inconsistent results and these models were removed from the final list.

Following completion of model selection and preliminary testing, five models were selected as being most appropriate for the specific requirements of this project. These five models were used for generation of all predicted climate data for this report:

- **HadGEM2-ES**: Hadley Centre for Climate Prediction and Research/Met Office (Exeter, United Kingdom);
- **CNRM-CM5**: Centre National de Recherches Meteorologiques (Toulouse, France);
- **GFDL-ESM2G**: Geophysical Fluid Dynamics Laboratory (Princeton, USA);
- **MIROC5**: Atmosphere and Ocean Research Institute (The University of Tokyo, Japan);
- **MRI-CGCM3**: Meteorological Research Institute (Tsukuba-city, Ibaraki, Japan).

A2.3 Scenario selection

The Intergovernmental Panel on Climate Change (IPCC) has adopted four greenhouse gas concentration trajectories for its fifth Assessment Report (AR5), called Representative Concentration Pathways (RCPs).

The IPCC has defined Radiative forcing as "A measure of the influence a factor has in altering the balance of incoming and outgoing energy in the Earth-Atmosphere system and is an index of the importance of this factor as a potential climate change mechanism". It is expressed in watts per square meter (W/m2).

The four RCPs, RCP2.6, RCP4.5, RCP6, and RCP8.5, are named after a possible range of radiative forcing values in the year 2100 (2.6, 4.5, 6.0, and 8.5 W/m2, respectively).

In addition to providing future projections the models are also providing historical control runs based on recorded concentrations.

Four scenarios were selected for this project, including three RCP trajectories representing low, medium, and high greenhouse gas concentration, as well as the Historical 20th Century control runs. These four scenarios are:

- **RCP8.5:** Rising radiative forcing pathway leading to 8.5 W/m2 in 2100;
- **RCP4.5:** Stabilization without overshoot pathway to 4.5 W/m2 at stabilization after 2100;

- **RCP2.6:** Peak in radiative forcing at ~ 3 W/m2 before 2100 and decline;
- **Historical control:** 20th Century control run.

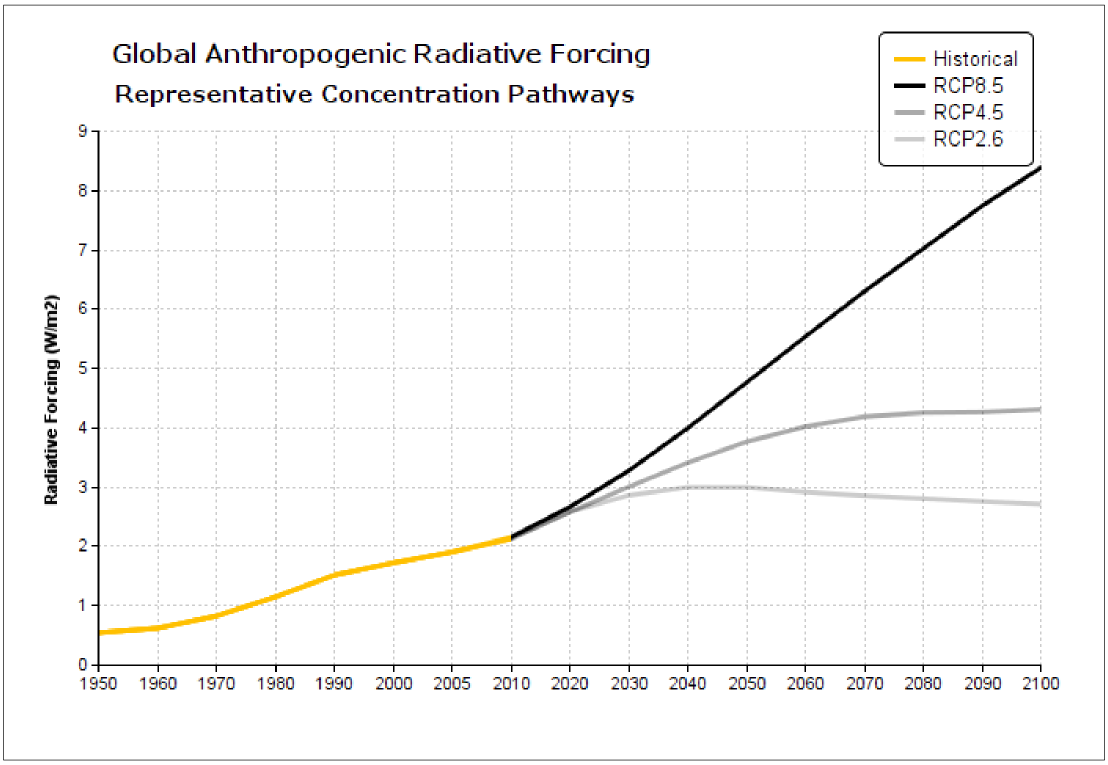

Figure A2. 1: The changes in atmospheric carbon dioxide concentration as envisioned by the IPCC's different emission scenarios, representative concentration pathways (RCPs).

A2.4 Variable selection

The variables provided in each predicted climate dataset were determined by the requirement of the two modelling approaches: one modelling heat load in feedlot cattle (HLI) and the other modelling water runoff (MEDLI).

A2.4.1 Accumulated Heat Load Index (HLI)

The Heat Load Index (HLI) is an algorithm designed for the beef cattle industry which takes into account the air movement and radiant heat load as well as the traditional temperature and humidly to determine load.

HLI (TBG>25) = 8.62 + (0.38 x RH) + (1.55 x TBG) – (0.5 x wind speed) + e-2.4 wind speed

HLI (TBG<25) = 10.66 + (0.28 x RH) + (1.3 x TBG) – wind speed

Variables required:

- Temperature
- Relative Humidity

- Wind speed
- Solar Radiation.

Climate models were not able to generate Relative Humidity at the required level and this variable was calculated by using the Specific Humidly, Temperature and Pressure, which the models do provide.

The Wind speed was calculated from the Northward Near-Surface Wind and the Eastward Near-Surface Wind.

The Accumulated HLI was calculated at hourly intervals to meet modelling requirements in order to assess changes in heat load over time in cattle.

A2.4.2 Model for Effluent Disposal using Land Irrigation (MEDLI)

MEDLI (Model for Effluent Disposal using Land Irrigation) was designed for sewage effluent re-use schemes (municipal and on-site), intensive livestock industries (piggeries, dairies, feedlots) and agri-industries such as abattoirs, tanneries, and rendering plants.

MEDLI requires daily input of the following climate variables:

- Rainfall (millimetres, mm)
- Minimum Temperature (degrees Celsius, °C)
- Maximum Temperature (degrees Celsius, °C)
- Solar Radiation (megajoules per day, Mj/d)
- Evapotranspiration (millimetres per day, mm/d)

As the climate models do not provide Evapotranspiration it was calculated using the FAO Penman-Monteith equation[4][5].

A2.5 Preliminary validation of predicted data

Selected climate models were parameterised to generate predicted climate data covering an historic time window in order to allow comparison of model output with observed data derived from SILO records. SILO is an online climate database based on historic climate data[6].

Preliminary comparisons between predicted historic climate data from the five selected models and SILO data revealed discrepancies between the predicted data and the observed data with some predicted records being more than double the observed data. Selected examples of discrepancies are shown in the following figures.

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[4] http://www.fao.org/docrep/X0490E/x0490e00.htm#Contents

[5] http://edis.ifas.ufl.edu/pdffiles/AE/AE45900.pdf

[6] http://www.longpaddock.qld.gov.au/silo/about.html

It is important to note that modelled historical outputs were not expected to be in precise agreement with observed data because model outputs are predicted data generated with observed input parameters but representing a stochastic model output of predicted climate data. This preliminary validation process was approached in the expectation that model outputs should be in broad agreement with observed data.

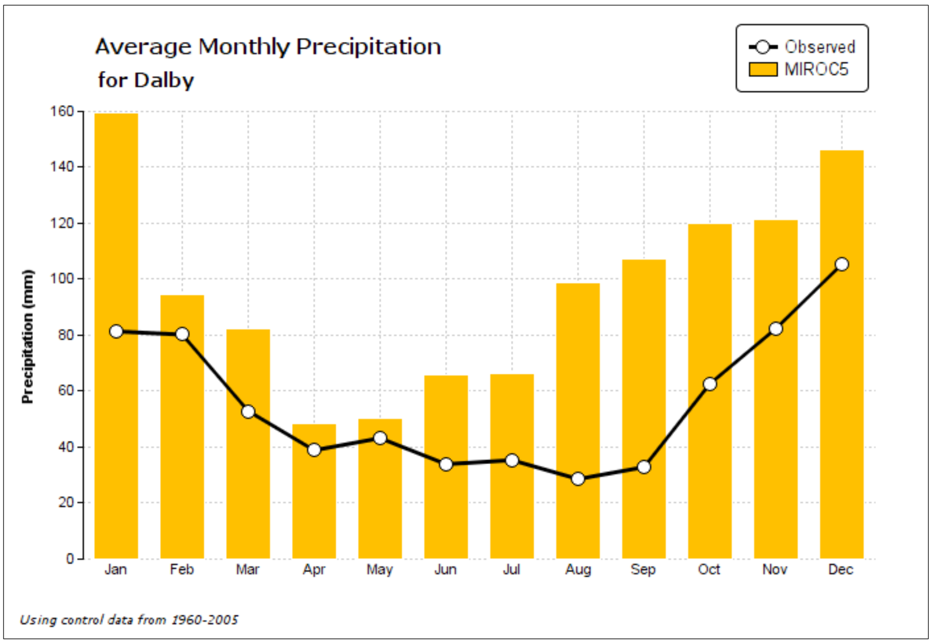


Figure A2. 2: Comparing modelled Precipitation output from the MIROC5 model with Observed data from Dalby, Queensland. While there appears to be an apparent bias this is not consistent throughout the year.

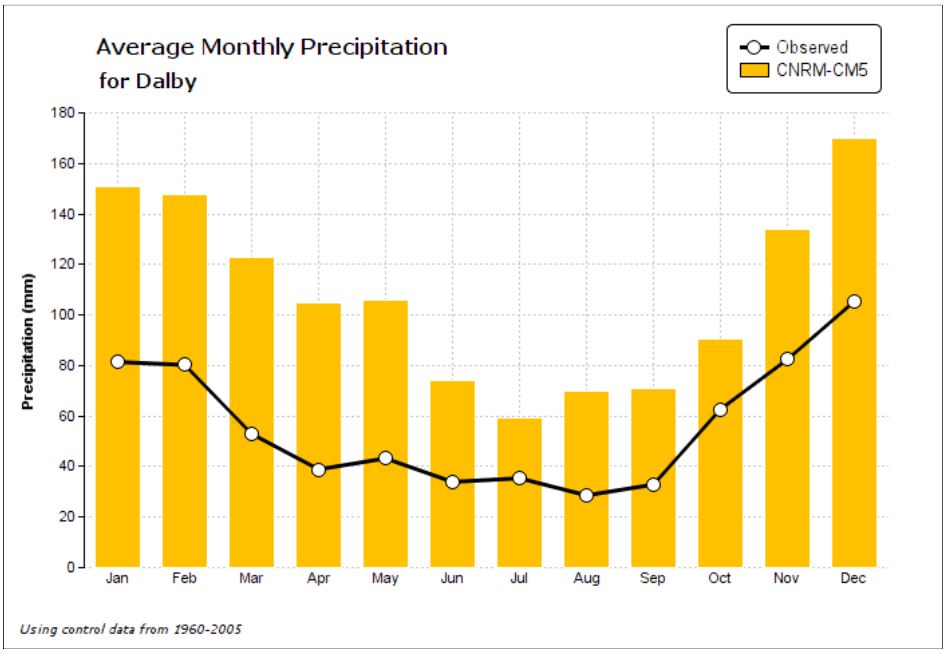


Figure A2. 3: Comparing modelled Precipitation output from the CNRM-CM5 model with Observed data from Dalby, Queensland showing a consistent bias throughout the year.

While discrepancies may be partly explained by comparing a point based historic record (SILO) with a larger area based average which may include coastal and/or locations at differing altitudes (predicted model outputs), the bias was neither consistent throughout the year nor did it match a similar region based average derived from actual observation stations for the same region.

Average Temperature and Radiation data displayed a similar bias for most models but was generally within plus/minus a few degrees/MJ.

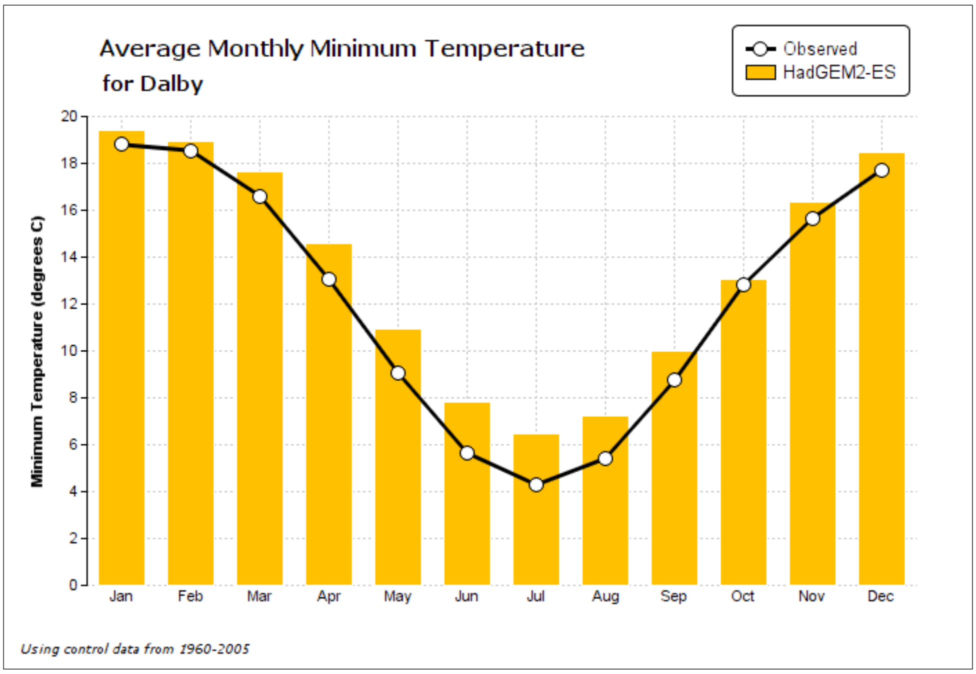


Figure A2. 4: Comparing modelled Minimum Temperature output from the HADGEM2-ES model with Observed data from Dalby, Queensland showing a consistent bias of 1° - 2° degrees throughout the year.

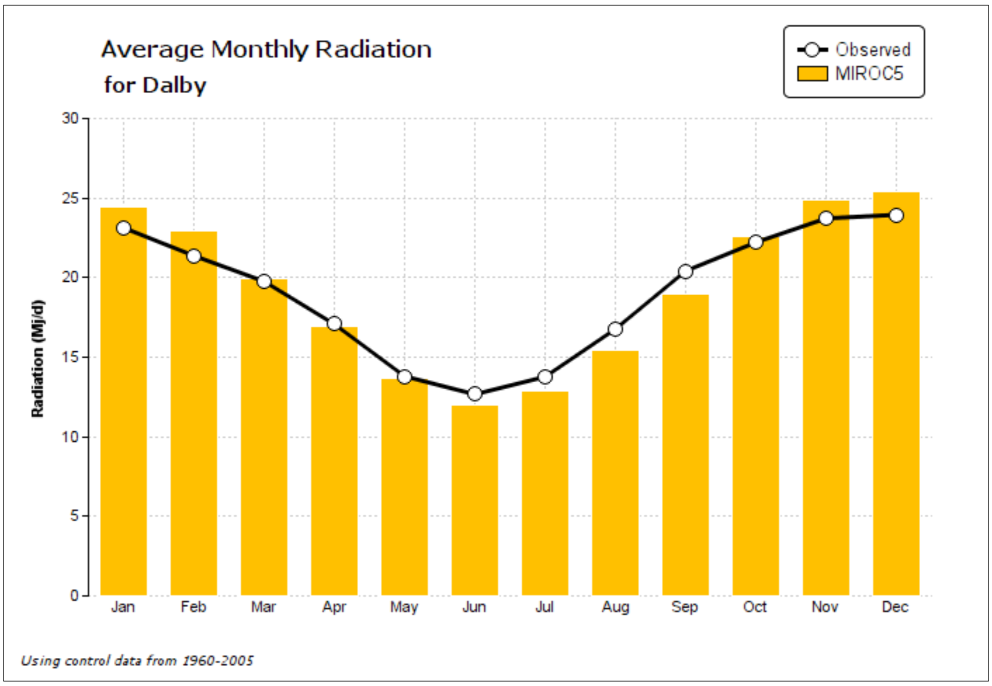


Figure A2. 5: Comparing modelled Radiation output from the MIROC5 model with Observed data from Dalby, Queensland showing a consistent bias of 1 - 2 MJ throughout the year.

In addition, preliminary assessment also involved running MEDLI models using observed SILO data from historic records for the five feedlot locations, and using predicted climate data from the historic time period (1960-1999) for the same locations.

Additional discrepancies were identified in preliminary MEDLI model comparisons that were considered to be mainly due to effects of the larger scales (time and area) inherent in the predicted datasets. There also appeared to be complications arising from the way that the stochastic processes were operating in the GCMs. It appeared that the climate variables for which data were being predicted were being modelled independently with no inter-variable dependencies. This was considered likely to interfere with comparisons to the fine-scale observed SILO data.

Following completion of preliminary comparisons, a decision was made to revisit the scaling of the climate model output and to downscale the modelled data to a smaller regional scale or a point location in order to produce data more likely to be consistent with observed SILO measurements and also more suitable for use in regional or site based modelling such as the MEDLI model.

A2.6 Revisiting data generation using downscaling

Traditional downscaling methods are generally developed using the relationships between local climate variables (e.g. surface air temperature and precipitation) and large-scale predictors based on monthly averages for example. Traditional methods were felt to have a potential drawback in that they may obscure fine-scale variation and extreme events such as very heavy rainfall or extreme changes in temperature that may occur over a short period of time. The project was particularly interested in these fine-scale events because of the impact of such variability on overtopping risk and heat load risk.

As a result a novel approach to downscaling was applied. Key statistics were extracted from the daily data generated by the CMIP5 models and these were used in the downscaling process, applied on a monthly time-frame and re-run every 10 years to maintain the decadal shifts in the data.

The statistics extracted included:

- Average Minimum and Maximum Temperate
- Standard Deviation of Minimum and Maximum Temperate
- Average Rainfall
- Standard Deviation of Average Rainfall
- Skew of Average Rainfall
- Probability of Dry Day following a Wet Day
- Probability of Wet Day following a Wet Day
- Average number of Rain Days
- Average Solar Radiation
- Average Wind Speed
- Standard Deviation and Skew of Wind Speed

The impact of this additional downscaling process was to retain the variability associated with climate-change model runs while re-calibrating the model predictions so that they would incorporate the dependencies observed in historical real-world records. The result has been the development of novel methodology that can be applied to similar climate model prediction data to achieve the combined goals of retaining prediction attributes about future climate variability while simultaneously calibrating the data based on historical real-world records.

This downscaling approach enabled the generation of predicted climate data for historic time periods at a daily time-step that had a high level of agreement when compared to observed historic data from the same locations. The same approach was then applied to the generation of predicted future climate data.

Daily climate datasets were then generated for each combination of five locations (Caroona, Comet, Dalby, Leeton, Narrogin), five GCMs (CNRM, GFDL, HD, MIR, MRI), four scenarios (no change, RCP2.6, RCP4.5, RCP8.5) and three time periods (1960-1999, 2010-2049, 2050-2099).

The downscaled daily data was reformatted and delivered as individual ASCII files for direct input into the MEDLI model.

Checking downscaled daily data against observed SILO data indicated good general agreement as shown in the following figures.

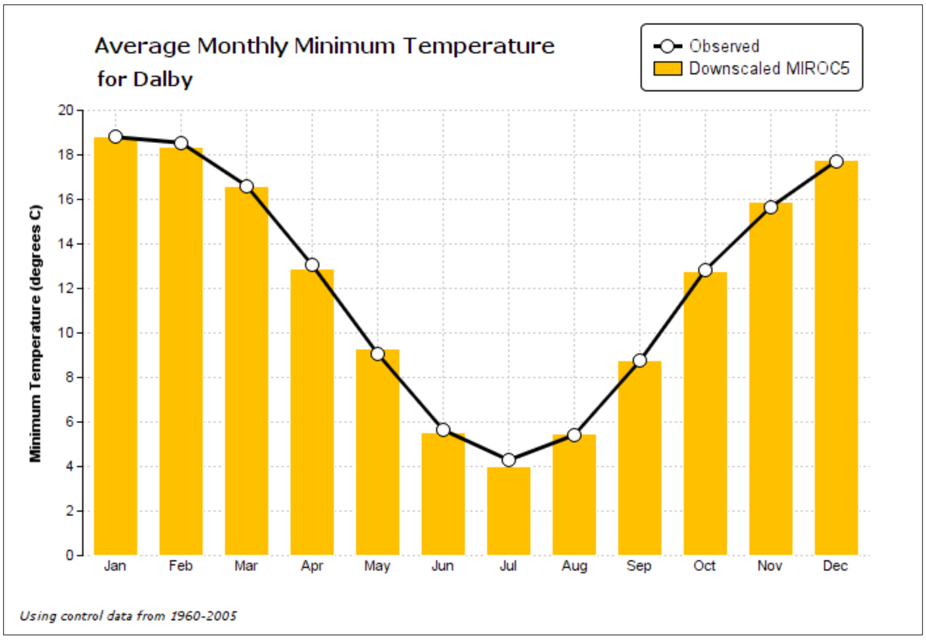


Figure A2. 6: Comparing Observed Minimum Temperature data from Dalby, Queensland with downscaled data from the MIROC5 model using the Historical scenario data.

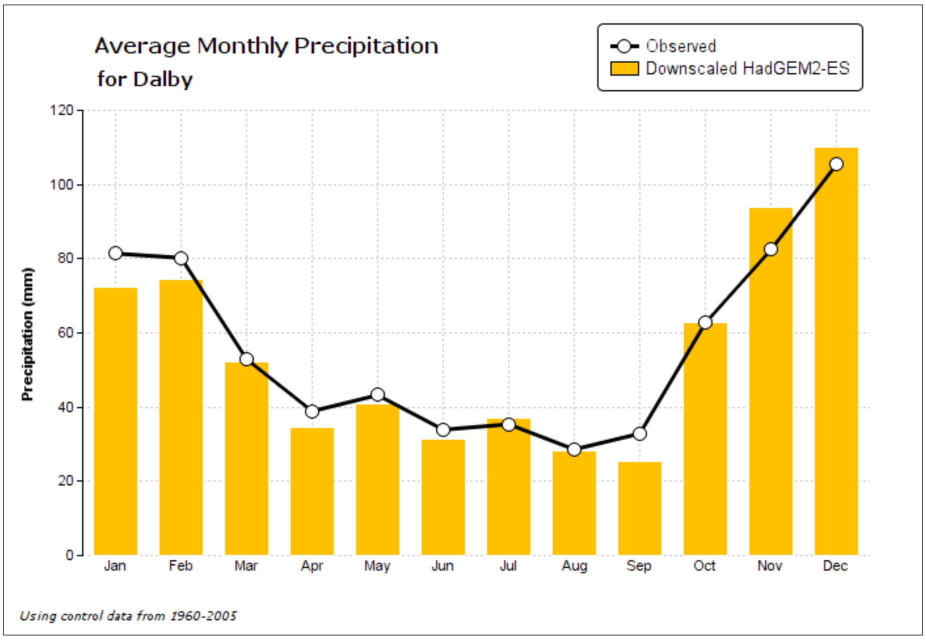


Figure A2. 7: Comparing Observed Precipitation data from Dalby, Queensland with downscaled data from the HADGEM2-ES model using the Historical scenario data.

A2.6.1 Further sub-daily downscaling for HLI models

The HLI model framework used to model accumulated heat load in cattle over time, required predicted climate data to be generated at a sub-daily scale (hourly data).

The CMIP5 climate change models provided limited sub-daily data at 3 and 6 hourly timescales but did not provide data at hourly intervals. The downscaling techniques used in generating daily data for the MEDLI modelling were not able to be used to generate sub-daily data for the HLI modelling due mainly to the lack of sub-daily observed data for each location.

Sub-daily data was therefore generated from predicted climate model outputs at coarser time scales by applying empirical functions to provide an hourly dataset suitable for heat load modelling.

Where possible techniques were used which incorporated multiple variables to ensure a cohesive dataset. Examples of published techniques included papers dealing with temperature (Cambell 1985), relative humidity (Allen et al 1998; Waichler and Wigmosta 2003), and solar radiation (Liu and Jordan 1960).

As wind speed is not related to any other variable and would only be determined at random it was decided to use the daily average for each hourly time step.

Appendix 3 Feedlot hydrology modelling

High density livestock numbers in feedlots produce wastes (manure and other waste) containing significant amounts of organic matter, nutrients (N, P, K), salts and potential pathogens. Surface runoff has the potential to result in environmental contamination with waste products. Controlling feedlot runoff protects water quality by preventing contaminants in feedlot runoff from entering local surface water or leaching into groundwater and conserves valuable, nutrient-rich manure for use in land irrigation.

Feedlots are designed to minimise the catchment area that generates contaminated runoff and to control the runoff that does occur through drainage channels and sedimentation basins and holding ponds. The design objective is that holdings ponds should be large enough to store runoff from major storms and/or runoff from long-term sustained rainfall when extended rainy periods prevent irrigation so that feedlot runoff does not cause contamination of surface waters. The ponds should have sufficient capacity for overflows to be limited to an acceptable frequency (return period).

A3.1 Feedlot Holding Pond Design Guidelines

The design objective for feedlot runoff control systems is to size the holding pond so that pond overflows to natural watercourses only occur at an acceptable frequency. Historically, the design methodology for a feedlot was specified in the relevant state guidelines. These are briefly described below.

A3.1.1 Queensland

The Reference Manual for the Establishment and Operation of Beef Cattle Feedlots in Queensland (Skerman, 2000) uses the following equation for determining the required pond volume for any combination of component catchment areas:

$$Holding\ Pond\ Volume(ML) = C_p x A_p + C_h x A_h + C_s x A_s$$

Where C_p, C_h & C_s are the coefficients for the pen, hard and soft catchment areas respectively, for the feedlot site, and

A_p, A_h & A_s are the areas of the pens, hard and soft catchment areas in ha.

In the above equation, the controlled drainage area of the feedlot is divided into the three component catchment areas A_p, A_h and A_s, which are defined as follows:

A_p (Pens): production pens, handling and holding yards, hospital pens.

A_h (Hard): roads, drains, cattle lanes, manure stockpile area(s), sedimentation system(s), holding pond(s), car parks, building roofs, silage and grain storage bunkers

A_s (Soft): permanently grassed or vegetative areas

A3.1.2 New South Wales

The New South Wales Feedlot Manual (NSW Agriculture et al. 1997) recommends that the volumes needed for major storm events and for extended storage periods should both be calculated and the holding pond sized to accommodate whichever is greater. It states that for major storm events holding ponds should be capable of retaining at least a one in 20 year, 24 hour storm event, using volumetric runoff coefficients of 0.8 for feedlot pens, roadways and other hard stand areas and 0.4 for grassed areas within the controlled drainage area.

A3.1.3 Western Australia

The Western Australia Feedlot Guidelines (Western Australian Lot Feeders' Association 2002) recommends that the volumes needed for major storm events and for extended storage periods should both be calculated and the holding pond sized to accommodate whichever is greater. It states that the pond should have sufficient capacity to retain a 10-year return frequency 72 hour storm event using a runoff coefficient of 0.8 for the feedlot and associated works.

A3.1.4 National Feedlot Guidelines

Experience has shown that holding ponds designed using these simple formulae often overtop at an unacceptable frequency. Consequently, the new National Guidelines for Cattle Feedlots in Australia (MLA 2012) recommend the use of daily-step hydrological modelling of the controlled drainage area and holding pond to establish that the proposed holding pond would spill less frequently than an average of one in ten years (or one in 20 years in the case of an evaporation pond).

Specifically, the design standard from the National Guidelines is Holding ponds should have sufficient storage capacity so that:

- Normal holding ponds (*i.e*. those from which wastewater is routinely extracted for land application) spill no more frequently than an average of 1 in 10 years, and
- Evaporation ponds (*i.e*. those from which there is normally no land application of captured wastewater) spill no more frequently than an average of 1 in 20 years.

For this project, all feedlots have been designed to this standard and local state guidelines have not been used.

A3.2 National Guidelines Holding Pond Design Methodology

According to the National Guidelines, an acceptable design method is to us daily-step hydrological modelling of the controlled drainage area and holding pond to establish that the proposed holding pond would spill less frequently than an average of 1 in 10 years (or 1 in 20 years in the case of an evaporation pond). The meteorological data set used should be representative of the site and cover a period of at least 100 years (*i.e*. a data set covering ≥36 524 days). The SILO data drill can be used to obtain representative data (MLA 2012).

A number of small catchment hydrology models are commonly used in the design of a feedlot. Provided these models are known to regulatory authorities, or sufficient information can be provided on the computations and assumptions (along with data files), these models should generally be acceptable to regulatory authorities.

The runoff calculations should be applied in a water balance for the holding pond that accounts for the following:

- Evaporative losses
- Seepage losses
- Any extractions made for the land application of wastewater
- The pond capacity utilised in storing sludge.

Modelled wastewater applications should be based on correcting the soil moisture deficit and meeting plant nutrient needs based on their growth stage. Assumptions made about the timing of applications (*e.g*. application only made in fine weather in the 'x' weeks prior to seasonal cropping) should be explicitly stated. In addition, reasonable expectations of cropping activity and the yields in that location should be used (*i.e*. the modelled wastewater applications must realistically reflect expected management practices).

The holding pond water balance will typically have to be run through a number of times to determine a pond capacity that notionally spills at the required frequency (*i.e*. no more often than an average of 1 in 10 years for a 'normal' holding pond and 1 in 20 years for an evaporation pond). It is acknowledged that once a pond has 'spilled' in this type of modelling, the likelihood of another modelled spill occurring within the next few days is quite high. Thus, modelled spill events within 30 days of one another should be treated as a single spill for the purpose of these model calculations. In reality, it is more likely that a feedlot manager would be able to intervene in these circumstances, and possibly avert secondary spills.

An allowance of at least an additional 10% of pond storage capacity should be made to accommodate sludge that will progressively build up in the pond.

In this project, the daily-step hydrological model used was MEDLI (Gardner and Davis 1998; Atzeni et al 2001).

A3.3 Feedlot Hydrological Modelling using MEDLI

A3.3.1 MEDLI Introduction

MEDLI® is a Windows®-based computer model for designing and analysing effluent disposal systems for intensive rural industries, agri-industrial processors (e.g. abattoirs) and sewage treatment plants using land irrigation. It was developed jointly by the CRC for Waste Management and Pollution Control, the Queensland Department of Natural Resources (now Department of Science, Information Technology, Innovation and the Arts - DSITIA) and the Department of Primary Industries (now Department of Agriculture, Fisheries and Forestry - DAFF), Queensland.

MEDLI models the effluent cycle from its production in an enterprise through to the disposal area and predicts the fate of the water, nitrogen, phosphorus, and soluble salts. MEDLI is very flexible and can be applied to piggeries, feedlots, abattoirs, municipal sewage treatment plants, dairy sheds and any situation where the user can define the waste stream characteristics over a typical year based on measured data, e.g. for a food processing factory, or facility utilising an on-site STP system such as an island resort or school camp. Gardner & Davis (1998) provides more details about MEDLI.

MEDLI can undertake water and nutrient balances throughout the waste generation, holding pond and irrigation area components of the facility being assessed. In this project, only water balance modelling is relevant. Hence, detailed descriptions of the nutrient balance components of MEDLI are not included.

A3.3.2 Modular Structure of MEDLI

MEDLI is a modular Fortran program driven by a Windows user interface written in C/C++. The modular structure of MEDLI is shown below. Most of the modules were pre-existing, pre-tested models that were integrated into MEDLI to form a complete system model.

The feedlot module is part of the Waste Estimation module.

When used to model the hydrology of a feedlot, MEDLI runs in two stages. The initial stage predicts the runoff from the feedlot catchment on a daily basis during the period nominated by the user (Feedlot Runoff Module). The runoff data is then used as a variable effluent stream input (waste estimation) to the pre-treatment system and treatment pond / effluent irrigation system.

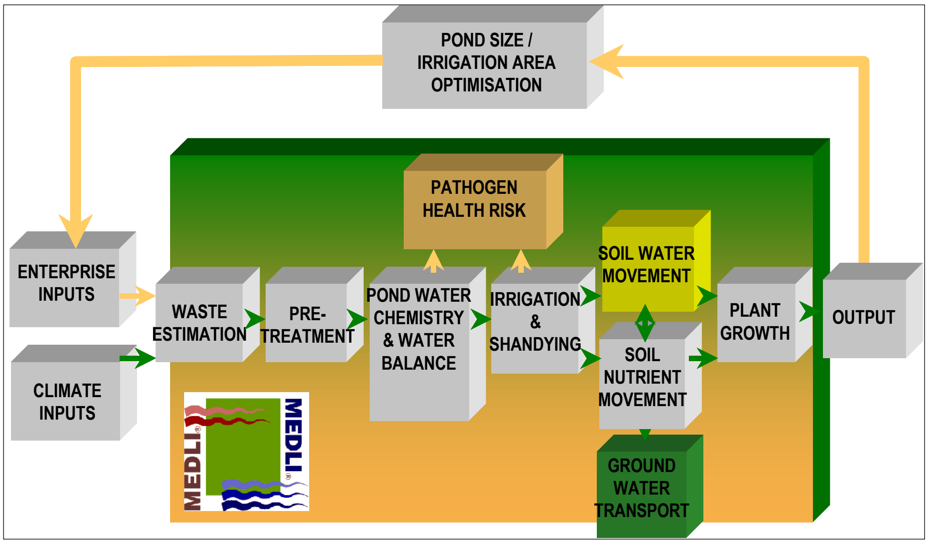


Figure A3. 1: Modular Structure of MEDLI

A brief overview is given in the following sections of the non-feedlot components of MEDLI. These modules are common to all uses of MEDLI. With the exception of the Waste Estimation module these components are common to all users of MEDLI regardless of the application.

A3.4 MEDLI - Non-Feedlot Modules

A3.4.1 Climate Input Module

MEDLI requires daily-time-series climate data for estimating crop water requirements, simulating crop growth and carrying out water balance computations (including feedlot runoff). The data required are daily rainfall, maximum and minimum temperatures, Class A pan evaporation and solar radiation. Concurrent sequences of data for all the climatic variables are generally not available at sites where intensive rural industries (*e.g.* piggeries, feedlots, abattoirs) may be proposed. Long time sequences (e.g. >50 years) are needed to capture the effect of climatic variability. A location and period is selected from those sites available to the user through the Enterprise / Location and Period Menu. To assist MEDLI users in obtaining weather data, the Queensland Climate Change Centre for Excellence (QCCCE) supplies data derived from interpolation of daily climatic surfaces for any location in Australia.

For the purpose of this project, historical climate data was sourced for designing the representative feedlots at each location. The source of the historical climate data used was the 'SILO Data Drill' of the Queensland Government[7].

A3.4.2 Waste Estimation Module

Depending on the type of industry involved, the waste estimation component of MEDLI uses the required inputs (e.g. herd composition and manure excretion rates for feedlots and piggeries; dry weather flow for sewage treatment plant, etc) to predict the daily chemical composition and volume of the effluent stream before any subsequent dilution, pre-treatment, treatment and storage in holding ponds or irrigation.

In this project waste estimation for feedlots was managed separately using the BEEFBAL spreadsheet tool (Davis et al 2012). Estimates of daily waste were generated as outputs from the BEEFBAL tool and were then used as inputs into the MEDLI model.

A3.4.3 Waste Pre-treatment Module

MEDLI includes an option to pre-treat an effluent stream prior to the effluent entering the pond system. The pre-treatment module has the effect of removing various fractions from the raw waste. It is implemented by choosing a pre-treatment method from a list of options that have default water, solids and nutrient removal fractions associated with them. The user can override the default removal fractions.

Sedimentation basins are commonly used in feedlots to reduce the solids loading rate on the holding pond. In that respect, they are essentially a pre-treatment device that removes fractions of water, solids and nutrients from the raw runoff. For the purpose of the MEDLI feedlot module, a sedimentation basin can be implemented by choosing it as the pre-treatment option.

Unlike other pre-treatment devices such as a static run-down screen, the footprint of the sedimentation basin can be substantial in area and forms part of the feedlot catchment area. Therefore, its surface area must be included as part of the "hard" catchment area in the feedlot design parameters.

[7] http://www.longpaddock.qld.gov.au/silo

A3.4.4 Pond Chemistry and Pond Water Balance Module

MEDLI models the water and nutrient balances of up to four ponds in series. For most feedlots, there is only one pond. In MEDLI, irrigation is always drawn from the last pond in the series.

A3.4.5 Irrigation and Shandying Module

The irrigation module calculates an irrigation demand based on soil water condition and crop water requirement. Whether this irrigation demand is applied is determined by limitations in the irrigation system and water availability. Availability of water is governed by the amount of water in the holding pond (last pond in the series) and by the availability of an external water source (shandying water).

Irrigation can be triggered as a daily amount, a given soil water deficit, or a given percentage of the plant available water capacity. The latter two triggers are updated daily in the soil water balance module. A range of irrigation systems can be defined which influence the maximum irrigation rate possible (ML/ha/day) and the volatilisation loss of ammonia from the effluent during irrigation.

The shandying module enables the use of an external water source for the purpose of increasing the supply and quality of the irrigation water. This external source of water can be introduced when there is insufficient water in the storage pond and/or the effluent, or the pond effluent has too high a salinity and/or nitrogen concentration for sustainable irrigation.

A3.4.6 Soil Water Movement Module

Modelling of the movement of water from irrigation and rainfall through the soil is a key part of the MEDLI program, ultimately determining irrigation frequency, pond overtopping, plant growth, nutrient and salt movement.

A3.4.7 Soil Water Balance

Soil water movement is simulated as a one-dimensional (vertical) water balance, averaged over a field-sized area. The water balance component was taken from PERFECT (Littleboy et al. 1989, Littleboy et al. 1992) which was based on water balance models as used in CREAMS (Knisel 1980) and similar models.

The soil profile has a maximum of four user-defined layers of variable thickness, with each layer assigned an air-dry component, lower storage limit, upper storage limit, total porosity, bulk density and saturated hydraulic conductivity. Soil water of each soil layer is updated on a daily basis by computing rainfall, irrigation, runoff, soil evaporation, transpiration and drainage.

A3.4.8 Runoff/Infiltration

Irrigation is assumed to infiltrate the soil surface with no runoff. Runoff from rainfall is predicted using the Curve Number method (K) (USDA-SCS 1972) and is calculated as a function of daily rainfall, soil water deficit, plant total cover and the user-defined Curve Number (K).

A3.4.9 Evaporation

Soil evaporation is based on a two-stage soil evaporation algorithm by Ritchie (1972) as modified in PERFECT (Littleboy et al. 1989). Stage 1 drying equals the potential evaporation rate (i.e. demand limited) and continues until the cumulative amount evaporated exceeds a user-defined limit. Stage 2 drying is a soil supply rate limited process, with the rate of evaporation proportional to the square root of time. This rate is calculated from another user-defined parameter. Both parameters are related to soil texture. Evaporation will remove soil water from the two upper profile layers until the top layer reaches its air-dry moisture content and the second layer reaches its lower storage limit.

A3.4.10 Transpiration

Plant transpiration is determined from soil water content, plant canopy cover and Class A pan evaporation. The potential transpiration demand is estimated as the product of canopy cover, daily pan evaporation and user-defined maximum crop coefficient. The plant will transpire this amount unless limited by its ability to extract water from the soil profile (potential extraction rate). Transpiration is partitioned across the different soil layers within the root zone such that the pattern of extraction favours the wetter layers, and only involves those layers with available soil water.

A3.4.11 Deep Drainage

When a soil profile layer is above its defined Upper Storage Limit (i.e. field capacity) following an infiltration event, it is assumed that drainage occurs from this layer. The drainage algorithm from EPIC (Sharpley and Williams 1990a & b) is used to predict the proportion of the drainable water (in excess of the Upper Storage Limit) that will drain on a particular day. The most important parameters are drainable porosity and saturated hydraulic conductivity. Under profile saturated conditions, drainage can also occur by saturated flow. The amount that can be infiltrated in one day is equivalent to half the saturated hydraulic conductivity. When a saturated profile cannot repartition all the predicted infiltration into saturated drainage, the excess is routed as runoff.

A3.4.12 Soil Nutrient Movement Module

Modelling the nitrogen cycle is important for sustainable design of effluent reuse schemes because nitrate ions are very mobile and can degrade the quality of groundwater. The total amount of nitrogen applied must be accounted for in crop uptake, denitrification, volatilisation, seepage to groundwater, and storage in the soil. MEDLI has adopted a simplified approach to modelling the nitrogen dynamics in the soil on a daily time step.

Only nitrogen in the nitrate form is assumed to be potentially mobile. Nitrate may be denitrified and lost to the atmosphere as gaseous N, or it may be leached to lower soil profile layers. Leachate entering a soil layer is assumed to mix completely with the soil solution. The amount of nitrate that leaches from that layer is the product of the amount that is drained from that layer into the layer below (determined in the soil water balance module) and the nitrate concentration of the soil solution mix. Ammonia volatilisation is only assumed to occur during the actual irrigation event. Once infiltrated into the soil, volatilisation losses from effluent are assumed to be negligibly small (Thompson et al. 1987).

Modelling of the phosphorus in soils is important for the sustainable reuse of effluent to ensure that the phosphorus holding capacity of the soil is not exceeded. Levels of soil phosphorus in excess of the soil's phosphorus holding capacity may result in seepage of phosphorus to groundwater, and high levels of phosphorus in runoff. MEDLI simulates the movement of phosphorus through a soil profile by modelling adsorption of phosphorus to soil particles, desorption of phosphorus into soil water, and plant uptake of phosphorus. The amount of phosphorus leached through the soil layers is a function of its soil solution concentration and the total amount of drainage passing through that layer.

The effect of soil profile salinity under the given irrigation/climate regime on plant growth is determined using *steady-state* algorithms. Hence, salinity is not modelled by a daily time step, but uses values averaged over a user-specified number of years (usually about five years). The fraction of total infiltrated water moving between the soil layers, and the salinity and quantity of rain and irrigation water is used to predict the root zone salinity, using mass balance algorithms taken from the steady-state leaching fraction model (USSL(1954); Shaw and Thorburn (1985)). The yield reduction is then estimated from phenomenological relationships of plant salinity tolerance (e.g. Maas and Hoffman (1977)) for the specific crop of interest.

A3.4.13 Plant Growth Module

The plant growth modules predict the biomass accumulation and the quantities of N and P that are removed from the effluent irrigation site through crop growth and the export of harvested material. Flexibility is gained through the provision of a dynamic pasture growth model and a dynamic crop growth model. MEDLI uses a dynamic pasture growth and crop growth module but no further details will be provided here.

A3.4.14 Groundwater Transport Module

The groundwater model (PLUME) used in MEDLI is an extension of an earlier model that was applied to predict the fate of contaminants in the long-term, and over long distances in aquifers subject to diffuse source contamination. The basis for that model and comparisons between its performance and that of a well-established numerical solute transport model are documented in Dillon (1989).

A3.4.15 Output Module

MEDLI can be run to produce either a text Summary Output or Full Output incorporating a text and graphics data presentation. A Full Output run requires about 20 megabytes of data storage for a 100-year run. The Summary Output consumes about 1% of this storage requirement.

A3.4.16 Summary Output

The Summary Output provides general run identification information and a summary of average monthly climate variables, the soil hydraulic properties, and the waste stream characteristics. Hydraulic, nitrogen, phosphorus and salinity mass balances are reported for the pond system including the frequency/size of pond overtopping events. The nutrients stored and removed from the pond in the sludge and supernatant are also listed.

The hydrology components of the irrigation area (runoff, drainage, irrigation, transpiration etc) and components of the soil nitrogen, phosphorus and salinity balances are listed. Plant growth and any soil salinity restrictions and nutrient storage values are also listed. The general summary concludes with information on groundwater quality due to nitrate leaching beneath the irrigation area. The summary can be printed or viewed on screen.

A3.4.17 Full Output

The Full Output option saves daily results for all the parameters from the simulation and allows graphing of any output parameter at a range of time scales (daily, monthly, yearly) and statistical types (e.g. mean, minimum, maximum, total). The Full Output option allows graphing of various pond, plant, soil water, soil nutrient, irrigation and climate parameters. In addition, a comprehensive report file is available for tabulated results. Additional parameters specific to the pathogen and feedlot modules are generated if these options are chosen.

Overlaid graphs can be created using multiple parameters from the same run, or across multiple runs. A simultaneous text file can be opened for each graph to view the actual data. ASCII text files can be exported and used in other programs such as Excel. Graphs and time scales can be zoomed or compressed and there are printing and file saving capabilities. For this project, the output ASCII files have been used for further data analysis and graphing.

A3.5 MEDLI - Feedlot Module

A3.5.1 Overview

Feedlots are modelled in Version 2.0 of MEDLI using the Waste Estimation/Feedlot option. For the purposes of this and other MLA-funded projects, FSA Consulting was supplied with MEDLI Version 2.0 in order to beta-test the unreleased MEDLI feedlot model developed by Atzeni et al.(2001). In consultation with FSA Consulting, DAFF (formerly DPI&F) significantly revamped the feedlot model's hydrology component in 2003 for the purposes of predicting and generating daily surface and sub-surface pad moisture output.

The feedlot module models the dynamics of the feedlot pad and predicts the quantity and quality of runoff from the pad and surrounding catchment following rainfall. The model, in conjunction with a pre-treatment option, predicts the quantity and quality of runoff entering a feedlot holding pond. The module is a deterministic, daily time-step Fortran program (feedlot.exe) which generates the runoff details (date, volume, concentrations) for the run period and writes them to the waste parameter file which then becomes an input file for the main MEDLI program. The feedlot module includes the Enterprise Inputs and Waste Estimation module of the overall MEDLI model. Figure A3. 2 shows the assumed layout of a feedlot as modelled by MEDLI.

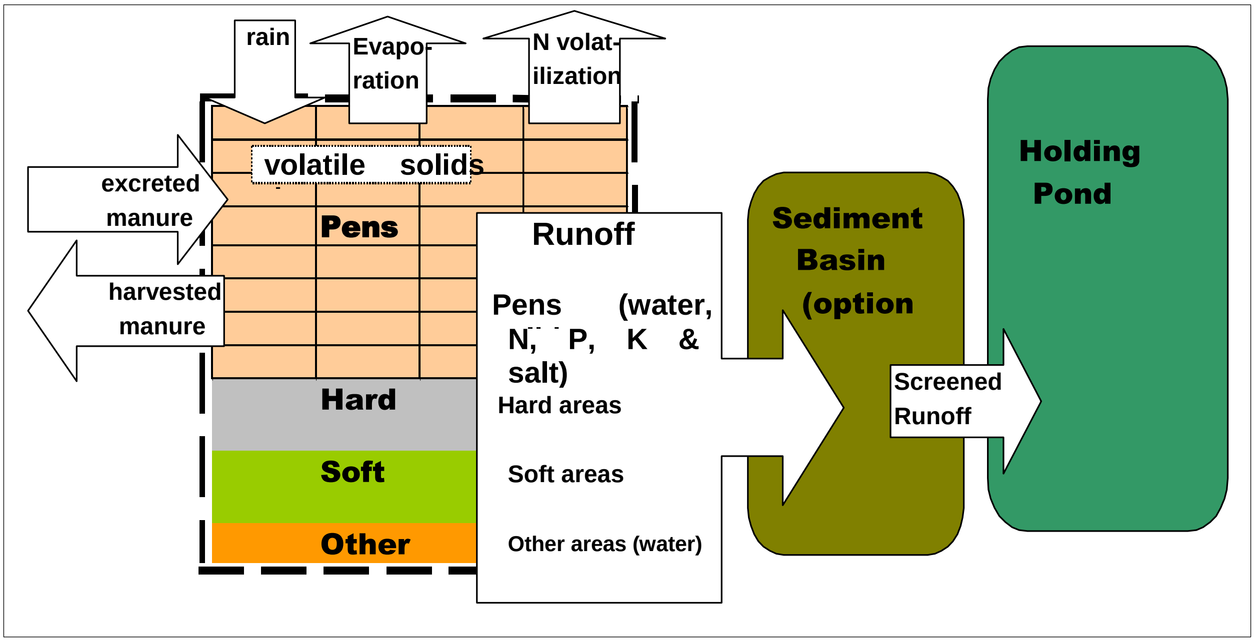


Figure A3. 2: Schematic Layout of Feedlot for MEDLI

In the context of MEDLI's overall design, the predicted runoff events from the feedlot represent the **Waste Stream Estimation** for the enterprise over the nominated simulation period. A sedimentation basin (if present) is implemented as a **Pre-treatment option** and the receiving pond (holding pond/evaporation basin) is implemented as an **Anaerobic Pond** in which the solids settle to the sludge layer, N and P are partitioned between the sludge and supernatant, and total dissolved salts are assumed to remain in solution (see Figure A3. 2).

The design of a feedlot enterprise in MEDLI is extremely flexible with provision for modifying:

- Market composition of the herd
- Occupancy rates
- Manure excretion rates
- Stocking density
- Catchment configurations
- Manure pad hydrology
- Runoff behaviour of non-pen areas
- Pen maintenance rules
- Manure harvesting limitations

In addition to the usual time-series outputs common to all MEDLI scenarios, feedlot scenarios generate additional time-series data pertaining to the feedlot catchment and runoff characteristics that allow the user to critically assess the behaviour of the feedlot model. These daily outputs include:

- Surface and subsurface manure depth
- Surface and subsurface pad moisture content
- Pad nutrient and salt concentrations
- Pad surface temperature

- Pen evaporation
- Equivalent USDA runoff estimate

MEDLI models each pen separately. This is because, at any one time, different pens could be empty or full of cattle and/or recently cleaned or heavily manured. These factors affect pen hydrology and odour generation. The user defines the number of pens. MEDLI generates time-series data (during a Full Run) for both a single pen, viz. the first modelled pen (Pen No 1), as well as averaged data across all pens.

The feedlot Summary Report (provided as part of a MEDLI Summary Output) includes information on annual runoff, harvesting rates, average pad nutrient and dry matter composition. In addition, the model compares its runoff predictions to those using the USDA curve number approach adopted by Skerman (2000). The soft and hard area runoff components are predicted in MEDLI using the same approach as Skerman (2000). All things being equal, differences in the feedlot runoff predictions between the two models are due to the pen runoff predictions.

A3.5.2 Feedlot Enterprise Definition

The modelled feedlot is defined in terms of its licensed capacity expressed as Standard Cattle Units (SCUs). Standard Cattle Units are a concept defined in the Queensland feedlot guidelines Skerman (2000) as a means of standardising manure output from a feedlot. One SCU equates to a beast with an exit weight of 600 kg. Conversion factors are presented in Skerman (2000) to allow cattle destined for different markets that have different exit weights to be expressed as SCUs.

The operating number of SCUs for each market type is calculated from the following Waste Estimation\Feedlot inputs:

- Market composition of the herd (% of licensed capacity).
- Entry and exit weights, feeding period, and occupancy rate for each market type (Technical menu, see Figure A3. 3).
- Herd mortality rate (Technical menu).

In practice, a feedlot is unlikely to be 100% occupied. Industry data suggests long-term occupancy rates are 60% to 85% depending on market conditions. Consequently, some production pens will be empty at any given time. For modelling purposes, the default approach apportions the nominated number of pens according to the herd composition.

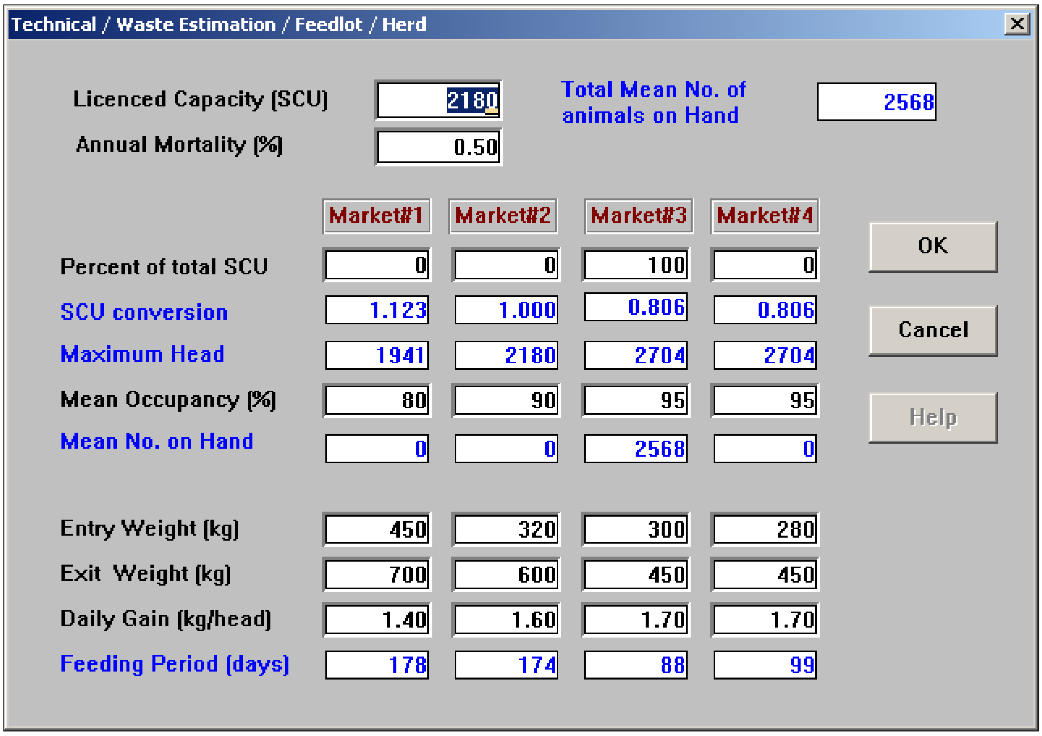


Figure A3. 3: Technical Menu – Waste Estimation / Feedlot

A3.5.3 Manure production

Once the size, market types and proportions of the feedlot herd have been defined, the next step is to estimate the amount of manure produced per head. Manure production data is important as the depth and moisture content of manure on the pen surface has a large influence on runoff and odour generation.

Manure is the combination of faeces and urine. Hence, it contains solids and water. The solids (dry matter or Total Solids, TS) can be partitioned between Volatile Solids (VS) and Ash (or Fixed Solids (FS)). The volume and composition of fresh feedlot cattle manure depends on a number of factors. These include:

- The ration type fed to the cattle
- The amount fed to the cattle
- The quantity of water drank
- The salinity of potable water

MEDLI Version 1.13 included a Digestibility Approximation of Manure Production (DAMP) model (Barth 1985a) to estimate manure production. This version also included a simple mass-balance approach to manure production, and after accounting for ration type, daily intake and daily gain, manure production was expressed as grams per kg of liveweight. This meant that for very large cattle, manure production was very high. Also, for long-fed cattle, there was a considerable change in manure production rates during their time in the feedlot.

However, subsequent research by van Sliedregt et al. (2000) showed that this model did not accurately predict manure production in feedlots. Figure A3. 4 shows a typical relationship between dry matter intake and days on feed for feedlot cattle (taken from van Sliedregt et al. (2000)). This data shows that, for most feeding ranges, feed intake (and thus manure production) is reasonably constant with days on feed. This is contrary to previous assumptions. In Version 2.0 of MEDLI, it is assumed that, for each market type, manure production is fixed and constant at a user-defined value.

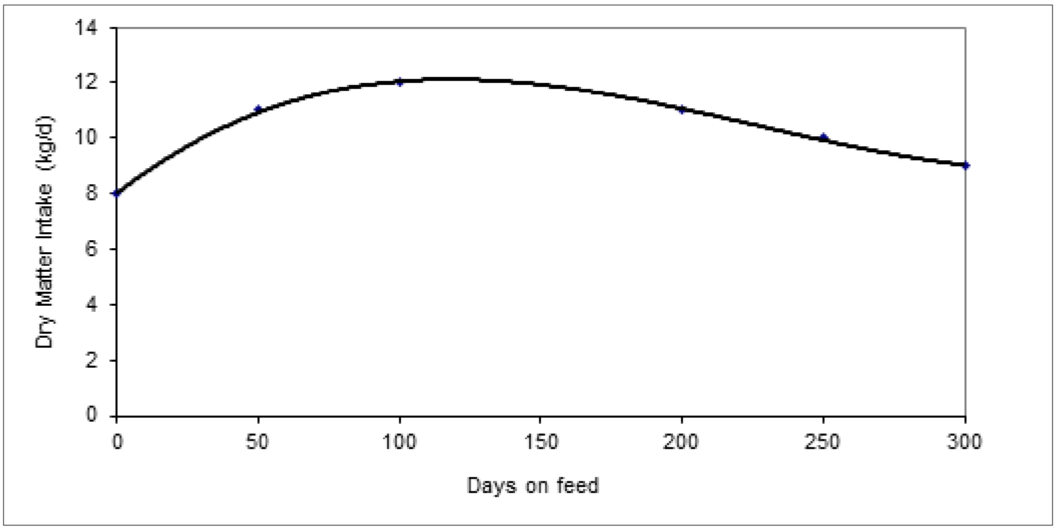


Figure A3. 4: Relationship between feed intake and days on feed

In Version 2.0, the manure production values (Total Solids, Volatile Solids, Nitrogen, Phosphorus, Potassium and Salt) are no longer calculated within MEDLI. The user must enter them. It is recommended that the BEEFBAL model produced by DAFF be used to estimate these manure production values. This model uses a modified version of the DAMP model called the Dry Matter Digestibility Approximation of Manure Production (DMDAMP) to predict the amount of TS, VS and ash excreted by feedlot cattle. Davis et al. (2012) have recently completed a project to validate BEEFBAL and their report provides background information about the formulae used in BEEFBAL.

A3.5.4 BEEFBAL Calculations

To obtain the manure production values (Total Solids, Volatile Solids, Nitrogen, Phosphorus, Potassium and Salt) for each class of feedlot animal to be entered in MEDLI, a user may run the BEEFBAL model or may use other methods to make similar estimates.

BEEFBAL (QPIF 2004) was originally constructed as a tool to provide an estimate of quantity and composition of feedlot manure (both liquid and solid fractions) available for application after harvesting and storage. BEEFBAL is also used extensively to provide waste estimates for new and expanding feedlot development applications throughout Australia. BEEFBAL is a Microsoft Excel® spreadsheet model that is used to predict the amount of solids (total and volatile) and nutrients (nitrogen, phosphorus and potassium) excreted by feedlot cattle based on the improved model of DMD approximation of manure production DMDAMP (van Sliedregt et al. (2000)) and mass balance principles (Watts et al. 1994).

In BEEFBAL, a user can simply input the correct percentages of individual feed ingredients and the amount fed. If a user has more accurate information on feed ingredients, the dry matter digestibility and nutrient content of individual feed ingredients can also be modified. The diet information and intake should be as accurate as possible, as it will determine the annual excretion of solids and nutrients. The values entered in the diet and intake section are used to calculate the annual manure production in kilograms per head per year. These values are entered in the modified feedlot model (Figure A3. 2). The mass balance calculation is applied to each class of cattle in the feedlot. For any element (N, P, K, salt and ash) the amount excreted can be calculated.

MEDLI allows the input of up to four market types of cattle in a feedlot. Each market type has different liveweight on entry, daily gain and liveweight on exit (Figure A3. 3, Table A3. 1**Error! Reference source not found.**). Table A3. 1 gives typical entry and exit weights, average daily gain and dry matter intakes for different market types.

Table A3. 1: Typical Liveweight Gains and Feed Intake for Different Markets

Market	70 day	100 day	150 day	200 day	250 day	300 day
Days on feed	70	100	150	200	250	300
Liveweight in (kg)	340	420	420	450	450	450
Liveweight out (kg)	450	570	645	690	740	780
Avg. Daily Gain (kg)	1.7	1.65	1.5	1.3	1.15	1.1
Days on starter ration	5	5	5	5	5	5
Amount fed (DM) – Starter	8.1	8.0	8.0	8.0	8.0	8.0
Days on Inter. Ration	5	5	5	5	5	5
Amount fed (DM) – Inter.	9.0	9.0	9.0	9.0	9.0	9.0
Days on grower ration	5	5	5	5	5	5
Amount fed (DM) – grower	9.5	9.5	9.5	9.5	9.5	9.5
Days on finisher ration	55	85	135	185	235	285
Amount fed (DM) – finisher	10.3	10.8	11.1	11.1	11.0	10.8

A3.5.5 Excreted Volatile and Total Solids

The digestibility of a whole diet has been proposed as a way of predicting the total solids (TS), volatile solids (VS) and fixed solids (FS) or ash excreted by an animal. Barth (1985a) proposed a method called the Digestibility Approximation of Manure Production (DAMP) for predicting TS, VS and ash components of manure from a diet of known composition for any class of animal. The DAMP model uses the reported values of the percent total digestible nutrients (TDN) to calculate the inorganic and organic components of a ration available to the animal. The DAMP model requires as input the mass, percentage dry matter, percentage ash and percentage total digestible nutrients (TDN) of each feed component offered, and the level of feed wastage.

Van Sliedregt et al. (2000) proposed a modified version of the DAMP model called the Dry Matter Digestibility Approximation of Manure Production (DMDAMP) to predict the amount of TS, VS and ash excreted by feedlot cattle. The method uses Dry Matter Digestibility (DMD) instead of TDN values of individual ingredients to predict TS output. Volatile solids output was calculated using mass balance principles on the ash component of the feed and the ash retention of the animal. Davis et al. (2012) provides complete details on this component of BEEFBAL.

A3.5.6 Water Intake and Excretion

MEDLI calculates the drinking water intake of the cattle in the feedlot. The calculation of the drinking water intake is performed daily as a function of mean temperature with the equation fitted to the *Bos taurus* data collected by Winchester & Morris (1956). These calculations provide information on clean water requirements for the feedlot but are not used in the determination of the water content of manure.

Of the water consumed by cattle, some is respired and some is excreted. The DMDAMP model only calculates the dry matter excretion. To determine the amount of water excreted, it is necessary to know the moisture content of manure (faeces and urine). This is variable depending on ration processing method, ration ingredients and salinity of the drinking water. The quoted range is from 85% to 95% (wb). MEDLI requires a value to be entered for manure moisture content.

Using DMDAMP and an estimate of the moisture content of manure, it is possible to estimate the daily amount of dry matter, organic matter (volatile solids) and water excreted by different cattle and deposited on the pen surface (see Table A3. 2). This table shows that most feedlot cattle produce the equivalent of about 0.8-1.0 tonnes of dry matter (TS) per year, which must be harvested from the pen surface. MEDLI models this deposition and removal.

Table A3. 2: Calculated Dry Matter (TS) and Water Excretion by Feedlot Cattle

Days on feed	Manure Production (kg/hd/yr)		
	TS	VS	Water*
70	884	690	8841
100	915	714	9150
150	936	730	9361
300	852	686	8524

* assumes manure has 90% (wb) moisture content

This data can be converted to an annual equivalent depth of applied water with a knowledge of the feedlot stocking density and manure moisture content (Table A3. 3). Table A3. 3 shows that manure water is a significant component of the water balance of the feedlot pad. It is important to note that the assumed value of manure moisture content has a significant effect on the moisture applications and, therefore, the hydrology of the feedlot pad. If an upper limit (95%) is assumed, the data presented in Table A3. 3 is doubled. This aspect of feedlot hydrology needs further research if more accurate pad moisture contents are to be modelled.

Table A3. 3: Moisture Applications (mm/yr) by Feedlot Cattle at Different Stocking Densities

Days on feed	Stocking Density (m^2/hd)		
	10	15	20
70	884	589	442
100	915	610	458
150	936	624	468
300	852	568	426

* assumes manure has 90% (wb) moisture content

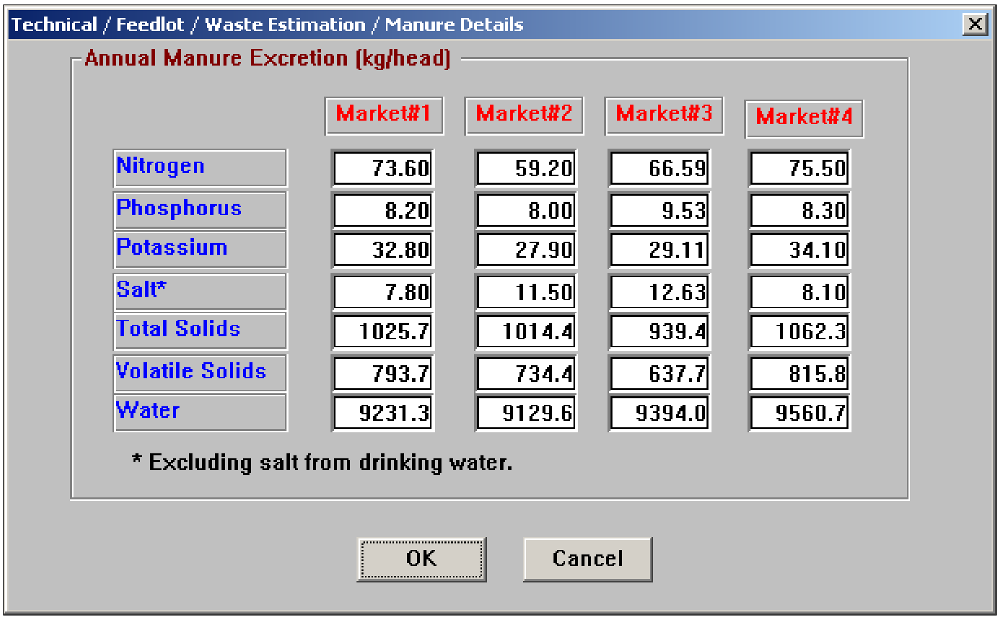
A3.5.7 Manure Accumulation

The amount of dry matter (TS) excreted per annum by four different types of market cattle (70, 100, 150 and 300 day) is shown in Table A3. 1. These manure excretion rates can be used to estimate the manure accumulation on the pad in mm/day by assuming a TS decomposition rate and the bulk density of manure. Table A3. 4 shows manure accumulation rates for various cattle market types (70, 100, 150 and 300 day) and stocking densities (10, 15 and 20 m^2/head) assuming a decomposition rate of 10% of total solids and a pad manure bulk density of 750 kg/m^2. These predictions do not take into account further losses that may occur in manure runoff from the pad or losses due to VS breakdown.

Table A3. 4: Predicted Pad Manure Depth (mm/d) for Different Market Types and Stocking Densities

Days on feed	Stocking Density (m^2/hd)		
	10	**15**	**20**
70	0.45	0.30	0.22
100	0.46	0.31	0.23
150	0.47	0.32	0.24
300	0.43	0.29	0.22

MEDLI uses this data to update the depth of the feedlot pad on a daily basis, which has an effect on the moisture holding capacity of the pen surface. The MEDLI feedlot model requires excreted manure characteristics to be entered on a kg/head/yr basis (Figure A3. 5).


Technical / Feedlot / Waste Estimation / Manure Details

Annual Manure Excretion (kg/head)

	Market#1	Market#2	Market#3	Market#4
Nitrogen	73.60	59.20	66.59	75.50
Phosphorus	8.20	8.00	9.53	8.30
Potassium	32.80	27.90	29.11	34.10
Salt*	7.80	11.50	12.63	8.10
Total Solids	1025.7	1014.4	939.4	1062.3
Volatile Solids	793.7	734.4	637.7	815.8
Water	9231.3	9129.6	9394.0	9560.7

* Excluding salt from drinking water.

OK

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Figure A3. 5: Technical Menu – Feedlot/Waste Estimation / Manure Details

A3.5.8 The Feedlot Pad

Once the quantity and quality of manure produced by the cattle has been estimated, the next step is to model the hydrological and nutrient balance of the feedlot pad (pen surface).

The subsequent composition and mass of manure left on the feedlot pad are influenced by the following factors:

- Frequency with which the manure is harvested from the feedlot pad
- Decay rate of volatile solids in the feedlot pad
- Volatilisation rate of nitrogen in the feedlot pad
- Amount of solids and bound nutrients and salt removed in runoff
- Amount of unbound nutrient and salts dissolved in runoff.

The feedlot module encompasses all these factors.

The current MEDLI feedlot model assumes there are two layers in the manure pad - the sub-surface (lower) layer and the surface (upper) layer. Water can move between the layers but the material below the lower layer is considered to be impermeable. This base material is typically well-compacted clay or gravel. The manure “interface” layer would be considered to be part of the lower layer. The depth of both manure layers changes dynamically in the model due to excretion, decay, harvesting, erosion and subsurface layer build-up. For the latter, it is assumed that when the depth of the surface layer is more than one tenth that of the lower layer that 1% (default) of the surface layer is redistributed to the sub-surface layer.

This has the effect of maintaining a fairly constant manure depth on the surface (a manure crust) with an increasing sub-surface layer while the pen remains unharvested. It is also assumed that no more than 90% of the surface layer is removed during a harvest event with the balance coming from the sub-surface. Effectively, this ensures there is always a surface layer present for the purpose of the model’s assumptions and calculations. The default bulk densities of the subsurface layer and surface layer are both 750 kg/m^3 but can be changed by the user. The depth of manure maintained above the pad's base is a user input. Given the thickness and bulk density, the mass of total solids in each layer can be determined, and consequently the mass of water for any specified threshold on a % dry basis (e.g., at air dry or drained upper limit).

In practice, pen manure is harvested on as-required basis, usually when the accumulated manure depth exceeds a certain level, rather than a fixed schedule as implied in most guidelines. Pen harvesting cycles can range from 2 to 12 months depending on the number of pens, stocking density, resources available for harvesting and the vagaries of the weather. It is normal practice to avoid harvesting manure that is too wet (say MC > 120% db), and to maintain a manure layer 25-30 mm thick above the interface layer. Both practices safeguard against ripping the impermeable interface layer. Nowadays, with improved cleaning technology and a change in manure management policy, an interface layer is becoming increasingly redundant and the maintenance depth is much lower, e.g. 10-20 mm above the impermeable base.

All these considerations make pen manure harvesting a difficult process to model with any accuracy, especially at pen level. Yet, it is an important hydrological aspect. The feedlot module incorporates pen manure management capabilities that govern when and how often the individual pens have manure removed from them and presumably stockpiled. The user defines the harvesting regime by entering the cleaning cycle and manure depth limitations. The amount of manure that can be removed per harvest-day is limited in the model by the number of pens that can be cleaned in a day (an input). This operational limit helps ensure that harvesting is spread over a plausible number of pen-cleaning days throughout the year.

Different pad moisture contents and their associated significance, if any, for the feedlot model are given in Table A3. 5.

Table A3. 5: Pad Manure Moisture Contents and Implications

MC (%db)	MC (%wb)	Comments
7	**7**	**Default minimum air-dry MC allowed in MEDLI**
< 40	29	Pad is dusty. No implications for model at present. If a sprinkler capability were introduced then 40%db or less could be the default trigger threshold to use the sprinkler system.
30-50	23-33	Ideal surface manure MC to try and maintain. The target range for predicted average pad MC.
70-80	41-44	Surface is intact and manageable. Evaporation is generally at a falling rate stage and won't exceed pan evaporation.
90-100	47-50	Hooves start to leave imprints and the manure becomes pugged. Evaporation is accelerated and exceeds pan evaporation.
120	**55**	**Default maximum allowed MC for harvesting in MEDLI**
120-180	55-64	Pad is sticky and probably unsafe to harvest
190	**66**	**Drained upper limit of surface layer based on tensiometer data. Beyond this the manure slumps and any depression storage is lost.**
400+	80	MC of fresh faeces

The thickness of the manure layer decreases over time due to breakdown on the VS component of the manure. Measured data indicates the amount of VS in the feedlot pad at any time falls in the range of 35-85% db and averages about 70% (Sinclair 1997). The rate of VS decay is affected by temperature and moisture content. The base average daily decay has been approximated to 0.15% of the VS remaining in the pad, but is then subsequently adjusted by a temperature factor and a moisture factor (Miner et al. 1980).

A3.5.9 Feedlot Pen Hydrology

Well-managed feedlot pads display a propensity for rapid initial drying followed by a much slower phase once the surface starts to seal. There are a number of theories surrounding the evaporation of water from a feedlot pad and this remains one of the most contentious issues in developing the feedlot model.

Lott (1998) measured feedlot manure weight loss over time and attributed all this loss to evaporation. The estimated cumulative pad evaporation was about three times the cumulative pan evaporation. However, as volatile solids decay was not apparently taken into account, evaporation could have been over-estimated. Furthermore, anecdotal evidence indicates that feedlot pad manure dries faster when disturbed by cattle than when it is left undisturbed. Lott (1998) concluded that there is a need to further test the evaporation of pen moisture when the pen is scuffed and pugged, especially when initially wet, and to clearly delineate between evaporation and volatile solids decay.

Given this unknown, the pen “pan factor” was made an input to the model to assist with user calibration. It is strongly recommended that users carefully examine the pad moisture content time-series output to ensure that the model reflects reality. Testing of the model indicates that a pen ‘pan factor’ of 1.2 to 1.8 can be acceptable.

The MEDLI feedlot model deals with infiltration and runoff from the manure pad on a pen-by-pen basis. The step-wise procedure for the prediction of pen runoff by MEDLI is given in Table A3. 6.

For all intents and purposes, MEDLI treats the manure pad as a two-layered soil, where both layers are dynamically changing in depth (due to changes in total solids) and, therefore, in their maximum and minimum moisture holding capacities: and both layers are attempting to maintain moisture equilibrium, the redistribution between layers being a dynamic linear function based on:

- The ratio of the layer with the greater moisture content (%db) over the other.
- The current water deficit, tempered by drained upper limit (DUL) considerations in the “destination” layer; the air dry limit in the “source” layer; and
- The maximum percolation rate into the sub-layer (default: 10 mm/day) entered by the user.

The above algorithms allow the pad moisture content, pad layer thicknesses, pad evaporation and runoff to be calculated on a daily basis for each pen in the feedlot. Table A3. 6**Error! Reference source not found.** shows the stepwise sequence for calculating pad moisture and thickness each day.

Table A3. 6: Step-wise procedure for calculating pad moisture and runoff in each pen

Event	Comments
Add manure water and rainfall (mm) to surface layer	Can exceed Drained Upper Limit at this stage
Estimate pen's Pan Evaporation factor	Linear function based on pens' pad MC (%db) and the maximum pen pan factor
Estimate Potential evaporation	Equals pan evaporation factor times pan evaporation
Calculate surface evaporation	Can not exceed difference between current MC and air dry MC (mm)
Redistribute water	Downwards, if surface MC (%db) > sub-surface MC (%db). Upwards, if the reverse applies. No movement if MCs are the same.
Calculate sub-surface evaporation	Potential pen evaporation less surface evaporation
Calculate runoff depth (mm)	Excess in surface layer (MC –DUL), if any
Calculate solids and nutrients in runoff	

A3.5.10 Feedlot Pen and other Catchment Areas

The total catchment area of the feedlot (Figure A3. 6) consists of the following component areas for MEDLI modelling purposes:

Pen area - area occupied by **production** pens, irrespective of their occupancy rate. The total pen area is a derived value based on the inputted stocking density (m^2/SCU), licensed capacity (number of SCUs) and number of pens. Pen Area does not include handling and holding yards, hospital pens and other seldom-used pens. These other pens should be defined as part of the "Hard" area or separately as an "Other area".

Hard area - area occupied by roads, drains, cattle lanes, manure stockpile area(s), surface area of sedimentation basin(s), car parks, building roofs, silage and grain storage bunkers. Hospital, holding and handling pens would also qualify as "hard" areas if they are seldom used and scraped clean after use. Should any "hard" areas mentioned display atypical runoff behaviour in practice, then omitting them from the Hard area and consigning them to an "Other area" (see below) is the recommended modelling strategy.

Soft area - permanently grassed and vegetated areas within the catchment.

Other area(s) - any non-production area that possesses different hydraulic properties to those of the soft and hard areas (e.g. composting area) should be defined as a separate area and assigned a valid set of Curve Number (K) values for the purpose of predicting the runoff volume it contributes. Runoff from these areas is predicted in similar fashion to the hard and soft area using the USDA-type runoff model. Up to four separate areas can be defined as "Other" areas.

The model assumes all runoff from the catchment area is directed into a holding pond via an optional sedimentation basin. The sedimentation basin is not coded into MEDLI's feedlot model *per* *se*, nor does it need to be dimensioned like a holding pond in MEDLI Pond parameters. Rather, its screening effect on runoff quality is incorporated by choosing it as the **Pre-treatment** option. The default removal rates can be overridden. However, it is the responsibility of the user to ensure that, if **the sedimentation basin area is included in the 'hard' area**, a sedimentation basin is chosen as a pre-treatment option, and vice versa.

Rain falling directly into the holding pond is accounted for outside the feedlot model in the MEDLI pond module. Therefore, the surface area of the holding pond is **not** to be included in the hard area estimate.

The user inputs the number of pens in the feedlot and the stocking density. MEDLI then determines the available pen capacity, the area of the average pen and the total pen area for the feedlot.

Depending on the size of the feedlot and nature of the run, the user can theoretically group pens together to design a feedlot with fewer pens and larger individual pen areas, or even treat the production pens as one massive "super" pen if the cattle are all the same market type. This will reduce run time but may impact adversely on the model's predictions (e.g. pad moisture levels) if too few pens are modelled, so the user should take care to not oversimplify the system.

The user inputs Total Soft Area, Total Hard Area and any additional "Other" areas (maximum of four allowed). In addition to entering the various areas, if necessary the user must enter K values (USDA runoff curve numbers) associated with each area to model their hydrology (Figure A3. 6). For runoff predictions from the soft and hard areas, the MEDLI feedlot model uses the same algorithms as the USDA Curve Number method ('K' values) (Table A3. 7). These values were determined by calibrating the USDA Rainfall/Runoff model against research data reported by Lott (1995) for three commercial feedlots in Southern Queensland. The MEDLI feedlot model has since been updated to allow the user to define other non-production areas with different 'K' values (Figure A3. 6).

In the absence of measured runoff data from a **soft area** (validation of both FSIM and the MEDLI feedlot model consisted only of runoff from pen and hard areas), the K values adopted are consistent with a native pasture or grassland in fair hydrological condition growing on a medium loamy soil. It is therefore likely that these K values may overestimate runoff for some soil profiles but they can be varied at the discretion of the modeller.

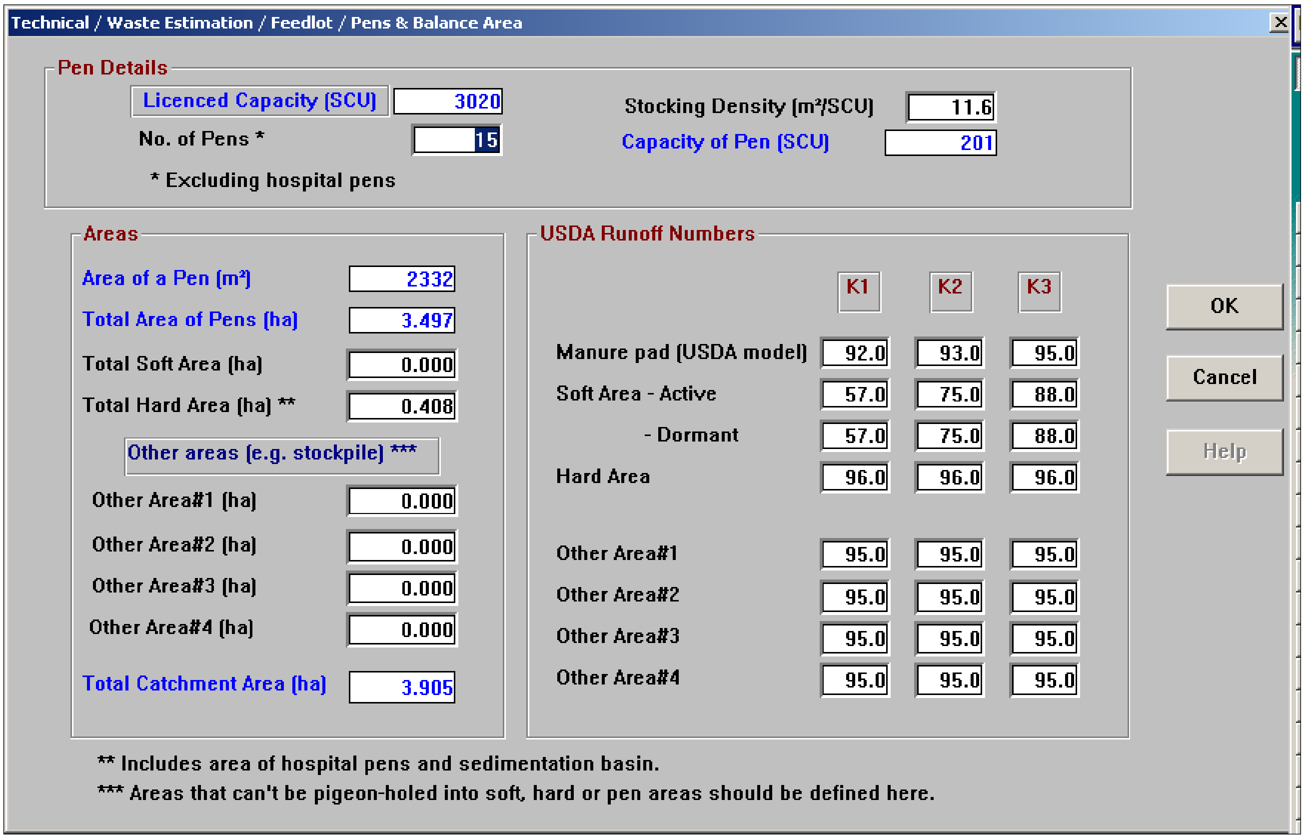

Figure A3. 6: Technical Menu – Feedlot/Waste Estimation / Pens and Balance Area

However, many feedlots are established on relatively shallow, hard-setting ridge soils to minimise the loss of more productive, flatter country and to utilise natural slope. Furthermore, the vegetative cover of the soft catchment area fluctuates seasonally and may be sparse for much of the time resulting in a relatively high runoff coefficient. Hence, the model allows much greater flexibility in defining non-pen catchment areas, to provide more flexibility in applying MEDLI.

Table A3. 7: USDA Rainfall/Runoff Model DEFAULT "K" values

Catchment Area Type	K1	K2	K3	Applicable Period
Hard Area	96	96	96	Jan – Dec
Soft Area – Dormant period	57	75	88	May – Aug
Soft Area – Active period	57	75	88	Sep – Apr
Manure Pad*	92	93	95	Jan - Dec
Other Areas (up to four additional areas)	95	95	95	Jan - Dec

*Manure Pad 'K' values do not apply to the MEDLI feedlot model – only the USDA model.

A3.5.11 Sedimentation Basin

In MEDLI, the modeller can incorporate a feedlot sedimentation basin by setting the Pre-treatment Treatment type to a Feedlot Sedimentation Basin in the Enterprise Menu and the modeller can change the sedimentation basin's screening efficacy by editing the percentage of runoff (effluent), total solids, volatile solids, N, P and K removed in the Technical menu. The default fractions removed by the sedimentation basin for TS, N, P and K are 0.64, 0.84, 0.8 and 0.34, respectively (Lorrimor et al 2000). It has been assumed only 10% of the total dissolved salts is removed by the sedimentation basin.

The efficacy of the sedimentation basin plays a crucial role in the ultimate holding pond concentrations. Between 35 and 75% of solids may be retained in the sedimentation basin. Madden and Dornbush (1971) estimated potential N, P and K reductions of around 35%, which are much lower for N and P than reported by Lorrimor et al (2000). Hence, there is considerable onus on the modeller to know the efficiency of the sedimentation basin. The modeller can override the default **settling fractions** using the Technical menu for *Pre-treatment facility* within MEDLI (Figure A3. 7).

It should be noted that in this model, the “pre-treatment system” has no surface area or volume. Therefore, no ingress by rainfall or evaporation loss is modelled. This is not a major issue for a sedimentation basin that is free-draining and empties soon after a storm. However, some feedlots operate sedimentation basins that hold water after a storm and must be manually dewatered. In these instances, it may be more appropriate to set the pre-treatment to “None” and model the sedimentation basin as an initial shallow “anaerobic” pond and the holding pond as the second pond in series.

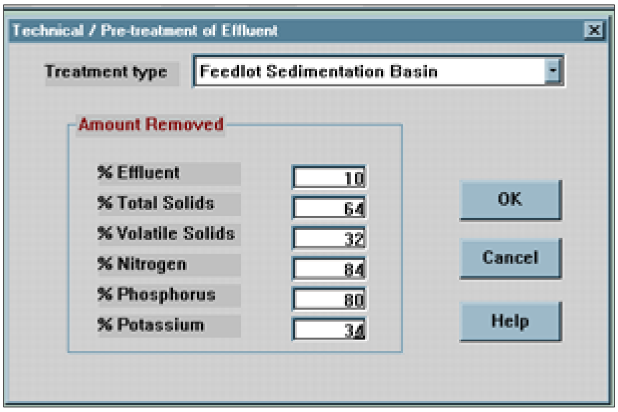

Figure A3. 7: Technical Input Screen – Sedimentation Basin

A3.5.12 Feedlot Holding Ponds

MEDLI’s pond module allows prediction of water levels and nutrient and salt concentrations in a series of up to four ponds. A nominated pond can be used for recycling purposes (not usually applicable to feedlots) and only the last pond may be used for irrigation purposes.

The pond water balance is calculated on a daily basis as a function of new inflow (i.e. rainfall and whole feedlot catchment runoff) and new outflow (i.e. evaporation, irrigation, seepage and overtopping). Evaporation is calculated from Class A pan evaporation and a pond evaporation factor (e.g. Watts and McKay (1986)) whilst irrigation extraction is determined by irrigation demand of the reuse area. Standard pan-pond factors derived from clean water surfaces are used, as there is little research available on evaporation rates from effluent holding ponds. Reported clean water pan coefficients range from 0.4 to 1.2 (Weeks 1983) and are claimed to vary with season and locality.

Data from a selection of Australian feedlots is consistent with a pan factor of about 1.25 with a range of 1.0 to 1.4. This conclusion is quite different for research done on effluent ponds in the USA. Others have reported pan factors of around 0.81-0.83 (Ham and DeSutter 1999; Parker et al 1999).

In summary, current information could allow a user to use a pan factor anywhere in the range of 0.7 to 1.4 (i.e. modelled evaporation from the holding pond could vary by a factor of two.)

Leakage (seepage) from the pond can be modelled at a user-defined rate (usually equal to saturated hydraulic conductivity of the clay liner – 0.1 mm/day), whilst overtopping occurs when pond water level reaches the overflow pipe. Pond water level is adjusted by the net input/out volumes and pond geometry (e.g. trapezoidal cross section). Ponds are hydraulically linked via passive overflow pipes and the major variation in pond level is usually restricted to the last pond in the series (the wet weather storage). Overtopping frequency and volume is a major output from this module.

MEDLI's pond module is a modified version of a design model for treating pig wastes (Casey 1995). The module consists of mass balances for the hydraulic, nitrogen, phosphorus, potassium and total dissolved salts components. It uses a number of empirically derived relationships. Nutrients in the incoming mass are partitioned between the sludge and the supernatant, and a transfer coefficient is used to estimate the nitrogen volatilisation from the pond surface. As nutrient balances are not important in this study, they are not discussed in any further detail.

MEDLI can model up to four ponds in series. The user enters the number of ponds and then the volume, depth, side batters, and length-to-breadth ratio. If the modelling scenario has non-empty ponds at the start (i.e. half-full or full), initial pond concentrations (N, P, K, EC) can be entered for each pond (zero by default). The classification of the first pond (anaerobic or other) must be entered.

The predicted runoff for any rainfall event is the cumulative total of the runoff from the pens, and the balance areas (hard, soft and other areas). Because pens can differ in the type of cattle they contain and when manure is harvested, the depth of pen manure can vary between pens and consequently the quality and quantity of runoff contributed by each pen also varies. Thus, the overall runoff characteristics from the production area are derived from the cumulative totals of runoff, eroded solids, nutrient and salts generated by each production pen.

A3.5.13 Assumptions and Limitations – Feedlot Hydrology

The feedlot model of MEDLI is designed for simulating modern beef cattle feedlots with adequate pen slope and operating within the recommended guidelines, and using a holding pond as a runoff collection system. A sedimentation basin with default removal rates can be implemented as a pre-treatment process but the onus is on the user to establish whether the default removal rates apply to the feedlot in question.

Since the runoff contains total solids, MEDLI requires the feedlot holding pond to be modelled as an anaerobic pond - even if it is designed to function as an evaporative pond - for the purposes of accumulating sludge and partitioning the runoff nutrients between the sludge layer and supernatant. In an evaporative pond scenario, MEDLI never allows the pond to completely dry out and assumes all nutrients and salt in solution remain in solution. In reality, crystallisation would occur at specific saturation points. Therefore, unrealistic pond concentrations (truncated spikes in the time-series plots) will be reported at near-dry pond levels.

The modelled manure harvesting may not reflect on-site practices. For instance, it is an accepted practice to mound manure in small areas within the pens. The model does not allow for mounding but the user could compensate for it by setting harvesting rules that effectively remove less manure from the pens.

In dry periods, dust is a hindrance to manure harvesting and has to be managed by waiting for rain or wetting the pad (e.g. water trucks, sprinklers) to settle it, or increasing the stocking rate (Lott et al. 1994). The model does not cater for dust management nor take dusty conditions into account when harvesting. Stocking density is constant throughout the whole modelling period. Hence, the predicted harvested "wet" manure will be similar to predicted harvested dry matter during drought periods. If necessary, the model could be updated to include "wetting" rules that trigger wetting of the pad when below a certain moisture threshold. Water availability would also have to be taken into account, if a limiting factor.

The model's runoff predictions are based on daily rainfall without regard to the intensity and duration of the rainfall events or pen slope. Thus, some individual runoff predictions and resultant pad conditions may be misleading. However, rainfall intensity and duration are difficult data to acquire and were not justifiable for MEDLI purposes given its daily time step.

There is conjecture about the rate of pad evaporation, particularly after wetting and subsequent pugging of the pad. This area should be the subject of further experimentation. It is clear however that the pen evaporation must be allowed to exceed pan evaporation to some degree to account for the anecdotal evidence that the manure pad dries out rapidly even during periods of low evaporation – possibly due to enhanced evaporation due to cattle disturbing the pen surface. Based on our current modelling, it seems that a pan factor of 1.2 to 1.8 could apply during the first stage of evaporation following rainfall, since this adequately defined the evaporation algorithm for the model.

Appendix 4 Additional heat load output

A4.1 Development of approach for reporting

Various exploratory analyses were conducted to identify approaches to analysing and reporting results in order to distil results to relatively few outputs that were relatively simple and easily able to be appreciated.

AHL was generated on a cumulative basis at hourly intervals. A decision was made to immediately aggregate this to a daily time-step dataset for ease of analysis. This was done by using the maximum daily value for each day from the 24 hourly values.

The daily datasets were then aggregated to annual summary statistics in a dataset with one row per year. The per-year datasets were then used to generate tables of results and plots for reporting.

It was felt important to try and capture heat load events based on several different dimensions.

- Number of days per year when the daily maximum AHL value exceeded a defined threshold (set at 50, 100 and 200 AHL). intended to capture mild to relatively severe heat load events.
- Number of heat load events per year where a heat load event is defined as all consecutive days when AHL was greater than each of the three thresholds.
- Duration in days of heat load events.

The summary statistics reported in Section **Error! Reference source not found.** were limited to data derived for a daily threshold of 100 AHL. Additional results for thresholds of 50 and 200 AHL are reported in this appendix. The general patterns are the same as those reported for the 100 AHL threshold.

In addition, we aimed to produce summary plots that would attempt to convey the major findings of heat load modelling for each location in as few plots as possible.

This section attempts to explain the approach taken to the selection of the summary plots as reported in Section **Error! Reference source not found.**.

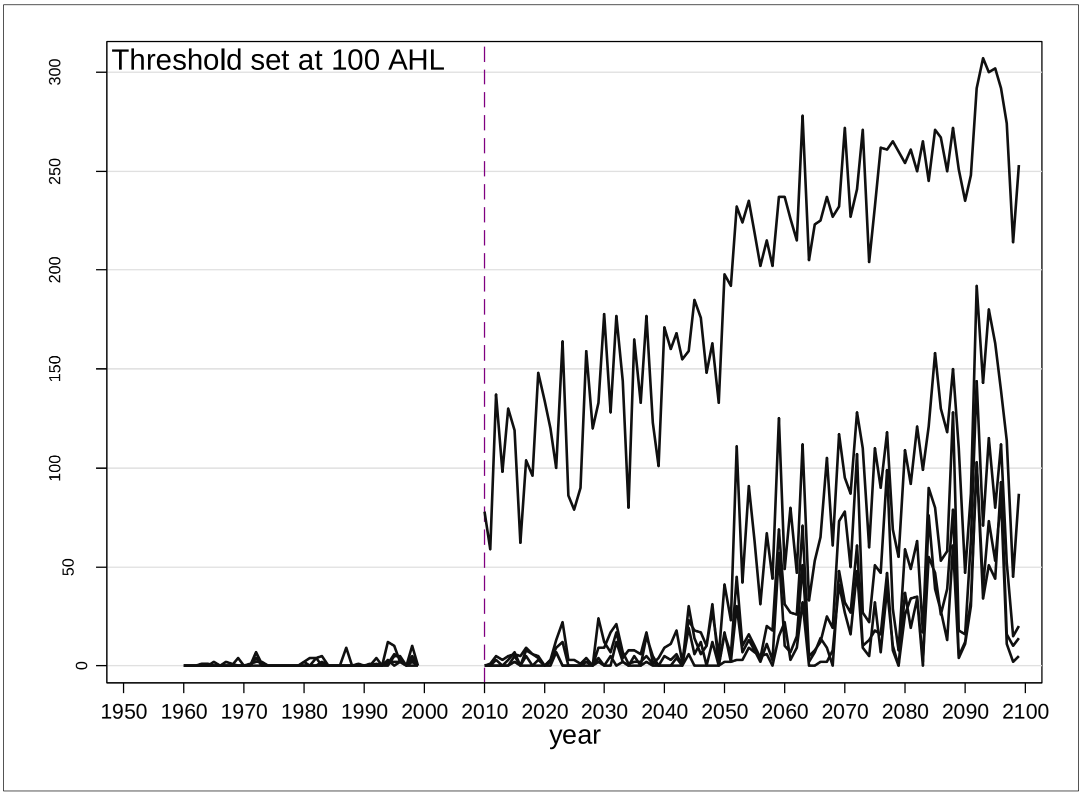

Figure A4. 1: Plot showing the number of days per year when AHL was >100 for one location (Comet) and one RCP (RCP8.5) scenario. Data generated using five separate climate models covering periods from 1960-1999 (historic data) and 2010-2099. Separate lines are produced for each of five GCMs.

Figure A4. 1 shows a plot of five separate GCM outputs (CNRM-CM5, GFDL-ESM2G, HadGEM2-ES, MIROC5, MRI-CGCM3) for one location (Comet) and one scenario (RCP8.5).

The vertical axis is a measure of the number of days per year when AHL>100 units and ranges from 0 to 300.

The vertical dotted line is at year=2010. The model runs prior to 2010 display the results of AHL estimates using predicted climate output for the historic period (1960-1999). The lines to the right show the AHL results for the future predicted climate GCM runs.

There is very little discrepancy between the different models for the historic data and this reflects the fact that all models are acting as replicates for prediction of the same output (historic data without any greenhouse gas effects). As time progresses to the right, the model runs show more variation. There is a general pattern of increasing numbers of days when AHL>100 and there is fairly wide variation between different models. One model line is well above all the others throughout the period from 2010-2099. There is sufficient overlap for the other four models that it is difficult to distinguish different lines.

In an attempt to simplify the appearance of this sort of plot, we changed the appearance of the plot as shown in Figure A4. 2. The shaded area represents the area covered by the maximum value from any of the five GCMs in any year and the minimum value. The solid line is the median number of days when AHL>100, estimated each year from the five GCM values.

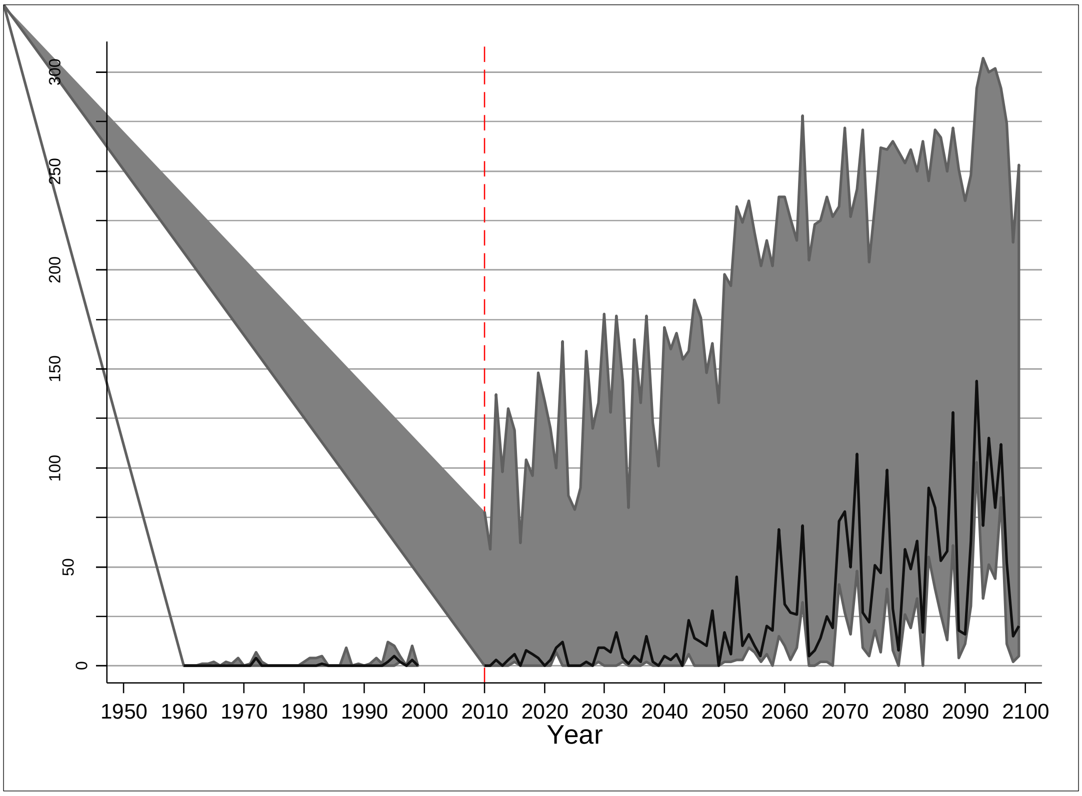

Figure A4. 2: Plot showing the number of days per year when AHL >100 for location =Comet and RCP8.5. The shaded area shows the area demarcated by the maximal number of days in any one year for any of the five models and the minimum number of days in any one year for any model. The solid line shows the median number of days per year when AHL>100 across all five models.

Figure A4. 2 provides a visually more appealing way to display the same output as was shown in Figure A4. 1. The reader can still appreciate the spread and the median shows a representation of the typical value (from the five GCMs used to generate data for this plot).

The extremely high model run (shown by the maximum lines in both previous figures) was of concern because it was so different to the other four model outputs. The median is theoretically more resistant to single extreme values than the mean and therefore the median should be resistant to the extreme effects of a single model run. This was tested by refitting the summary statistics and producing plots with the extremely high model output removed (CNRM for period >2010).

Figure A4. 3 shows two separate median lines, one estimated from all five models and one estimated from the four models remaining after the most extreme model run had been filtered. The median number of days per year when AHL>100 is very similar regardless of whether the data from the one extreme model output were included in estimates or not. This is entirely consistent with the mathematical approach to estimation of the median in that it is resistant to the effects of extreme values.

Data from all five models were incorporated into all statistical analyses. Graphs of the median number of days estimated across model output from all five models for each location, RCP value, threshold and mitigation strategy were then used to demonstrate the impact of various mitigations.

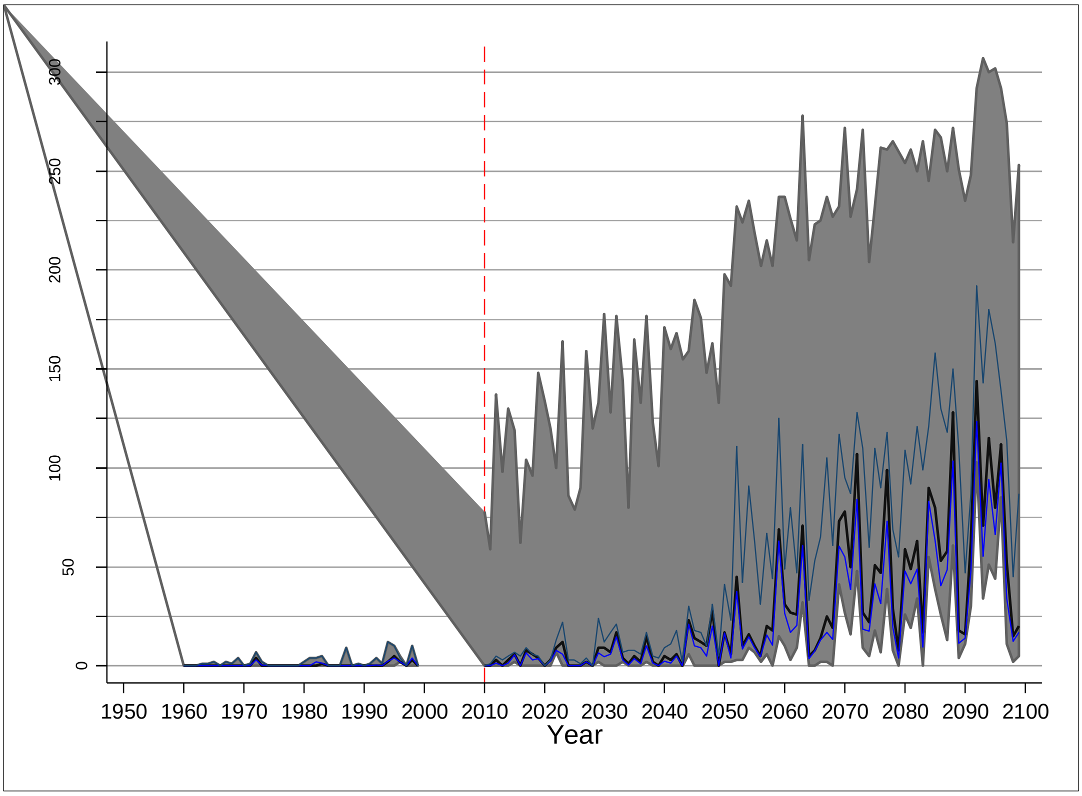

Figure A4. 3: Plot showing the number of days per year when AHL >100 for location=Comet and RCP8.5. The shaded area shows the area demarcated by the maximal number of days in any one year for any of the five models and the minimum number of days in any one year for any model. The solid black line shows the median number of days per year when AHL>100 across all five models. The faint navy line shows the maximal value when summary statistics were generated from four models only (removing the extreme model output) and the blue line shows the refitted median number of days per year, generated using data from four models only.

Following this process, a decision was made to generate plots based on the median number of days when AHL exceeded a defined threshold. In addition, a decision was made to display the four mitigation strategies on each plot as a visual way of showing the trend in heat load days without any mitigation and with each of the three mitigation levels.

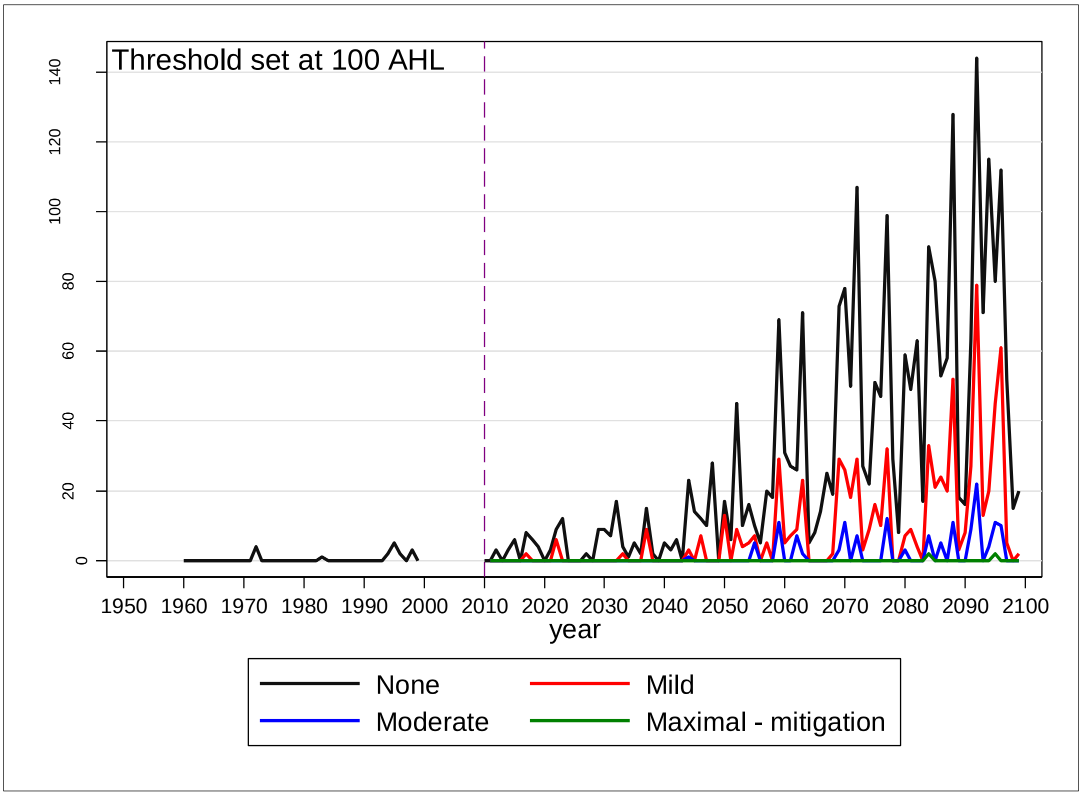

Figure A4. 4: Plot showing the effect of various mitigation strategies on the median number of days per year when AHL>100 for location =Comet and RCP8.5.

Figure A4. 4 is an example of a plot showing the effect of different mitigation strategies on the occurrence of heat events. In this case the threshold was set at AHL>100.

The black line shows the median number of days per year (across all five models) when no mitigation is applied at all (equivalent to the reference animal: lower HLI=77, upper HLI=86).

Mild mitigation involved setting the upper HLI to 89 (+3, equivalent to adding shade up to 2m^2/SCU). In discussion with Dr John Gaughan, mild mitigation also involved raising the lower HLI to 84.

Moderate mitigation involved setting the upper HLI to 93 (+7, equivalent to adding 3 to 5 m^2/SCU of shade or some combination of other strategies such as changing cattle to more heat resistant genetics and/or white coat colour). In discussion with Dr John Gaughan, moderate mitigation also involved raising the lower HLI to 84.

Maximal mitigation involved setting the upper HLI to 96 (+10, equivalent to using pure *Bos indicus* genotypes). In discussion with Dr John Gaughan, maximal mitigation also involved raising the lower HLI to 92.

Plots of median number of days when AHL exceeded a threshold in the presence of four mitigation strategies will be used to present summary effects of mitigation.

One of the problems with this plot design that only became apparent as plots were generated is that the coloured lines sometimes overlap each other almost exactly and the underlying line can then be impossible to detect (the plot generates the lines in order of increasing mitigation). There is no simple solution to this.

A4.2 Additional tables for number of days per year when AHL>threshold

A4.2.1 Caroona

Table A4. 1: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, time period= 1960-1999. No mitigation implemented.

1960-1999 mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold					
			min	p25	median	p75	max	all yrs
CNRM-CM5	50	40	0	0	0	0	5	12
CNRM-CM5	100	40	0	0	0	0	1	2
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	3	10
HadGEM2-ES	100	40	0	0	0	0	3	4
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	1	3
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	4	16
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	0	0

Table A4. 2: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	2	9	53
CNRM-CM5	100	40	0	0	0	1	6	31
CNRM-CM5	200	40	0	0	0	0	3	7
GFDL-ESM2G	50	40	0	0	0	0.5	9	30
GFDL-ESM2G	100	40	0	0	0	0	6	14
GFDL-ESM2G	200	40	0	0	0	0	2	2
HadGEM2-ES	50	40	0	0	1	2	8	53
HadGEM2-ES	100	40	0	0	0	0	3	10
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	3	15
MIROC5	100	40	0	0	0	0	2	6
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	3	16
MRI-CGCM3	100	40	0	0	0	0	3	6
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	2	7	17	201
CNRM-CM5	100	50	0	0	0	4	11	108
CNRM-CM5	200	50	0	0	0	0	8	44
GFDL-ESM2G	50	50	0	0	0	1	9	53
GFDL-ESM2G	100	50	0	0	0	0	4	22
GFDL-ESM2G	200	50	0	0	0	0	3	8
HadGEM2-ES	50	50	0	0	1	4	20	137
HadGEM2-ES	100	50	0	0	0	1	10	65
HadGEM2-ES	200	50	0	0	0	0	6	29
MIROC5	50	50	0	0	0	2	11	56
MIROC5	100	50	0	0	0	0	8	31
MIROC5	200	50	0	0	0	0	4	4
MRI-CGCM3	50	50	0	0	0	3	19	116
MRI-CGCM3	100	50	0	0	0	2	10	62
MRI-CGCM3	200	50	0	0	0	0	5	19

Table A4. 3: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

		Count of	Summary of per-annum counts of days when AHL >

mit=mild Model	AHL threshold	years (n)	 min	 p25	threshold median	 p75	 max	 all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	3	14
CNRM-CM5	100	40	0	0	0	0	2	4
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	5
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	11
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	2	3
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	5
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	2	7	63
CNRM-CM5	100	50	0	0	0	0	7	32
CNRM-CM5	200	50	0	0	0	0	3	7
GFDL-ESM2G	50	50	0	0	0	0	3	16
GFDL-ESM2G	100	50	0	0	0	0	2	7
GFDL-ESM2G	200	50	0	0	0	0	1	2
HadGEM2-ES	50	50	0	0	0	1	6	39
HadGEM2-ES	100	50	0	0	0	0	4	17
HadGEM2-ES	200	50	0	0	0	0	2	4
MIROC5	50	50	0	0	0	0	4	17
MIROC5	100	50	0	0	0	0	4	8
MIROC5	200	50	0	0	0	0	3	3
MRI-CGCM3	50	50	0	0	0	0	6	27
MRI-CGCM3	100	50	0	0	0	0	4	9
MRI-CGCM3	200	50	0	0	0	0	3	5

Table A4. 4: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	 p25	 median	 p75	 max	 all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	1

CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	6	12
CNRM-CM5	100	50	0	0	0	0	2	2
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	1	2
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	3	8
HadGEM2-ES	100	50	0	0	0	0	2	4
HadGEM2-ES	200	50	0	0	0	0	1	2
MIROC5	50	50	0	0	0	0	1	1
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	3	5
MRI-CGCM3	100	50	0	0	0	0	2	2
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 5: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	2
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	4
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 6: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	2.5	10	61
CNRM-CM5	100	40	0	0	0	0.5	8	28
CNRM-CM5	200	40	0	0	0	0	2	4
GFDL-ESM2G	50	40	0	0	0	1	7	30
GFDL-ESM2G	100	40	0	0	0	0	4	10
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	3	10	74
HadGEM2-ES	100	40	0	0	0	1	7	27
HadGEM2-ES	200	40	0	0	0	0	5	9
MIROC5	50	40	0	0	0	0	3	10
MIROC5	100	40	0	0	0	0	1	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	1	4	22
MRI-CGCM3	100	40	0	0	0	0	2	4
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	2	4	10	28	322
CNRM-CM5	100	50	0	0	2.5	6	25	202
CNRM-CM5	200	50	0	0	0	2	18	93
GFDL-ESM2G	50	50	0	0	3	7	24	219
GFDL-ESM2G	100	50	0	0	0	3	18	125
GFDL-ESM2G	200	50	0	0	0	0	10	43
HadGEM2-ES	50	50	0	1	3	7	27	265
HadGEM2-ES	100	50	0	0	1	4	21	138
HadGEM2-ES	200	50	0	0	0	1	13	63
MIROC5	50	50	0	0	0	2	12	70
MIROC5	100	50	0	0	0	0	6	26
MIROC5	200	50	0	0	0	0	3	10
MRI-CGCM3	50	50	0	0	0	3	19	112
MRI-CGCM3	100	50	0	0	0	0	14	57
MRI-CGCM3	200	50	0	0	0	0	7	21

Table A4. 7: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	**threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	4	16
CNRM-CM5	100	40	0	0	0	0	2	6
CNRM-CM5	200	40	0	0	0	0	2	2
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0.5	5	15
HadGEM2-ES	100	40	0	0	0	0	2	4
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0.5	3	14	107
CNRM-CM5	100	50	0	0	0	2	11	70
CNRM-CM5	200	50	0	0	0	0	9	26
GFDL-ESM2G	50	50	0	0	0	1	12	58
GFDL-ESM2G	100	50	0	0	0	0	9	22
GFDL-ESM2G	200	50	0	0	0	0	4	10
HadGEM2-ES	50	50	0	0	1	2	12	70
HadGEM2-ES	100	50	0	0	0	0	9	28
HadGEM2-ES	200	50	0	0	0	0	6	14
MIROC5	50	50	0	0	0	0	3	12
MIROC5	100	50	0	0	0	0	2	3
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	9	34
MRI-CGCM3	100	50	0	0	0	0	4	14
MRI-CGCM3	200	50	0	0	0	0	3	3

Table A4. 8: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	2
CNRM-CM5	100	40	0	0	0	0	2	2
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	4
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	8	37
CNRM-CM5	100	50	0	0	0	0	6	16
CNRM-CM5	200	50	0	0	0	0	3	4
GFDL-ESM2G	50	50	0	0	0	0	3	6
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	4	17
HadGEM2-ES	100	50	0	0	0	0	3	10
HadGEM2-ES	200	50	0	0	0	0	2	4
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	1
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 9: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	**threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	5	10
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	8
HadGEM2-ES	100	50	0	0	0	0	2	4
HadGEM2-ES	200	50	0	0	0	0	1	2
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 10: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	7	21	34	48	79	1423
CNRM-CM5	100	40	0	11	20.5	35	71	942
CNRM-CM5	200	40	0	5.5	12	26	65	648
GFDL-ESM2G	50	40	0	0	0	2	10	48
GFDL-ESM2G	100	40	0	0	0	0	7	15
GFDL-ESM2G	200	40	0	0	0	0	6	6
HadGEM2-ES	50	40	0	1	2	4	12	100
HadGEM2-ES	100	40	0	0	0	1.5	9	44
HadGEM2-ES	200	40	0	0	0	0	7	14
MIROC5	50	40	0	0	0	0	3	16
MIROC5	100	40	0	0	0	0	2	6
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	1.5	3	25
MRI-CGCM3	100	40	0	0	0	0	2	10
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	59	93	120	146	175	5979
CNRM-CM5	100	50	37	82	108	134	171	5388
CNRM-CM5	200	50	28	72	99.5	125	170	4869
GFDL-ESM2G	50	50	0	2	7	15	40	486
GFDL-ESM2G	100	50	0	0	4	9	35	342
GFDL-ESM2G	200	50	0	0	0	5	29	176
HadGEM2-ES	50	50	0	9	17	25	65	956
HadGEM2-ES	100	50	0	4	10.5	20	63	686
HadGEM2-ES	200	50	0	1	5	10	56	413
MIROC5	50	50	0	0	2.5	6	27	235
MIROC5	100	50	0	0	0	3	24	135
MIROC5	200	50	0	0	0	1	23	75
MRI-CGCM3	50	50	0	2	6	11	39	421
MRI-CGCM3	100	50	0	0	3.5	7	30	275
MRI-CGCM3	200	50	0	0	0	2	23	119

Table A4. 11: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	7.5	13	24	50	645
CNRM-CM5	100	40	0	2	7	13.5	44	360
CNRM-CM5	200	40	0	0	3	7.5	39	213
GFDL-ESM2G	50	40	0	0	0	0	5	10
GFDL-ESM2G	100	40	0	0	0	0	5	7
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	4	30
HadGEM2-ES	100	40	0	0	0	0	4	9
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	2	4
MIROC5	100	40	0	0	0	0	2	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	6
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	28	53	73.5	94	140	3803
CNRM-CM5	100	50	19	36	62	82	135	3151
CNRM-CM5	200	50	10	28	47.5	76	130	2649
GFDL-ESM2G	50	50	0	0	2	5	16	187
GFDL-ESM2G	100	50	0	0	0	3	14	80
GFDL-ESM2G	200	50	0	0	0	0	6	30
HadGEM2-ES	50	50	0	3	6	10	31	397
HadGEM2-ES	100	50	0	0	2	5	28	226
HadGEM2-ES	200	50	0	0	0	3	25	135
MIROC5	50	50	0	0	0	2	15	67
MIROC5	100	50	0	0	0	0	12	38
MIROC5	200	50	0	0	0	0	6	14
MRI-CGCM3	50	50	0	0	2	3	16	127
MRI-CGCM3	100	50	0	0	0	1	9	50
MRI-CGCM3	200	50	0	0	0	0	6	16

Table A4. 12: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	2	3.5	8.5	29	230
CNRM-CM5	100	40	0	0	2	5	24	143
CNRM-CM5	200	40	0	0	0	2	15	52
GFDL-ESM2G	50	40	0	0	0	0	4	4
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	3	4
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	13	24	42.5	62	105	2279
CNRM-CM5	100	50	3	17	35	50	103	1852
CNRM-CM5	200	50	0	11	25	41	99	1384
GFDL-ESM2G	50	50	0	0	0	0	5	24
GFDL-ESM2G	100	50	0	0	0	0	5	14
GFDL-ESM2G	200	50	0	0	0	0	3	3
HadGEM2-ES	50	50	0	0	1	3	20	118
HadGEM2-ES	100	50	0	0	0	2	14	82
HadGEM2-ES	200	50	0	0	0	0	12	27
MIROC5	50	50	0	0	0	0	5	16
MIROC5	100	50	0	0	0	0	2	4
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	6	14
MRI-CGCM3	100	50	0	0	0	0	3	4
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 13: Summary statistics for count of the number of days per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	2	3	10	79
CNRM-CM5	100	40	0	0	0	1	5	30
CNRM-CM5	200	40	0	0	0	0	3	7
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	2	10	21.5	32	65	1197
CNRM-CM5	100	50	0	7	15.5	25	57	883
CNRM-CM5	200	50	0	2	10	17	52	589
GFDL-ESM2G	50	50	0	0	0	0	2	3
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	7	33
HadGEM2-ES	100	50	0	0	0	0	2	10
HadGEM2-ES	200	50	0	0	0	0	2	4
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

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Table A4. 14: Summary statistics for count of the number of days per year when AHL>threshold. Location=Comet, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold					
			min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	2	11	55
CNRM-CM5	100	40	0	0	0	0	7	21
CNRM-CM5	200	40	0	0	0	0	5	8
GFDL-ESM2G	50	40	0	0	0	2.5	8	62
GFDL-ESM2G	100	40	0	0	0	0	4	18
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	1	2	2	9	83
HadGEM2-ES	100	40	0	0	0	1	6	34
HadGEM2-ES	200	40	0	0	0	0	5	5
MIROC5	50	40	0	0	0	0.5	5	27
MIROC5	100	40	0	0	0	0	5	11
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	1	5.5	16	122
MRI-CGCM3	100	40	0	0	0	1.5	12	68
MRI-CGCM3	200	40	0	0	0	0	7	33

Table A4. 15: Summary statistics for count of the number of days per year when AHL>threshold. Location=Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1.5	4	8.5	21	244
CNRM-CM5	100	40	0	0	2	4.5	15	137
CNRM-CM5	200	40	0	0	0	0	9	31
GFDL-ESM2G	50	40	0	3	8.5	19	43	493
GFDL-ESM2G	100	40	0	0	4.5	14	38	348
GFDL-ESM2G	200	40	0	0	0	9.5	32	204
HadGEM2-ES	50	40	1	3.5	8	14.5	28	400
HadGEM2-ES	100	40	0	2	5	8	25	246
HadGEM2-ES	200	40	0	0	1	2.5	16	106
MIROC5	50	40	0	0	1	3	26	140
MIROC5	100	40	0	0	0	1	25	83
MIROC5	200	40	0	0	0	0	10	23
MRI-CGCM3	50	40	0	0	0	1.5	7	39
MRI-CGCM3	100	40	0	0	0	0	6	14
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	2	6	17	65	582
CNRM-CM5	100	50	0	0	3	12	61	411
CNRM-CM5	200	50	0	0	0	6	51	237
GFDL-ESM2G	50	50	0	0	3	8	29	268
GFDL-ESM2G	100	50	0	0	0	4	22	168
GFDL-ESM2G	200	50	0	0	0	0	20	92
HadGEM2-ES	50	50	1	4	9.5	18	38	603
HadGEM2-ES	100	50	0	3	6	13	34	432
HadGEM2-ES	200	50	0	0	2	6	28	194
MIROC5	50	50	0	0	3	13	29	344
MIROC5	100	50	0	0	0	8	23	195
MIROC5	200	50	0	0	0	2	16	89
MRI-CGCM3	50	50	0	0	2	5	21	183
MRI-CGCM3	100	50	0	0	0	2	17	86
MRI-CGCM3	200	50	0	0	0	0	6	23

Table A4. 16: Summary statistics for count of the number of days per year when AHL>threshold. Location=Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	6	26
CNRM-CM5	100	40	0	0	0	0	2	8
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	1	5.5	18	120
GFDL-ESM2G	100	40	0	0	0	2	13	55
GFDL-ESM2G	200	40	0	0	0	0	8	11
HadGEM2-ES	50	40	0	1	2	4	14	125
HadGEM2-ES	100	40	0	0	1	2	10	65
HadGEM2-ES	200	40	0	0	0	0	5	25
MIROC5	50	40	0	0	0	0	6	20
MIROC5	100	40	0	0	0	0	6	6
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	4	26	159
CNRM-CM5	100	50	0	0	0	2	18	91
CNRM-CM5	200	50	0	0	0	0	14	33
GFDL-ESM2G	50	50	0	0	0	1	10	57
GFDL-ESM2G	100	50	0	0	0	0	5	18
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	2	3	5	14	192
HadGEM2-ES	100	50	0	0	1	2	12	106
HadGEM2-ES	200	50	0	0	0	1	8	47
MIROC5	50	50	0	0	0	2	11	61
MIROC5	100	50	0	0	0	0	6	27
MIROC5	200	50	0	0	0	0	4	12
MRI-CGCM3	50	50	0	0	0	0	7	21
MRI-CGCM3	100	50	0	0	0	0	4	6
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 17: Summary statistics for count of the number of days per year when AHL>threshold. Location=Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	9	11
GFDL-ESM2G	100	40	0	0	0	0	3	5
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	8	49
HadGEM2-ES	100	40	0	0	0	0	5	25
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	3	3
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	7	18
CNRM-CM5	100	50	0	0	0	0	5	5
CNRM-CM5	200	50	0	0	0	0	3	3
GFDL-ESM2G	50	50	0	0	0	0	2	2
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	1	2	10	80
HadGEM2-ES	100	50	0	0	0	1	7	45
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	6	12
MIROC5	100	50	0	0	0	0	3	6
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 18: Summary statistics for count of the number of days per year when AHL>threshold. Location=Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	3	7
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	3	19
HadGEM2-ES	100	50	0	0	0	0	1	1
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	3	4
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 19: Summary statistics for count of the number of days per year when AHL>threshold. Location=Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold					
			min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1.5	3	9	21	226
CNRM-CM5	100	40	0	0	1	5.5	13	125
CNRM-CM5	200	40	0	0	0	0	7	33
GFDL-ESM2G	50	40	0	1.5	6	11.5	32	306
GFDL-ESM2G	100	40	0	0	2	7	28	182
GFDL-ESM2G	200	40	0	0	0	2	19	76
HadGEM2-ES	50	40	1	4.5	8	14	32	428
HadGEM2-ES	100	40	0	2	5	10	25	272
HadGEM2-ES	200	40	0	0	1	3	15	106
MIROC5	50	40	0	0	1.5	3	13	101
MIROC5	100	40	0	0	0	0	10	38
MIROC5	200	40	0	0	0	0	3	8
MRI-CGCM3	50	40	0	0	0	3	9	66
MRI-CGCM3	100	40	0	0	0	0	6	28
MRI-CGCM3	200	40	0	0	0	0	1	1
2050-2099								
CNRM-CM5	50	50	0	6	14	33	84	1125
CNRM-CM5	100	50	0	4	10	27	80	887
CNRM-CM5	200	50	0	0	4	17	76	576
GFDL-ESM2G	50	50	0	8	16	34	88	1187
GFDL-ESM2G	100	50	0	3	11.5	29	87	903
GFDL-ESM2G	200	50	0	0	6.5	21	84	647
HadGEM2-ES	50	50	4	12	21	46	90	1462
HadGEM2-ES	100	50	1	6	15.5	35	84	1135
HadGEM2-ES	200	50	0	2	8.5	24	78	780
MIROC5	50	50	0	0	4.5	12	56	414
MIROC5	100	50	0	0	2	7	42	275
MIROC5	200	50	0	0	0	0	25	133
MRI-CGCM3	50	50	0	0	4.5	9	34	323
MRI-CGCM3	100	50	0	0	0	7	30	196
MRI-CGCM3	200	50	0	0	0	0	26	81

Table A4. 20: Summary statistics for count of the number of days per year when AHL>threshold. Location=Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	2	6	35
CNRM-CM5	100	40	0	0	0	0	3	11
CNRM-CM5	200	40	0	0	0	0	2	2
GFDL-ESM2G	50	40	0	0	0	2	6	43
GFDL-ESM2G	100	40	0	0	0	0	5	22
GFDL-ESM2G	200	40	0	0	0	0	2	2
HadGEM2-ES	50	40	0	1	2	4	13	140
HadGEM2-ES	100	40	0	0	1	2	11	78
HadGEM2-ES	200	40	0	0	0	0	9	29
MIROC5	50	40	0	0	0	0	5	15
MIROC5	100	40	0	0	0	0	3	5
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	7
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	3	8	29	286
CNRM-CM5	100	50	0	0	0	4	22	160
CNRM-CM5	200	50	0	0	0	0	18	88
GFDL-ESM2G	50	50	0	0	3.5	10	41	357
GFDL-ESM2G	100	50	0	0	2	7	32	238
GFDL-ESM2G	200	50	0	0	0	0	29	99
HadGEM2-ES	50	50	1	3	8	14	44	502
HadGEM2-ES	100	50	0	2	5	10	39	373
HadGEM2-ES	200	50	0	0	1	3	21	167
MIROC5	50	50	0	0	0	2	12	71
MIROC5	100	50	0	0	0	0	8	30
MIROC5	200	50	0	0	0	0	2	2
MRI-CGCM3	50	50	0	0	0	0	7	41
MRI-CGCM3	100	50	0	0	0	0	7	28
MRI-CGCM3	200	50	0	0	0	0	3	5

Table A4. 21: Summary statistics for count of the number of days per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	3	6
GFDL-ESM2G	100	40	0	0	0	0	2	4
GFDL-ESM2G	200	40	0	0	0	0	2	2
HadGEM2-ES	50	40	0	0	0	2	9	59
HadGEM2-ES	100	40	0	0	0	0	6	19
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	2	2
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	10	43
CNRM-CM5	100	50	0	0	0	0	10	26
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	14	45
GFDL-ESM2G	100	50	0	0	0	0	13	21
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	1	2.5	6	19	204
HadGEM2-ES	100	50	0	0	1	3	15	108
HadGEM2-ES	200	50	0	0	0	0	10	14
MIROC5	50	50	0	0	0	0	3	6
MIROC5	100	50	0	0	0	0	2	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	2	2
MRI-CGCM3	100	50	0	0	0	0	2	2
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 22: Summary statistics for count of the number of days per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold					
			min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	7
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	3
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	2	2
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	4	42
HadGEM2-ES	100	50	0	0	0	0	3	14
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	2	2
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 23: Summary statistics for count of the number of days per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	77	117	141	168	194	5746
CNRM-CM5	100	40	59	100.5	133	161.5	185	5240
CNRM-CM5	200	40	45	89	127.5	155.5	184	4883
GFDL-ESM2G	50	40	0	2.5	8	14	35	404
GFDL-ESM2G	100	40	0	0	5	8.5	31	268
GFDL-ESM2G	200	40	0	0	0	4	24	130
HadGEM2-ES	50	40	1	4	9	17	36	485
HadGEM2-ES	100	40	0	2.5	5	10.5	28	312
HadGEM2-ES	200	40	0	0	1	5	16	150
MIROC5	50	40	0	0	3	6.5	26	200
MIROC5	100	40	0	0	0	5	19	120
MIROC5	200	40	0	0	0	0	13	44
MRI-CGCM3	50	40	0	0	0	3.5	13	81
MRI-CGCM3	100	40	0	0	0	0	7	26
MRI-CGCM3	200	40	0	0	0	0	2	2
2050-2099								
CNRM-CM5	50	50	202	230	250	273	315	12634
CNRM-CM5	100	50	192	225	243	265	307	12259
CNRM-CM5	200	50	185	221	235.5	261	301	11940
GFDL-ESM2G	50	50	7	26	50.5	78	152	2759
GFDL-ESM2G	100	50	4	17	38	71	144	2332
GFDL-ESM2G	200	50	0	6	19	59	141	1766
HadGEM2-ES	50	50	35	70	106	129	195	5204
HadGEM2-ES	100	50	23	60	93.5	118	192	4687
HadGEM2-ES	200	50	12	45	81	107	186	3995
MIROC5	50	50	0	9	18	43	105	1407
MIROC5	100	50	0	4	11	34	103	1103
MIROC5	200	50	0	0	6.5	23	100	786
MRI-CGCM3	50	50	2	12	24.5	53	108	1635
MRI-CGCM3	100	50	0	8	15.5	39	103	1288
MRI-CGCM3	200	50	0	0	7	29	98	905

Table A4. 24: Summary statistics for count of the number of days per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	30	51.5	69.5	95.5	131	2999
CNRM-CM5	100	40	14	34	48.5	83	120	2328
CNRM-CM5	200	40	7	22.5	35.5	73	119	1939
GFDL-ESM2G	50	40	0	0	0.5	2.5	12	82
GFDL-ESM2G	100	40	0	0	0	0	10	39
GFDL-ESM2G	200	40	0	0	0	0	2	2
HadGEM2-ES	50	40	0	1.5	3	5	14	157
HadGEM2-ES	100	40	0	0	1	2.5	11	85
HadGEM2-ES	200	40	0	0	0	1	8	32
MIROC5	50	40	0	0	0	1	9	40
MIROC5	100	40	0	0	0	0	9	24
MIROC5	200	40	0	0	0	0	4	6
MRI-CGCM3	50	40	0	0	0	0	2	4
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	110	172	193.5	214	252	9669
CNRM-CM5	100	50	90	166	186.5	205	247	9189
CNRM-CM5	200	50	77	157	176.5	201	246	8849
GFDL-ESM2G	50	50	0	5	11.5	29	81	916
GFDL-ESM2G	100	50	0	0	7.5	23	79	696
GFDL-ESM2G	200	50	0	0	3	14	75	474
HadGEM2-ES	50	50	6	23	36	56	117	2106
HadGEM2-ES	100	50	4	13	29	44	113	1660
HadGEM2-ES	200	50	0	5	16.5	30	102	1180
MIROC5	50	50	0	1	3	13	45	414
MIROC5	100	50	0	0	2	7	39	260
MIROC5	200	50	0	0	0	4	17	129
MRI-CGCM3	50	50	0	0	6.5	17	55	472
MRI-CGCM3	100	50	0	0	0	12	55	319
MRI-CGCM3	200	50	0	0	0	3	54	189

Table A4. 25: Summary statistics for count of the number of days per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	6	17	24	48.5	65	1223
CNRM-CM5	100	40	0	10.5	15.5	37	61	915
CNRM-CM5	200	40	0	3	10	23.5	47	570
GFDL-ESM2G	50	40	0	0	0	0	2	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	2	9	59
HadGEM2-ES	100	40	0	0	0	1	8	32
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	3	5
MIROC5	100	40	0	0	0	0	2	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	65	109	142.5	166	210	6991
CNRM-CM5	100	50	49	97	137.5	161	206	6619
CNRM-CM5	200	50	32	86	128.5	157	203	6207
GFDL-ESM2G	50	50	0	0	0	9	29	248
GFDL-ESM2G	100	50	0	0	0	3	22	141
GFDL-ESM2G	200	50	0	0	0	0	18	35
HadGEM2-ES	50	50	1	6	13.5	23	78	1007
HadGEM2-ES	100	50	0	4	9	18	76	819
HadGEM2-ES	200	50	0	0	2	8	64	478
MIROC5	50	50	0	0	0	1	15	71
MIROC5	100	50	0	0	0	0	7	33
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	18	62
MRI-CGCM3	100	50	0	0	0	0	18	31
MRI-CGCM3	200	50	0	0	0	0	4	4

Table A4. 26: Summary statistics for count of the number of days per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	2.5	8	15.5	30	371
CNRM-CM5	100	40	0	0	2.5	9.5	27	230
CNRM-CM5	200	40	0	0	0	4.5	22	125
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	3	11
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	14	53	75.5	108	152	4025
CNRM-CM5	100	50	12	41	67.5	95	145	3596
CNRM-CM5	200	50	5	28	54	84	138	3027
GFDL-ESM2G	50	50	0	0	0	0	5	22
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	2	3	5	13	180
HadGEM2-ES	100	50	0	0	1	3	10	101
HadGEM2-ES	200	50	0	0	0	0	4	12
MIROC5	50	50	0	0	0	0	3	7
MIROC5	100	50	0	0	0	0	2	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	2	2
MRI-CGCM3	100	50	0	0	0	0	2	2
MRI-CGCM3	200	50	0	0	0	0	0	0

A4.2.3 Dalby

Table A4. 27: Summary statistics for count of the number of days per year when AHL>threshold. Location=Dalby, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	0	2	2
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	7
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	5	12
MRI-CGCM3	100	40	0	0	0	0	3	5
MRI-CGCM3	200	40	0	0	0	0	0	0

Table A4. 28: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none		Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	**AHL threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	3	11
CNRM-CM5	100	40	0	0	0	0	2	4
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	5	15
GFDL-ESM2G	100	40	0	0	0	0	2	8
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	2	3	39
HadGEM2-ES	100	40	0	0	0	0	3	8
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	4	9
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	2	11	69
CNRM-CM5	100	50	0	0	0	0	9	40
CNRM-CM5	200	50	0	0	0	0	8	22
GFDL-ESM2G	50	50	0	0	0	0	4	13
GFDL-ESM2G	100	50	0	0	0	0	3	5
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	1	2	7	60
HadGEM2-ES	100	50	0	0	0	1	5	26
HadGEM2-ES	200	50	0	0	0	0	4	7
MIROC5	50	50	0	0	0	0	7	28
MIROC5	100	50	0	0	0	0	5	13
MIROC5	200	50	0	0	0	0	3	6
MRI-CGCM3	50	50	0	0	0	0	3	9
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 29: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	4
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0.5	2	11
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	6	22
CNRM-CM5	100	50	0	0	0	0	5	10
CNRM-CM5	200	50	0	0	0	0	2	2
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	5	23
HadGEM2-ES	100	50	0	0	0	0	3	6
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	3	7
MIROC5	100	50	0	0	0	0	2	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 30: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	2
CNRM-CM5	100	50	0	0	0	0	2	2
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	4
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	2	2
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 31: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	0	0
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 32: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	4	14
CNRM-CM5	100	40	0	0	0	0	2	4
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	5	19
GFDL-ESM2G	100	40	0	0	0	0	2	2
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	1	5	50
HadGEM2-ES	100	40	0	0	0	0	3	10
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	4	12
MIROC5	100	40	0	0	0	0	3	5
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	3
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	3	108	531
CNRM-CM5	100	50	0	0	0	0	103	414
CNRM-CM5	200	50	0	0	0	0	98	305
GFDL-ESM2G	50	50	0	0	1	3	12	114
GFDL-ESM2G	100	50	0	0	0	2	9	65
GFDL-ESM2G	200	50	0	0	0	0	5	23
HadGEM2-ES	50	50	0	1	3	5	12	173
HadGEM2-ES	100	50	0	0	1	3	7	102
HadGEM2-ES	200	50	0	0	0	0	5	27
MIROC5	50	50	0	0	0	0	7	22
MIROC5	100	50	0	0	0	0	5	12
MIROC5	200	50	0	0	0	0	3	3
MRI-CGCM3	50	50	0	0	0	0	5	15
MRI-CGCM3	100	50	0	0	0	0	4	9
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 33: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0.5	2	11
HadGEM2-ES	100	40	0	0	0	0	2	4
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	55	164
CNRM-CM5	100	50	0	0	0	0	55	116
CNRM-CM5	200	50	0	0	0	0	54	101
GFDL-ESM2G	50	50	0	0	0	0	6	29
GFDL-ESM2G	100	50	0	0	0	0	2	12
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	1	2	5	60
HadGEM2-ES	100	50	0	0	0	0	5	23
HadGEM2-ES	200	50	0	0	0	0	5	9
MIROC5	50	50	0	0	0	0	4	4
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 34: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	18	36
CNRM-CM5	100	50	0	0	0	0	18	25
CNRM-CM5	200	50	0	0	0	0	4	4
GFDL-ESM2G	50	50	0	0	0	0	2	2
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	5	14
HadGEM2-ES	100	50	0	0	0	0	4	7
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 35: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	2
CNRM-CM5	100	50	0	0	0	0	2	2
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	2
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 36: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	15	29	39.5	53.5	67	1620
CNRM-CM5	100	40	3	15	23.5	33	58	1002
CNRM-CM5	200	40	0	7.5	14	24	49	704
GFDL-ESM2G	50	40	0	0	0	0	5	17
GFDL-ESM2G	100	40	0	0	0	0	4	10
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	1	1	3.5	7	79
HadGEM2-ES	100	40	0	0	0	1	4	30
HadGEM2-ES	200	40	0	0	0	0	2	4
MIROC5	50	40	0	0	0	0	5	12
MIROC5	100	40	0	0	0	0	3	5
MIROC5	200	40	0	0	0	0	2	2
MRI-CGCM3	50	40	0	0	0	0	3	7
MRI-CGCM3	100	40	0	0	0	0	2	2
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	77	109	129.5	149	191	6589
CNRM-CM5	100	50	53	100	119.5	142	184	6015
CNRM-CM5	200	50	38	89	109	134	174	5539
GFDL-ESM2G	50	50	0	1	4.5	9	23	323
GFDL-ESM2G	100	50	0	0	2	6	18	178
GFDL-ESM2G	200	50	0	0	0	1	11	66
HadGEM2-ES	50	50	0	8	14	20	57	775
HadGEM2-ES	100	50	0	3	8.5	13	51	519
HadGEM2-ES	200	50	0	1	3	9	42	306
MIROC5	50	50	0	0	2	5	22	196
MIROC5	100	50	0	0	0	2	14	93
MIROC5	200	50	0	0	0	0	9	29
MRI-CGCM3	50	50	0	0	0	3	9	87
MRI-CGCM3	100	50	0	0	0	0	7	38
MRI-CGCM3	200	50	0	0	0	0	6	9

Table A4. 37: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	2	10	16	19	40	613
CNRM-CM5	100	40	0	2.5	7.5	11.5	30	334
CNRM-CM5	200	40	0	0	3	7	19	178
GFDL-ESM2G	50	40	0	0	0	0	2	5
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	3	22
HadGEM2-ES	100	40	0	0	0	0	2	6
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	33	60	75.5	94	129	3861
CNRM-CM5	100	50	16	45	62	79	120	3182
CNRM-CM5	200	50	11	36	49.5	72	112	2651
GFDL-ESM2G	50	50	0	0	0	3	8	72
GFDL-ESM2G	100	50	0	0	0	0	5	26
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	2	4	9	20	275
HadGEM2-ES	100	50	0	0	2	4	12	159
HadGEM2-ES	200	50	0	0	1	2	11	91
MIROC5	50	50	0	0	0	0	8	44
MIROC5	100	50	0	0	0	0	6	11
MIROC5	200	50	0	0	0	0	4	4
MRI-CGCM3	50	50	0	0	0	0	3	9
MRI-CGCM3	100	50	0	0	0	0	3	3
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 38: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1	4	7	14	173
CNRM-CM5	100	40	0	0	2	3.5	10	93
CNRM-CM5	200	40	0	0	0	0	8	32
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	4
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	9	26	40	51	84	2056
CNRM-CM5	100	50	6	20	32	43	80	1673
CNRM-CM5	200	50	2	11	21.5	33	77	1211
GFDL-ESM2G	50	50	0	0	0	0	4	4
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	1	3	9	95
HadGEM2-ES	100	50	0	0	1	2	9	70
HadGEM2-ES	200	50	0	0	0	0	4	4
MIROC5	50	50	0	0	0	0	2	2
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 39: Summary statistics for count of the number of days per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	6	34
CNRM-CM5	100	40	0	0	0	0	6	19
CNRM-CM5	200	40	0	0	0	0	4	6
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	2	12	17.5	24	48	946
CNRM-CM5	100	50	0	5	11.5	17	46	657
CNRM-CM5	200	50	0	0	5	10	36	368
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	3	28
HadGEM2-ES	100	50	0	0	0	0	3	7
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

A4.2.4 Leeton

Table A4. 40: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	1	8	33
CNRM-CM5	100	40	0	0	0	0	5	13
CNRM-CM5	200	40	0	0	0	0	5	9
GFDL-ESM2G	50	40	0	0	0	2	7	41
GFDL-ESM2G	100	40	0	0	0	0	6	23
GFDL-ESM2G	200	40	0	0	0	0	3	7
HadGEM2-ES	50	40	0	0	1	2	8	64
HadGEM2-ES	100	40	0	0	0	1	7	33
HadGEM2-ES	200	40	0	0	0	0	3	9
MIROC5	50	40	0	0	0	0	6	27
MIROC5	100	40	0	0	0	0	5	16
MIROC5	200	40	0	0	0	0	3	7
MRI-CGCM3	50	40	0	0	2	3	10	88
MRI-CGCM3	100	40	0	0	0	2	8	47
MRI-CGCM3	200	40	0	0	0	0	6	20

Table A4. 41: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	2.5	7	15	158
CNRM-CM5	100	40	0	0	2	3.5	10	105
CNRM-CM5	200	40	0	0	0	1.5	10	53
GFDL-ESM2G	50	40	0	0	2	5	15	117
GFDL-ESM2G	100	40	0	0	0	2	9	63
GFDL-ESM2G	200	40	0	0	0	0	7	20
HadGEM2-ES	50	40	0	2	4	8	22	219
HadGEM2-ES	100	40	0	0	2	5.5	17	130
HadGEM2-ES	200	40	0	0	0	2	8	52
MIROC5	50	40	0	0	2	4	17	118
MIROC5	100	40	0	0	0	2	16	68
MIROC5	200	40	0	0	0	0	10	24
MRI-CGCM3	50	40	0	0.5	3	6	13	166
MRI-CGCM3	100	40	0	0	2	3	11	101
MRI-CGCM3	200	40	0	0	0	1	8	41
2050-2099								
CNRM-CM5	50	50	0	2	4.5	9	30	291
CNRM-CM5	100	50	0	0	2.5	6	28	197
CNRM-CM5	200	50	0	0	0	3	16	106
GFDL-ESM2G	50	50	0	0	3.5	6	22	229
GFDL-ESM2G	100	50	0	0	2	4	17	127
GFDL-ESM2G	200	50	0	0	0	0	14	50
HadGEM2-ES	50	50	0	3	9	15	39	498
HadGEM2-ES	100	50	0	1	5	10	30	342
HadGEM2-ES	200	50	0	0	1	5	21	183
MIROC5	50	50	0	0	2	5	25	163
MIROC5	100	50	0	0	0	3	20	99
MIROC5	200	50	0	0	0	0	14	42
MRI-CGCM3	50	50	0	2	4	10	25	305
MRI-CGCM3	100	50	0	0	2	6	25	202
MRI-CGCM3	200	50	0	0	0	2	17	96

Table A4. 42: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	2.5	8	65
CNRM-CM5	100	40	0	0	0	0.5	8	39
CNRM-CM5	200	40	0	0	0	0	4	11
GFDL-ESM2G	50	40	0	0	0	1.5	7	36
GFDL-ESM2G	100	40	0	0	0	0	5	16
GFDL-ESM2G	200	40	0	0	0	0	3	7
HadGEM2-ES	50	40	0	0	1	2.5	9	69
HadGEM2-ES	100	40	0	0	0	1	7	37
HadGEM2-ES	200	40	0	0	0	0	4	15
MIROC5	50	40	0	0	0	2	10	43
MIROC5	100	40	0	0	0	0	7	20
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0.5	2	7	57
MRI-CGCM3	100	40	0	0	0	0.5	6	29
MRI-CGCM3	200	40	0	0	0	0	4	13
2050-2099								
CNRM-CM5	50	50	0	0	1.5	3	20	123
CNRM-CM5	100	50	0	0	0	3	16	82
CNRM-CM5	200	50	0	0	0	0	13	38
GFDL-ESM2G	50	50	0	0	0	2	13	77
GFDL-ESM2G	100	50	0	0	0	0	12	37
GFDL-ESM2G	200	50	0	0	0	0	5	8
HadGEM2-ES	50	50	0	1	2.5	7	24	209
HadGEM2-ES	100	50	0	0	1	5	19	135
HadGEM2-ES	200	50	0	0	0	1	15	69
MIROC5	50	50	0	0	0	2	16	55
MIROC5	100	50	0	0	0	0	12	31
MIROC5	200	50	0	0	0	0	9	16
MRI-CGCM3	50	50	0	0	1.5	3	18	128
MRI-CGCM3	100	50	0	0	0	2	16	67
MRI-CGCM3	200	50	0	0	0	0	12	35

Table A4. 43: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	5	14
CNRM-CM5	100	40	0	0	0	0	3	5
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	3	7
GFDL-ESM2G	100	40	0	0	0	0	3	6
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	4	13
HadGEM2-ES	100	40	0	0	0	0	4	5
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	5	6
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	5	18
MRI-CGCM3	100	40	0	0	0	0	4	7
MRI-CGCM3	200	40	0	0	0	0	2	2
2050-2099								
CNRM-CM5	50	50	0	0	0	0	12	31
CNRM-CM5	100	50	0	0	0	0	11	20
CNRM-CM5	200	50	0	0	0	0	10	10
GFDL-ESM2G	50	50	0	0	0	0	5	10
GFDL-ESM2G	100	50	0	0	0	0	2	2
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	2	14	70
HadGEM2-ES	100	50	0	0	0	1	13	42
HadGEM2-ES	200	50	0	0	0	0	10	17
MIROC5	50	50	0	0	0	0	2	8
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	12	35
MRI-CGCM3	100	50	0	0	0	0	10	22
MRI-CGCM3	200	50	0	0	0	0	3	3

Table A4. 44: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
	2010-2049							
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	4
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	2
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	4
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	6	7
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	9	25
HadGEM2-ES	100	50	0	0	0	0	5	11
HadGEM2-ES	200	50	0	0	0	0	4	6
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	2	7
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 45: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	2.5	6	20	173
CNRM-CM5	100	40	0	0	2	4.5	15	113
CNRM-CM5	200	40	0	0	0	0.5	9	43
GFDL-ESM2G	50	40	0	1	2	7	19	172
GFDL-ESM2G	100	40	0	0	2	3.5	16	110
GFDL-ESM2G	200	40	0	0	0	2	8	45
HadGEM2-ES	50	40	0	3	6	12	38	328
HadGEM2-ES	100	40	0	2	4	10	32	243
HadGEM2-ES	200	40	0	0	2	6	24	154
MIROC5	50	40	0	0	2	4.5	19	118
MIROC5	100	40	0	0	0	2	16	72
MIROC5	200	40	0	0	0	0	5	19
MRI-CGCM3	50	40	0	1	3.5	6	19	172
MRI-CGCM3	100	40	0	0	2	4	12	108
MRI-CGCM3	200	40	0	0	0	1	10	37
2050-2099								
CNRM-CM5	50	50	0	3	8.5	13	36	457
CNRM-CM5	100	50	0	2	5	10	33	327
CNRM-CM5	200	50	0	0	1.5	5	26	169
GFDL-ESM2G	50	50	0	3	8	14	44	481
GFDL-ESM2G	100	50	0	0	5	8	33	315
GFDL-ESM2G	200	50	0	0	1.5	5	23	171
HadGEM2-ES	50	50	1	8	17.5	23	45	861
HadGEM2-ES	100	50	0	4	11.5	18	42	644
HadGEM2-ES	200	50	0	1	6.5	13	37	403
MIROC5	50	50	0	2	5	8	31	348
MIROC5	100	50	0	0	2	5	25	207
MIROC5	200	50	0	0	0	3	19	120
MRI-CGCM3	50	50	0	4	6	11	28	403
MRI-CGCM3	100	50	0	2	3.5	7	25	260
MRI-CGCM3	200	50	0	0	0.5	3	20	137

Table A4. 46: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	1	2.5	8	71
CNRM-CM5	100	40	0	0	0	0	7	30
CNRM-CM5	200	40	0	0	0	0	4	11
GFDL-ESM2G	50	40	0	0	0	2	8	57
GFDL-ESM2G	100	40	0	0	0	0	5	26
GFDL-ESM2G	200	40	0	0	0	0	3	13
HadGEM2-ES	50	40	0	1	3	6.5	16	163
HadGEM2-ES	100	40	0	0	1	4	12	92
HadGEM2-ES	200	40	0	0	0	1	8	36
MIROC5	50	40	0	0	0	2	10	39
MIROC5	100	40	0	0	0	0	3	14
MIROC5	200	40	0	0	0	0	2	2
MRI-CGCM3	50	40	0	0	0.5	2.5	8	55
MRI-CGCM3	100	40	0	0	0	0	8	24
MRI-CGCM3	200	40	0	0	0	0	7	8
2050-2099								
CNRM-CM5	50	50	0	0	2	6	29	201
CNRM-CM5	100	50	0	0	0	4	22	114
CNRM-CM5	200	50	0	0	0	2	19	59
GFDL-ESM2G	50	50	0	0	2.5	6	25	190
GFDL-ESM2G	100	50	0	0	1	3	21	118
GFDL-ESM2G	200	50	0	0	0	2	18	57
HadGEM2-ES	50	50	0	3	8	11	30	427
HadGEM2-ES	100	50	0	1	4.5	9	24	306
HadGEM2-ES	200	50	0	0	1.5	5	18	168
MIROC5	50	50	0	0	0	3	18	120
MIROC5	100	50	0	0	0	2	15	81
MIROC5	200	50	0	0	0	0	10	32
MRI-CGCM3	50	50	0	0	2	4	22	160
MRI-CGCM3	100	50	0	0	0	2	16	92
MRI-CGCM3	200	50	0	0	0	0	13	43

Table A4. 47: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	3	11
CNRM-CM5	100	40	0	0	0	0	3	6
CNRM-CM5	200	40	0	0	0	0	3	3
GFDL-ESM2G	50	40	0	0	0	0	3	14
GFDL-ESM2G	100	40	0	0	0	0	3	7
GFDL-ESM2G	200	40	0	0	0	0	1	1
HadGEM2-ES	50	40	0	0	0	1	6	36
HadGEM2-ES	100	40	0	0	0	0	6	14
HadGEM2-ES	200	40	0	0	0	0	3	3
MIROC5	50	40	0	0	0	0	3	3
MIROC5	100	40	0	0	0	0	2	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	7	9
MRI-CGCM3	100	40	0	0	0	0	6	6
MRI-CGCM3	200	40	0	0	0	0	6	6
2050-2099								
CNRM-CM5	50	50	0	0	0	0	20	57
CNRM-CM5	100	50	0	0	0	0	14	30
CNRM-CM5	200	50	0	0	0	0	12	15
GFDL-ESM2G	50	50	0	0	0	2	16	56
GFDL-ESM2G	100	50	0	0	0	0	14	32
GFDL-ESM2G	200	50	0	0	0	0	5	10
HadGEM2-ES	50	50	0	0	1.5	5	18	155
HadGEM2-ES	100	50	0	0	1	3	17	106
HadGEM2-ES	200	50	0	0	0	1	13	51
MIROC5	50	50	0	0	0	0	6	24
MIROC5	100	50	0	0	0	0	5	14
MIROC5	200	50	0	0	0	0	3	7
MRI-CGCM3	50	50	0	0	0	0	10	42
MRI-CGCM3	100	50	0	0	0	0	9	26
MRI-CGCM3	200	50	0	0	0	0	3	3

Table A4. 48: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	4
CNRM-CM5	100	40	0	0	0	0	2	2
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	2
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	3	5
HadGEM2-ES	100	40	0	0	0	0	2	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	5	5
MRI-CGCM3	100	40	0	0	0	0	3	3
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	6	12
CNRM-CM5	100	50	0	0	0	0	6	8
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	3	10
GFDL-ESM2G	100	50	0	0	0	0	3	8
GFDL-ESM2G	200	50	0	0	0	0	1	1
HadGEM2-ES	50	50	0	0	0.5	1	13	61
HadGEM2-ES	100	50	0	0	0	1	10	33
HadGEM2-ES	200	50	0	0	0	0	10	20
MIROC5	50	50	0	0	0	0	3	9
MIROC5	100	50	0	0	0	0	3	7
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	2	5
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 49: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	14	30.5	42.5	57.5	82	1790
CNRM-CM5	100	40	5	19.5	29	47.5	76	1355
CNRM-CM5	200	40	0	13	19	39.5	69	1007
GFDL-ESM2G	50	40	0	0	2	5	9	117
GFDL-ESM2G	100	40	0	0	0	2	8	57
GFDL-ESM2G	200	40	0	0	0	0.5	6	26
HadGEM2-ES	50	40	0	2.5	8.5	12	35	342
HadGEM2-ES	100	40	0	1	4.5	9.5	26	242
HadGEM2-ES	200	40	0	0	1.5	4.5	21	129
MIROC5	50	40	0	0	2	3.5	12	106
MIROC5	100	40	0	0	0	2	11	72
MIROC5	200	40	0	0	0	0	6	23
MRI-CGCM3	50	40	0	2	3	6	19	171
MRI-CGCM3	100	40	0	0	2	5	14	104
MRI-CGCM3	200	40	0	0	0	2	7	46
2050-2099								
CNRM-CM5	50	50	51	82	104	121	169	5156
CNRM-CM5	100	50	41	68	91	109	162	4612
CNRM-CM5	200	50	29	56	82	103	158	4143
GFDL-ESM2G	50	50	0	9	15.5	23	57	892
GFDL-ESM2G	100	50	0	4	11.5	19	51	644
GFDL-ESM2G	200	50	0	2	5.5	12	47	405
HadGEM2-ES	50	50	8	27	45	58	98	2249
HadGEM2-ES	100	50	4	21	34.5	49	90	1902
HadGEM2-ES	200	50	0	14	27.5	42	83	1496
MIROC5	50	50	0	5	11.5	18	40	683
MIROC5	100	50	0	2	7.5	15	33	496
MIROC5	200	50	0	0	4	8	26	294
MRI-CGCM3	50	50	0	7	16	23	46	821
MRI-CGCM3	100	50	0	6	11	17	41	611
MRI-CGCM3	200	50	0	0	6	9	32	362

Table A4. 50: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	1	15	21.5	34.5	61	1007
CNRM-CM5	100	40	0	10	15	25	50	701
CNRM-CM5	200	40	0	6	9	18.5	46	514
GFDL-ESM2G	50	40	0	0	0	2	4	30
GFDL-ESM2G	100	40	0	0	0	0	4	18
GFDL-ESM2G	200	40	0	0	0	0	4	5
HadGEM2-ES	50	40	0	1	2	6	15	147
HadGEM2-ES	100	40	0	0	0.5	3	12	75
HadGEM2-ES	200	40	0	0	0	0.5	8	34
MIROC5	50	40	0	0	0	2	8	38
MIROC5	100	40	0	0	0	0	5	16
MIROC5	200	40	0	0	0	0	3	3
MRI-CGCM3	50	40	0	0	0	2.5	8	60
MRI-CGCM3	100	40	0	0	0	2	7	35
MRI-CGCM3	200	40	0	0	0	0	5	11
2050-2099								
CNRM-CM5	50	50	26	51	72	84	124	3509
CNRM-CM5	100	50	15	38	61	77	114	2978
CNRM-CM5	200	50	6	27	49	65	101	2462
GFDL-ESM2G	50	50	0	3	7.5	13	41	434
GFDL-ESM2G	100	50	0	2	5	8	32	272
GFDL-ESM2G	200	50	0	0	1	4	26	152
HadGEM2-ES	50	50	2	13	23.5	35	60	1245
HadGEM2-ES	100	50	2	9	17.5	27	53	986
HadGEM2-ES	200	50	0	5	12	20	48	689
MIROC5	50	50	0	2	4	9	28	307
MIROC5	100	50	0	0	2.5	6	21	203
MIROC5	200	50	0	0	0	3	15	114
MRI-CGCM3	50	50	0	2	6	11	33	387
MRI-CGCM3	100	50	0	0	3	6	30	247
MRI-CGCM3	200	50	0	0	0	3	17	119

Table A4. 51: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	7.5	11	18	40	525
CNRM-CM5	100	40	0	5	7.5	15.5	36	397
CNRM-CM5	200	40	0	1	4	8.5	23	224
GFDL-ESM2G	50	40	0	0	0	0	3	7
GFDL-ESM2G	100	40	0	0	0	0	3	3
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	7	35
HadGEM2-ES	100	40	0	0	0	0	6	21
HadGEM2-ES	200	40	0	0	0	0	3	3
MIROC5	50	40	0	0	0	0	3	7
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	3	14
MRI-CGCM3	100	40	0	0	0	0	3	6
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	12	28	50.5	59	98	2382
CNRM-CM5	100	50	6	22	40	52	88	1952
CNRM-CM5	200	50	2	14	27	40	72	1493
GFDL-ESM2G	50	50	0	0	2	5	27	151
GFDL-ESM2G	100	50	0	0	0	2	22	94
GFDL-ESM2G	200	50	0	0	0	0	14	45
HadGEM2-ES	50	50	0	6	10.5	18	43	643
HadGEM2-ES	100	50	0	3	9	13	36	493
HadGEM2-ES	200	50	0	1	3.5	7	28	275
MIROC5	50	50	0	0	0	4	15	115
MIROC5	100	50	0	0	0	2	14	79
MIROC5	200	50	0	0	0	0	10	29
MRI-CGCM3	50	50	0	0	1.5	3	15	118
MRI-CGCM3	100	50	0	0	0	2	15	80
MRI-CGCM3	200	50	0	0	0	0	13	47

Table A4. 52: Summary statistics for count of the number of days per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	2.5	5	10	25	261
CNRM-CM5	100	40	0	0.5	3	7	18	174
CNRM-CM5	200	40	0	0	0	3	9	76
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	3	10
HadGEM2-ES	100	40	0	0	0	0	2	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	2	15	28	38	64	1432
CNRM-CM5	100	50	0	12	20.5	28	57	1108
CNRM-CM5	200	50	0	7	13	21	44	757
GFDL-ESM2G	50	50	0	0	0	1	15	48
GFDL-ESM2G	100	50	0	0	0	0	11	34
GFDL-ESM2G	200	50	0	0	0	0	4	14
HadGEM2-ES	50	50	0	2	4	7	23	283
HadGEM2-ES	100	50	0	0	2	4	22	173
HadGEM2-ES	200	50	0	0	0	2	18	85
MIROC5	50	50	0	0	0	1	4	30
MIROC5	100	50	0	0	0	0	2	13
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	11	43
MRI-CGCM3	100	50	0	0	0	0	8	24
MRI-CGCM3	200	50	0	0	0	0	2	4

A4.2.5 Narrogin

Table A4. 53: Summary statistics for count of the number of days per year when AHL>threshold. Location=Narrogin, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	3
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0

Table A4. 54: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	2
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	9
HadGEM2-ES	100	40	0	0	0	0	2	3
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	4	10
MRI-CGCM3	100	40	0	0	0	0	2	3
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	7
CNRM-CM5	100	50	0	0	0	0	2	2
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	3
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	13
HadGEM2-ES	100	50	0	0	0	0	2	5
HadGEM2-ES	200	50	0	0	0	0	1	1
MIROC5	50	50	0	0	0	0	2	3
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	2	17
MRI-CGCM3	100	50	0	0	0	0	2	4
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 55: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	3
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	3
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	1
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	4
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	2
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 56: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 57: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	0	0
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 58: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model	**threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0.5	2	12
HadGEM2-ES	100	40	0	0	0	0	2	4
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	2	3
MIROC5	100	40	0	0	0	0	1	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	3	13
MRI-CGCM3	100	40	0	0	0	0	2	3
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	5	18
CNRM-CM5	100	50	0	0	0	0	3	6
CNRM-CM5	200	50	0	0	0	0	1	1
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	4	30
HadGEM2-ES	100	50	0	0	0	0	2	9
HadGEM2-ES	200	50	0	0	0	0	2	2
MIROC5	50	50	0	0	0	0	2	5
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	1	7	30
MRI-CGCM3	100	50	0	0	0	0	2	6
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 59: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	4
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	3
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	4
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	7
HadGEM2-ES	100	50	0	0	0	0	2	3
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	3
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 60: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL threshold	Count of years	Summary of per-annum counts of days when AHL > threshold					
Model		(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	1	1
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 61: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	1
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 62: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	3	6	8.5	12	29	402
CNRM-CM5	100	40	0	2	3	6	19	181
CNRM-CM5	200	40	0	0	0	2	14	69
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	1	2
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	11
HadGEM2-ES	100	40	0	0	0	0	2	4
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	3
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	7
MRI-CGCM3	100	40	0	0	0	0	2	2
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	15	23	29	36	57	1519
CNRM-CM5	100	50	4	13	16	23	45	920
CNRM-CM5	200	50	0	5	7	14	30	456
GFDL-ESM2G	50	50	0	0	0	0	4	12
GFDL-ESM2G	100	50	0	0	0	0	3	5
GFDL-ESM2G	200	50	0	0	0	0	2	2
HadGEM2-ES	50	50	0	0	1	3	12	101
HadGEM2-ES	100	50	0	0	0	2	10	48
HadGEM2-ES	200	50	0	0	0	0	3	10
MIROC5	50	50	0	0	0	2	4	33
MIROC5	100	50	0	0	0	0	2	4
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	1	3	9	79
MRI-CGCM3	100	50	0	0	0	0	6	26
MRI-CGCM3	200	50	0	0	0	0	1	2

Table A4. 63: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	2	3	6	15	167
CNRM-CM5	100	40	0	0	1	2	11	64
CNRM-CM5	200	40	0	0	0	0.5	7	22
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	3
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	3	11	15	19	37	785
CNRM-CM5	100	50	0	5	7.5	13	22	429
CNRM-CM5	200	50	0	0	3	7	18	196
GFDL-ESM2G	50	50	0	0	0	0	2	4
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	3	34
HadGEM2-ES	100	50	0	0	0	0	2	8
HadGEM2-ES	200	50	0	0	0	0	2	2
MIROC5	50	50	0	0	0	0	2	3
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	3	13
MRI-CGCM3	100	50	0	0	0	0	2	3
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 64: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	2	8	43
CNRM-CM5	100	40	0	0	0	0.5	3	18
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	4	5	9	20	317
CNRM-CM5	100	50	0	1	2	6	16	178
CNRM-CM5	200	50	0	0	0	3	13	81
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	4
HadGEM2-ES	100	50	0	0	0	0	2	3
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	1
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 65: Summary statistics for count of the number of days per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of per-annum counts of days when AHL > threshold min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	9
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	1.5	4	13	138
CNRM-CM5	100	50	0	0	0	2	10	69
CNRM-CM5	200	50	0	0	0	0	5	18
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	3
HadGEM2-ES	100	50	0	0	0	0	1	1
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

A4.3 Additional tables for number of events per year when AHL>threshold

A4.3.1 Caroona

Table A4. 66: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	0	3	7
CNRM-CM5	100	40	0	0	0	0	1	1
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	8
HadGEM2-ES	100	40	0	0	0	0	2	2
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	3
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	3	9
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	0	0

Table A4. 67: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	1	3	26
CNRM-CM5	100	40	0	0	0	0.5	2	13
CNRM-CM5	200	40	0	0	0	0	1	3
GFDL-ESM2G	50	40	0	0	0	0.5	3	13
GFDL-ESM2G	100	40	0	0	0	0	2	6
GFDL-ESM2G	200	40	0	0	0	0	1	1
HadGEM2-ES	50	40	0	0	1	1	3	31
HadGEM2-ES	100	40	0	0	0	0	1	6
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	9
MIROC5	100	40	0	0	0	0	1	3
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	3	10
MRI-CGCM3	100	40	0	0	0	0	2	3
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	1	2	5	70
CNRM-CM5	100	50	0	0	0	1	3	35
CNRM-CM5	200	50	0	0	0	0	2	12
GFDL-ESM2G	50	50	0	0	0	1	4	20
GFDL-ESM2G	100	50	0	0	0	0	1	8
GFDL-ESM2G	200	50	0	0	0	0	1	4
HadGEM2-ES	50	50	0	0	1	2	4	59
HadGEM2-ES	100	50	0	0	0	1	3	23
HadGEM2-ES	200	50	0	0	0	0	2	9
MIROC5	50	50	0	0	0	1	5	25
MIROC5	100	50	0	0	0	0	3	11
MIROC5	200	50	0	0	0	0	1	1
MRI-CGCM3	50	50	0	0	0	1	5	42
MRI-CGCM3	100	50	0	0	0	1	3	20
MRI-CGCM3	200	50	0	0	0	0	1	5

Table A4. 68: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	9
CNRM-CM5	100	40	0	0	0	0	1	2
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	9
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	3
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	1	3	28
CNRM-CM5	100	50	0	0	0	0	2	12
CNRM-CM5	200	50	0	0	0	0	1	3
GFDL-ESM2G	50	50	0	0	0	0	1	7
GFDL-ESM2G	100	50	0	0	0	0	1	4
GFDL-ESM2G	200	50	0	0	0	0	1	1
HadGEM2-ES	50	50	0	0	0	1	2	22
HadGEM2-ES	100	50	0	0	0	0	1	7
HadGEM2-ES	200	50	0	0	0	0	1	2
MIROC5	50	50	0	0	0	0	2	8
MIROC5	100	50	0	0	0	0	1	4
MIROC5	200	50	0	0	0	0	1	1
MRI-CGCM3	50	50	0	0	0	0	3	13
MRI-CGCM3	100	50	0	0	0	0	1	3
MRI-CGCM3	200	50	0	0	0	0	1	2

Table A4. 69: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	1
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	4
CNRM-CM5	100	50	0	0	0	0	1	1
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	4
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	1	1
MIROC5	50	50	0	0	0	0	1	1
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	2
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 70: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

2010-2049 mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	1
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	1	1
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 71: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	1	3	27
CNRM-CM5	100	40	0	0	0	0.5	1	10
CNRM-CM5	200	40	0	0	0	0	1	2
GFDL-ESM2G	50	40	0	0	0	1	2	16
GFDL-ESM2G	100	40	0	0	0	0	1	4
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	2	3	40
HadGEM2-ES	100	40	0	0	0	1	2	13
HadGEM2-ES	200	40	0	0	0	0	1	3
MIROC5	50	40	0	0	0	0	1	5
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0.5	3	12
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	1	1.5	3	7	101
CNRM-CM5	100	50	0	0	1	2	6	59
CNRM-CM5	200	50	0	0	0	1	2	25
GFDL-ESM2G	50	50	0	0	1	2	6	78
GFDL-ESM2G	100	50	0	0	0	1	4	37
GFDL-ESM2G	200	50	0	0	0	0	1	7
HadGEM2-ES	50	50	0	1	2	3	6	100
HadGEM2-ES	100	50	0	0	1	1	4	39
HadGEM2-ES	200	50	0	0	0	1	2	14
MIROC5	50	50	0	0	0	1	3	30
MIROC5	100	50	0	0	0	0	2	11
MIROC5	200	50	0	0	0	0	1	4
MRI-CGCM3	50	50	0	0	0	2	5	44
MRI-CGCM3	100	50	0	0	0	0	4	21
MRI-CGCM3	200	50	0	0	0	0	1	6

Table A4. 72: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	8
CNRM-CM5	100	40	0	0	0	0	1	3
CNRM-CM5	200	40	0	0	0	0	1	1
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	10
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0.5	1	3	39
CNRM-CM5	100	50	0	0	0	1	3	23
CNRM-CM5	200	50	0	0	0	0	2	7
GFDL-ESM2G	50	50	0	0	0	1	3	21
GFDL-ESM2G	100	50	0	0	0	0	1	6
GFDL-ESM2G	200	50	0	0	0	0	1	3
HadGEM2-ES	50	50	0	0	1	1	3	32
HadGEM2-ES	100	50	0	0	0	0	1	9
HadGEM2-ES	200	50	0	0	0	0	1	5
MIROC5	50	50	0	0	0	0	1	5
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	3	15
MRI-CGCM3	100	50	0	0	0	0	2	6
MRI-CGCM3	200	50	0	0	0	0	1	1

Table A4. 73: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	1
CNRM-CM5	100	40	0	0	0	0	1	1
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	13
CNRM-CM5	100	50	0	0	0	0	1	5
CNRM-CM5	200	50	0	0	0	0	1	2
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	6
HadGEM2-ES	100	50	0	0	0	0	1	4
HadGEM2-ES	200	50	0	0	0	0	1	2
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	1
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 74: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	3
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	4
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	1	1
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 75: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	**threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	3	6	8	9	12	301
CNRM-CM5	100	40	0	2	4	5.5	8	161
CNRM-CM5	200	40	0	2	2	3	7	101
GFDL-ESM2G	50	40	0	0	0	1	3	23
GFDL-ESM2G	100	40	0	0	0	0	1	5
GFDL-ESM2G	200	40	0	0	0	0	1	1
HadGEM2-ES	50	40	0	1	1	2	4	53
HadGEM2-ES	100	40	0	0	0	1	2	17
HadGEM2-ES	200	40	0	0	0	0	1	4
MIROC5	50	40	0	0	0	0	1	8
MIROC5	100	40	0	0	0	0	1	4
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0.5	2	13
MRI-CGCM3	100	40	0	0	0	0	1	5
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	4	7	9	12	17	484
CNRM-CM5	100	50	3	5	6	8	12	328
CNRM-CM5	200	50	1	3	5	6	11	249
GFDL-ESM2G	50	50	0	1	2	4	7	123
GFDL-ESM2G	100	50	0	0	1.5	3	5	82
GFDL-ESM2G	200	50	0	0	0	1	3	35
HadGEM2-ES	50	50	0	3	4	6	10	228
HadGEM2-ES	100	50	0	2	3	4	8	149
HadGEM2-ES	200	50	0	0	1	2	5	73
MIROC5	50	50	0	0	1	2	5	69
MIROC5	100	50	0	0	0	1	3	31
MIROC5	200	50	0	0	0	0	2	14
MRI-CGCM3	50	50	0	1	2	3	7	120
MRI-CGCM3	100	50	0	0	1	2	5	73
MRI-CGCM3	200	50	0	0	0	1	4	29

Table A4. 76: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	3	4.5	7.5	11	204
CNRM-CM5	100	40	0	1	2.5	4	9	105
CNRM-CM5	200	40	0	0	1	2	5	59
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	1	2
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	2	19
HadGEM2-ES	100	40	0	0	0	0	1	5
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	3
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	4	8	10	13	20	524
CNRM-CM5	100	50	2	5	7	9	14	361
CNRM-CM5	200	50	1	4	5	6	10	269
GFDL-ESM2G	50	50	0	0	1	2	4	61
GFDL-ESM2G	100	50	0	0	0	1	3	23
GFDL-ESM2G	200	50	0	0	0	0	1	9
HadGEM2-ES	50	50	0	1	2	4	7	129
HadGEM2-ES	100	50	0	0	1	2	6	62
HadGEM2-ES	200	50	0	0	0	1	3	27
MIROC5	50	50	0	0	0	1	2	23
MIROC5	100	50	0	0	0	0	2	11
MIROC5	200	50	0	0	0	0	2	6
MRI-CGCM3	50	50	0	0	1	1	3	44
MRI-CGCM3	100	50	0	0	0	1	2	17
MRI-CGCM3	200	50	0	0	0	0	2	6

Table A4. 77: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1	2	3	7	81
CNRM-CM5	100	40	0	0	1	2	5	50
CNRM-CM5	200	40	0	0	0	1	2	16
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	3	6	7	9	17	389
CNRM-CM5	100	50	1	4	5	7	13	279
CNRM-CM5	200	50	0	2	3	4	10	175
GFDL-ESM2G	50	50	0	0	0	0	2	9
GFDL-ESM2G	100	50	0	0	0	0	1	5
GFDL-ESM2G	200	50	0	0	0	0	1	1
HadGEM2-ES	50	50	0	0	0	1	3	31
HadGEM2-ES	100	50	0	0	0	1	2	19
HadGEM2-ES	200	50	0	0	0	0	1	6
MIROC5	50	50	0	0	0	0	2	7
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	2	6
MRI-CGCM3	100	50	0	0	0	0	1	2
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 78: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	1	1	4	34
CNRM-CM5	100	40	0	0	0	0.5	2	12
CNRM-CM5	200	40	0	0	0	0	1	3
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	1	4	5	7	14	275
CNRM-CM5	100	50	0	2	3	5	11	183
CNRM-CM5	200	50	0	1	2	4	6	107
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	16
HadGEM2-ES	100	50	0	0	0	0	1	5
HadGEM2-ES	200	50	0	0	0	0	1	2
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

A4.3.2 Comet

Table A4. 79: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Comet, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	1	3	19
CNRM-CM5	100	40	0	0	0	0	2	6
CNRM-CM5	200	40	0	0	0	0	1	2
GFDL-ESM2G	50	40	0	0	0	1	2	25
GFDL-ESM2G	100	40	0	0	0	0	1	8
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	1	1	2	3	49
HadGEM2-ES	100	40	0	0	0	1	2	16
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0.5	2	11
MIROC5	100	40	0	0	0	0	1	4
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0.5	1.5	4	36
MRI-CGCM3	100	40	0	0	0	0.5	2	16
MRI-CGCM3	200	40	0	0	0	0	2	8

Table A4. 80: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1	1	2	4	61
CNRM-CM5	100	40	0	0	1	1	3	32
CNRM-CM5	200	40	0	0	0	0	1	8
GFDL-ESM2G	50	40	0	1	2	3	7	92
GFDL-ESM2G	100	40	0	0	1	2	5	52
GFDL-ESM2G	200	40	0	0	0	1	2	24
HadGEM2-ES	50	40	1	2	3	4	6	128
HadGEM2-ES	100	40	0	1	2	2	5	64
HadGEM2-ES	200	40	0	0	0	1	2	23
MIROC5	50	40	0	0	1	1	5	38
MIROC5	100	40	0	0	0	0.5	3	16
MIROC5	200	40	0	0	0	0	3	5
MRI-CGCM3	50	40	0	0	0	1	2	15
MRI-CGCM3	100	40	0	0	0	0	1	5
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	1	2	3	6	105
CNRM-CM5	100	50	0	0	1	2	4	60
CNRM-CM5	200	50	0	0	0	1	2	24
GFDL-ESM2G	50	50	0	0	1	2	5	60
GFDL-ESM2G	100	50	0	0	0	1	3	32
GFDL-ESM2G	200	50	0	0	0	0	2	16
HadGEM2-ES	50	50	1	2	3	4	7	161
HadGEM2-ES	100	50	0	1	1	3	4	87
HadGEM2-ES	200	50	0	0	1	1	4	40
MIROC5	50	50	0	0	1	2	5	72
MIROC5	100	50	0	0	0	2	3	38
MIROC5	200	50	0	0	0	1	2	15
MRI-CGCM3	50	50	0	0	1	1	3	45
MRI-CGCM3	100	50	0	0	0	1	2	18
MRI-CGCM3	200	50	0	0	0	0	1	5

Table A4. 81: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	10
CNRM-CM5	100	40	0	0	0	0	1	4
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	1	2	3	35
GFDL-ESM2G	100	40	0	0	0	1	2	16
GFDL-ESM2G	200	40	0	0	0	0	2	3
HadGEM2-ES	50	40	0	1	1	2	4	59
HadGEM2-ES	100	40	0	0	0	1	2	22
HadGEM2-ES	200	40	0	0	0	0	2	6
MIROC5	50	40	0	0	0	0	2	8
MIROC5	100	40	0	0	0	0	2	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	1	3	37
CNRM-CM5	100	50	0	0	0	1	2	16
CNRM-CM5	200	50	0	0	0	0	1	5
GFDL-ESM2G	50	50	0	0	0	1	3	19
GFDL-ESM2G	100	50	0	0	0	0	1	7
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	1	1	2	4	79
HadGEM2-ES	100	50	0	0	0.5	1	4	37
HadGEM2-ES	200	50	0	0	0	0	2	14
MIROC5	50	50	0	0	0	1	3	22
MIROC5	100	50	0	0	0	0	1	9
MIROC5	200	50	0	0	0	0	1	4
MRI-CGCM3	50	50	0	0	0	0	2	7
MRI-CGCM3	100	50	0	0	0	0	1	2
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 82: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	2	3
GFDL-ESM2G	100	40	0	0	0	0	1	2
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	2	18
HadGEM2-ES	100	40	0	0	0	0	2	6
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	4
CNRM-CM5	100	50	0	0	0	0	1	1
CNRM-CM5	200	50	0	0	0	0	1	1
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	3	28
HadGEM2-ES	100	50	0	0	0	1	2	15
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	3
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 83: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	4
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	10
HadGEM2-ES	100	50	0	0	0	0	1	1
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 84: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1	1	2	5	61
CNRM-CM5	100	40	0	0	1	1	3	31
CNRM-CM5	200	40	0	0	0	0	2	10
GFDL-ESM2G	50	40	0	1	2	3	7	83
GFDL-ESM2G	100	40	0	0	1	1	4	34
GFDL-ESM2G	200	40	0	0	0	1	3	15
HadGEM2-ES	50	40	1	2	3	4	7	123
HadGEM2-ES	100	40	0	1	1.5	2	4	65
HadGEM2-ES	200	40	0	0	0	1	2	21
MIROC5	50	40	0	0	1	1.5	4	35
MIROC5	100	40	0	0	0	0	3	12
MIROC5	200	40	0	0	0	0	1	3
MRI-CGCM3	50	40	0	0	0	1	2	22
MRI-CGCM3	100	40	0	0	0	0	1	8
MRI-CGCM3	200	40	0	0	0	0	1	1
2050-2099								
CNRM-CM5	50	50	0	2	3	4	6	145
CNRM-CM5	100	50	0	1	2	3	7	96
CNRM-CM5	200	50	0	0	1	2	3	51
GFDL-ESM2G	50	50	0	2	3	4	8	165
GFDL-ESM2G	100	50	0	1	2	3	7	98
GFDL-ESM2G	200	50	0	0	1	2	5	54
HadGEM2-ES	50	50	2	3	5	5	11	236
HadGEM2-ES	100	50	1	2	2.5	4	7	141
HadGEM2-ES	200	50	0	1	1	3	5	90
MIROC5	50	50	0	0	1	2	6	78
MIROC5	100	50	0	0	1	2	4	45
MIROC5	200	50	0	0	0	0	2	15
MRI-CGCM3	50	50	0	0	1	2	4	58
MRI-CGCM3	100	50	0	0	0	1	4	32
MRI-CGCM3	200	50	0	0	0	0	2	10

Table A4. 85: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	1	2	15
CNRM-CM5	100	40	0	0	0	0	1	5
CNRM-CM5	200	40	0	0	0	0	1	1
GFDL-ESM2G	50	40	0	0	0	1	2	16
GFDL-ESM2G	100	40	0	0	0	0	1	7
GFDL-ESM2G	200	40	0	0	0	0	1	1
HadGEM2-ES	50	40	0	1	1	2	3	59
HadGEM2-ES	100	40	0	0	0	1	3	26
HadGEM2-ES	200	40	0	0	0	0	2	7
MIROC5	50	40	0	0	0	0	2	7
MIROC5	100	40	0	0	0	0	1	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	4
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	1	2	5	65
CNRM-CM5	100	50	0	0	0	1	3	28
CNRM-CM5	200	50	0	0	0	0	2	13
GFDL-ESM2G	50	50	0	0	1	3	5	69
GFDL-ESM2G	100	50	0	0	1	1	5	45
GFDL-ESM2G	200	50	0	0	0	0	4	16
HadGEM2-ES	50	50	0	2	2.5	4	5	130
HadGEM2-ES	100	50	0	1	1	2	4	78
HadGEM2-ES	200	50	0	0	0.5	1	3	32
MIROC5	50	50	0	0	0	1	3	19
MIROC5	100	50	0	0	0	0	2	10
MIROC5	200	50	0	0	0	0	1	1
MRI-CGCM3	50	50	0	0	0	0	1	11
MRI-CGCM3	100	50	0	0	0	0	1	8
MRI-CGCM3	200	50	0	0	0	0	1	2

Table A4. 86: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	1	2
GFDL-ESM2G	200	40	0	0	0	0	1	1
HadGEM2-ES	50	40	0	0	0	1	2	19
HadGEM2-ES	100	40	0	0	0	0	2	5
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	9
CNRM-CM5	100	50	0	0	0	0	1	5
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	3	11
GFDL-ESM2G	100	50	0	0	0	0	2	5
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	1	2	3	54
HadGEM2-ES	100	50	0	0	0	1	2	27
HadGEM2-ES	200	50	0	0	0	0	1	2
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	1	1
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	1
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 87: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	5
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	2
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	2	21
HadGEM2-ES	100	50	0	0	0	0	1	7
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	1
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 88: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	1	4	5	8	15	257
CNRM-CM5	100	40	1	2	3.5	5	8	149
CNRM-CM5	200	40	1	2	3	4	8	119
GFDL-ESM2G	50	40	0	1	1	3	6	78
GFDL-ESM2G	100	40	0	0	1	2	4	44
GFDL-ESM2G	200	40	0	0	0	1	3	21
HadGEM2-ES	50	40	1	2	3	4.5	7	133
HadGEM2-ES	100	40	0	1	1	2	4	68
HadGEM2-ES	200	40	0	0	0	1	5	29
MIROC5	50	40	0	0	1	2	4	44
MIROC5	100	40	0	0	0	1	3	26
MIROC5	200	40	0	0	0	0	2	9
MRI-CGCM3	50	40	0	0	0	1	4	25
MRI-CGCM3	100	40	0	0	0	0	1	7
MRI-CGCM3	200	40	0	0	0	0	1	1
2050-2099								
CNRM-CM5	50	50	2	4	5	6	11	257
CNRM-CM5	100	50	1	2	3	4	8	169
CNRM-CM5	200	50	1	1	2	3	5	116
GFDL-ESM2G	50	50	1	3	4	7	9	243
GFDL-ESM2G	100	50	1	2	3	5	8	180
GFDL-ESM2G	200	50	0	1	2	3	6	103
HadGEM2-ES	50	50	3	5	6.5	8	11	331
HadGEM2-ES	100	50	2	4	4	5	8	227
HadGEM2-ES	200	50	1	2	3	4	6	152
MIROC5	50	50	0	2	3	4	9	145
MIROC5	100	50	0	1	2	3	8	103
MIROC5	200	50	0	0	1	2	6	59
MRI-CGCM3	50	50	0	2	2	4	7	147
MRI-CGCM3	100	50	0	1	2	3	7	110
MRI-CGCM3	200	50	0	0	1	2	4	54

Table A4. 89: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	3	6.5	8.5	10	18	343
CNRM-CM5	100	40	1	4	5	6	9	199
CNRM-CM5	200	40	1	3	3	4.5	7	144
GFDL-ESM2G	50	40	0	0	0.5	1	3	24
GFDL-ESM2G	100	40	0	0	0	0	2	9
GFDL-ESM2G	200	40	0	0	0	0	1	1
HadGEM2-ES	50	40	0	1	1	2	4	65
HadGEM2-ES	100	40	0	0	1	1	3	31
HadGEM2-ES	200	40	0	0	0	0	2	9
MIROC5	50	40	0	0	0	1	2	13
MIROC5	100	40	0	0	0	0	1	6
MIROC5	200	40	0	0	0	0	1	2
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	1	4	6	8	14	305
CNRM-CM5	100	50	1	3	4	5	9	195
CNRM-CM5	200	50	1	2	3	4	7	140
GFDL-ESM2G	50	50	0	1	2	4	6	121
GFDL-ESM2G	100	50	0	0	1	2	5	71
GFDL-ESM2G	200	50	0	0	1	1	4	36
HadGEM2-ES	50	50	3	4	5	6	10	265
HadGEM2-ES	100	50	1	2	3.5	5	7	181
HadGEM2-ES	200	50	0	1	2	3	4	104
MIROC5	50	50	0	0	1	2	5	71
MIROC5	100	50	0	0	1	1	3	40
MIROC5	200	50	0	0	0	1	3	22
MRI-CGCM3	50	50	0	0	1	2	4	57
MRI-CGCM3	100	50	0	0	0	1	3	31
MRI-CGCM3	200	50	0	0	0	1	2	16

Table A4. 90: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	2	3.5	4.5	6	10	201
CNRM-CM5	100	40	0	2	3	4.5	8	135
CNRM-CM5	200	40	0	1	2	3	5	77
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	3	21
HadGEM2-ES	100	40	0	0	0	0	2	9
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	1	3	5	7	12	278
CNRM-CM5	100	50	1	2	4	6	10	205
CNRM-CM5	200	50	1	2	3	4	7	163
GFDL-ESM2G	50	50	0	0	0	1	3	31
GFDL-ESM2G	100	50	0	0	0	1	3	19
GFDL-ESM2G	200	50	0	0	0	0	1	4
HadGEM2-ES	50	50	0	2	2.5	3	5	123
HadGEM2-ES	100	50	0	1	1.5	2	4	81
HadGEM2-ES	200	50	0	0	1	1	3	36
MIROC5	50	50	0	0	0	1	3	17
MIROC5	100	50	0	0	0	0	2	9
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	7
MRI-CGCM3	100	50	0	0	0	0	1	3
MRI-CGCM3	200	50	0	0	0	0	1	1

Table A4. 91: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1	2	3.5	7	92
CNRM-CM5	100	40	0	0	1	2	4	48
CNRM-CM5	200	40	0	0	0	1	2	24
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	6
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	1	5	6	7	14	307
CNRM-CM5	100	50	1	3	4	6	12	244
CNRM-CM5	200	50	1	3	3	4	8	176
GFDL-ESM2G	50	50	0	0	0	0	2	9
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	1	1	2	4	72
HadGEM2-ES	100	50	0	0	1	1	3	42
HadGEM2-ES	200	50	0	0	0	0	1	4
MIROC5	50	50	0	0	0	0	1	3
MIROC5	100	50	0	0	0	0	1	1
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	1
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

A4.3.3 Dalby

Table A4. 92: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Dalby, time period= 1960-1999. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	0	1	1
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	6
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	5
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	0	0

Table A4. 93: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	6
CNRM-CM5	100	40	0	0	0	0	1	2
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	4
GFDL-ESM2G	100	40	0	0	0	0	1	4
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	1	2	26
HadGEM2-ES	100	40	0	0	0	0	1	4
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	4
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	1	4	18
CNRM-CM5	100	50	0	0	0	0	2	9
CNRM-CM5	200	50	0	0	0	0	1	5
GFDL-ESM2G	50	50	0	0	0	0	1	6
GFDL-ESM2G	100	50	0	0	0	0	1	2
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	1	1	3	32
HadGEM2-ES	100	50	0	0	0	0	2	10
HadGEM2-ES	200	50	0	0	0	0	1	3
MIROC5	50	50	0	0	0	0	1	10
MIROC5	100	50	0	0	0	0	1	4
MIROC5	200	50	0	0	0	0	1	2
MRI-CGCM3	50	50	0	0	0	0	1	4
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 94: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	9
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	8
CNRM-CM5	100	50	0	0	0	0	1	4
CNRM-CM5	200	50	0	0	0	0	1	1
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	2	16
HadGEM2-ES	100	50	0	0	0	0	2	4
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	3
MIROC5	100	50	0	0	0	0	1	1
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 95: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

2010-2049 mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	1
CNRM-CM5	100	50	0	0	0	0	1	1
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	1
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0

Table A4. 96: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

2010-2049 mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	0	0
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 97: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	6
CNRM-CM5	100	40	0	0	0	0	1	2
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	8
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	1	3	31
HadGEM2-ES	100	40	0	0	0	0	1	5
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	6
MIROC5	100	40	0	0	0	0	1	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	1	7	46
CNRM-CM5	100	50	0	0	0	0	7	33
CNRM-CM5	200	50	0	0	0	0	3	14
GFDL-ESM2G	50	50	0	0	0.5	1	3	36
GFDL-ESM2G	100	50	0	0	0	0	2	15
GFDL-ESM2G	200	50	0	0	0	0	1	5
HadGEM2-ES	50	50	0	1	1	2	4	68
HadGEM2-ES	100	50	0	0	1	1	2	34
HadGEM2-ES	200	50	0	0	0	0	2	10
MIROC5	50	50	0	0	0	0	2	6
MIROC5	100	50	0	0	0	0	1	3
MIROC5	200	50	0	0	0	0	1	1
MRI-CGCM3	50	50	0	0	0	0	1	6
MRI-CGCM3	100	50	0	0	0	0	1	3
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 98: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	**threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	9
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	4	16
CNRM-CM5	100	50	0	0	0	0	2	6
CNRM-CM5	200	50	0	0	0	0	2	5
GFDL-ESM2G	50	50	0	0	0	0	2	11
GFDL-ESM2G	100	50	0	0	0	0	1	6
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	1	1	2	31
HadGEM2-ES	100	50	0	0	0	0	2	10
HadGEM2-ES	200	50	0	0	0	0	2	3
MIROC5	50	50	0	0	0	0	1	1
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 99: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	**threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	3
CNRM-CM5	100	50	0	0	0	0	1	2
CNRM-CM5	200	50	0	0	0	0	1	1
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	6
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 100: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	1
CNRM-CM5	100	50	0	0	0	0	1	1
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	1
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 101: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	**threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**	**all yrs**
2010-2049								
CNRM-CM5	50	40	3	7	9	11	16	368
CNRM-CM5	100	40	1	2.5	4	5	8	162
CNRM-CM5	200	40	0	1.5	2.5	4	6	103
GFDL-ESM2G	50	40	0	0	0	0	2	7
GFDL-ESM2G	100	40	0	0	0	0	2	5
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	1	1	3	38
HadGEM2-ES	100	40	0	0	0	1	2	14
HadGEM2-ES	200	40	0	0	0	0	1	2
MIROC5	50	40	0	0	0	0	1	4
MIROC5	100	40	0	0	0	0	1	2
MIROC5	200	40	0	0	0	0	1	1
MRI-CGCM3	50	40	0	0	0	0	1	3
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	3	6	8	10	18	418
CNRM-CM5	100	50	2	4	5	7	11	278
CNRM-CM5	200	50	2	3	4	6	10	219
GFDL-ESM2G	50	50	0	0	1	2	7	83
GFDL-ESM2G	100	50	0	0	1	1	4	43
GFDL-ESM2G	200	50	0	0	0	1	2	15
HadGEM2-ES	50	50	0	2	3	4	8	176
HadGEM2-ES	100	50	0	1	2	3	5	94
HadGEM2-ES	200	50	0	0	1	2	3	46
MIROC5	50	50	0	0	1	2	6	59
MIROC5	100	50	0	0	0	1	6	27
MIROC5	200	50	0	0	0	0	2	7
MRI-CGCM3	50	50	0	0	0	1	3	23
MRI-CGCM3	100	50	0	0	0	0	1	10
MRI-CGCM3	200	50	0	0	0	0	1	2

Table A4. 102: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	1	3.5	5	7	9	200
CNRM-CM5	100	40	0	1	2	3	6	94
CNRM-CM5	200	40	0	0	1	2	5	51
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	2	18
HadGEM2-ES	100	40	0	0	0	0	1	3
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	5	8	10.5	13	16	519
CNRM-CM5	100	50	2	5	6	9	13	334
CNRM-CM5	200	50	1	4	4.5	6	10	252
GFDL-ESM2G	50	50	0	0	0	1	2	26
GFDL-ESM2G	100	50	0	0	0	0	2	9
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	1	2	3	5	84
HadGEM2-ES	100	50	0	0	1	1	3	41
HadGEM2-ES	200	50	0	0	0	1	2	27
MIROC5	50	50	0	0	0	0	2	14
MIROC5	100	50	0	0	0	0	1	3
MIROC5	200	50	0	0	0	0	1	1
MRI-CGCM3	50	50	0	0	0	0	1	4
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 103: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	1	2	4	60
CNRM-CM5	100	40	0	0	1	1	3	32
CNRM-CM5	200	40	0	0	0	0	1	7
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	3	5	7	9	12	353
CNRM-CM5	100	50	1	4	5	6	10	249
CNRM-CM5	200	50	0	1	3	4	9	151
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	2	31
HadGEM2-ES	100	50	0	0	0	1	2	24
HadGEM2-ES	200	50	0	0	0	0	1	1
MIROC5	50	50	0	0	0	0	1	1
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 104: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	11
CNRM-CM5	100	40	0	0	0	0	1	7
CNRM-CM5	200	40	0	0	0	0	1	2
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	1	3	4	6	10	213
CNRM-CM5	100	50	0	1	2	4	10	136
CNRM-CM5	200	50	0	0	1	2	6	65
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	2	16
HadGEM2-ES	100	50	0	0	0	0	2	4
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

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Table A4. 105: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Leeton, time period= 1960-1999. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	1	4	15
CNRM-CM5	100	40	0	0	0	0	1	4
CNRM-CM5	200	40	0	0	0	0	1	3
GFDL-ESM2G	50	40	0	0	0	1	2	17
GFDL-ESM2G	100	40	0	0	0	0	2	9
GFDL-ESM2G	200	40	0	0	0	0	1	3
HadGEM2-ES	50	40	0	0	1	1.5	3	32
HadGEM2-ES	100	40	0	0	0	0.5	2	11
HadGEM2-ES	200	40	0	0	0	0	1	4
MIROC5	50	40	0	0	0	0	2	10
MIROC5	100	40	0	0	0	0	1	6
MIROC5	200	40	0	0	0	0	1	3
MRI-CGCM3	50	40	0	0	1	1.5	3	34
MRI-CGCM3	100	40	0	0	0	1	2	16
MRI-CGCM3	200	40	0	0	0	0	2	8

Table A4. 106: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	1	2	4	50
CNRM-CM5	100	40	0	0	1	1	3	31
CNRM-CM5	200	40	0	0	0	1	2	13
GFDL-ESM2G	50	40	0	0	1	2	5	50
GFDL-ESM2G	100	40	0	0	0	1	4	25
GFDL-ESM2G	200	40	0	0	0	0	1	6
HadGEM2-ES	50	40	0	1	1	3	5	77
HadGEM2-ES	100	40	0	0	1	2	4	42
HadGEM2-ES	200	40	0	0	0	1	2	17
MIROC5	50	40	0	0	1	1.5	4	43
MIROC5	100	40	0	0	0	1	3	22
MIROC5	200	40	0	0	0	0	2	6
MRI-CGCM3	50	40	0	0.5	1	2	5	59
MRI-CGCM3	100	40	0	0	1	1	4	34
MRI-CGCM3	200	40	0	0	0	0.5	1	10
2050-2099								
CNRM-CM5	50	50	0	1	1	3	6	87
CNRM-CM5	100	50	0	0	1	2	5	53
CNRM-CM5	200	50	0	0	0	1	3	24
GFDL-ESM2G	50	50	0	0	1	3	5	81
GFDL-ESM2G	100	50	0	0	1	1	4	43
GFDL-ESM2G	200	50	0	0	0	0	2	15
HadGEM2-ES	50	50	0	1	2.5	4	8	142
HadGEM2-ES	100	50	0	1	1	3	6	86
HadGEM2-ES	200	50	0	0	1	1	4	44
MIROC5	50	50	0	0	1	2	5	56
MIROC5	100	50	0	0	0	1	3	28
MIROC5	200	50	0	0	0	0	2	12
MRI-CGCM3	50	50	0	1	2	3	6	101
MRI-CGCM3	100	50	0	0	1	2	5	58
MRI-CGCM3	200	50	0	0	0	1	3	23

Table A4. 107: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	1	3	23
CNRM-CM5	100	40	0	0	0	0.5	2	12
CNRM-CM5	200	40	0	0	0	0	1	4
GFDL-ESM2G	50	40	0	0	0	1	2	15
GFDL-ESM2G	100	40	0	0	0	0	1	6
GFDL-ESM2G	200	40	0	0	0	0	1	3
HadGEM2-ES	50	40	0	0	1	1	3	32
HadGEM2-ES	100	40	0	0	0	1	2	14
HadGEM2-ES	200	40	0	0	0	0	2	7
MIROC5	50	40	0	0	0	1	2	17
MIROC5	100	40	0	0	0	0	2	6
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0.5	1	2	25
MRI-CGCM3	100	40	0	0	0	0.5	1	10
MRI-CGCM3	200	40	0	0	0	0	1	4
2050-2099								
CNRM-CM5	50	50	0	0	1	1	4	39
CNRM-CM5	100	50	0	0	0	1	3	23
CNRM-CM5	200	50	0	0	0	0	1	9
GFDL-ESM2G	50	50	0	0	0	1	4	31
GFDL-ESM2G	100	50	0	0	0	0	2	13
GFDL-ESM2G	200	50	0	0	0	0	1	2
HadGEM2-ES	50	50	0	1	1	2	6	71
HadGEM2-ES	100	50	0	0	1	1	3	40
HadGEM2-ES	200	50	0	0	0	1	2	22
MIROC5	50	50	0	0	0	1	3	19
MIROC5	100	50	0	0	0	0	2	10
MIROC5	200	50	0	0	0	0	1	5
MRI-CGCM3	50	50	0	0	1	1	4	46
MRI-CGCM3	100	50	0	0	0	1	3	19
MRI-CGCM3	200	50	0	0	0	0	3	9

Table A4. 108: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	2	6
CNRM-CM5	100	40	0	0	0	0	1	2
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	1	2
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	6
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	5
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	1	1
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	8
CNRM-CM5	100	50	0	0	0	0	1	4
CNRM-CM5	200	50	0	0	0	0	1	1
GFDL-ESM2G	50	50	0	0	0	0	2	5
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	2	27
HadGEM2-ES	100	50	0	0	0	0	2	13
HadGEM2-ES	200	50	0	0	0	0	1	4
MIROC5	50	50	0	0	0	0	1	4
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	3	9
MRI-CGCM3	100	50	0	0	0	0	1	5
MRI-CGCM3	200	50	0	0	0	0	1	1

Table A4. 109: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	2	3
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	2	10
HadGEM2-ES	100	50	0	0	0	0	1	4
HadGEM2-ES	200	50	0	0	0	0	1	2
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	4
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 110: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	1	2	5	53
CNRM-CM5	100	40	0	0	1	1	3	30
CNRM-CM5	200	40	0	0	0	0.5	3	12
GFDL-ESM2G	50	40	0	1	1	2	4	57
GFDL-ESM2G	100	40	0	0	1	1	3	34
GFDL-ESM2G	200	40	0	0	0	1	2	13
HadGEM2-ES	50	40	0	1	2	3	7	90
HadGEM2-ES	100	40	0	1	1	2	4	60
HadGEM2-ES	200	40	0	0	1	1	2	31
MIROC5	50	40	0	0	1	2	4	47
MIROC5	100	40	0	0	0	1	3	24
MIROC5	200	40	0	0	0	0	2	7
MRI-CGCM3	50	40	0	1	1	2	6	61
MRI-CGCM3	100	40	0	0	1	1	3	35
MRI-CGCM3	200	40	0	0	0	1	1	11
2050-2099								
CNRM-CM5	50	50	0	1	2	3	7	123
CNRM-CM5	100	50	0	1	2	2	6	83
CNRM-CM5	200	50	0	0	1	1	4	40
GFDL-ESM2G	50	50	0	1	3	4	8	137
GFDL-ESM2G	100	50	0	0	1	3	6	86
GFDL-ESM2G	200	50	0	0	1	1	4	41
HadGEM2-ES	50	50	1	3	4	6	11	220
HadGEM2-ES	100	50	0	2	2	4	8	147
HadGEM2-ES	200	50	0	1	1	2	6	80
MIROC5	50	50	0	1	2	3	6	106
MIROC5	100	50	0	0	1	2	4	53
MIROC5	200	50	0	0	0	1	3	28
MRI-CGCM3	50	50	0	1	2	4	7	130
MRI-CGCM3	100	50	0	1	1	2	5	76
MRI-CGCM3	200	50	0	0	0.5	1	3	33

Table A4. 111: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	1	1	4	29
CNRM-CM5	100	40	0	0	0	0	1	9
CNRM-CM5	200	40	0	0	0	0	1	4
GFDL-ESM2G	50	40	0	0	0	1	2	23
GFDL-ESM2G	100	40	0	0	0	0	2	10
GFDL-ESM2G	200	40	0	0	0	0	1	5
HadGEM2-ES	50	40	0	1	1	2	5	63
HadGEM2-ES	100	40	0	0	0.5	1	3	29
HadGEM2-ES	200	40	0	0	0	1	2	13
MIROC5	50	40	0	0	0	1	3	17
MIROC5	100	40	0	0	0	0	1	7
MIROC5	200	40	0	0	0	0	1	1
MRI-CGCM3	50	40	0	0	0.5	1	3	24
MRI-CGCM3	100	40	0	0	0	0	1	9
MRI-CGCM3	200	40	0	0	0	0	1	2
2050-2099								
CNRM-CM5	50	50	0	0	1	2	6	66
CNRM-CM5	100	50	0	0	0	1	4	34
CNRM-CM5	200	50	0	0	0	1	3	18
GFDL-ESM2G	50	50	0	0	1	2	5	64
GFDL-ESM2G	100	50	0	0	0.5	1	4	37
GFDL-ESM2G	200	50	0	0	0	1	3	17
HadGEM2-ES	50	50	0	1	2	4	7	128
HadGEM2-ES	100	50	0	1	1	2	6	82
HadGEM2-ES	200	50	0	0	1	1	3	42
MIROC5	50	50	0	0	0	1	3	39
MIROC5	100	50	0	0	0	1	3	23
MIROC5	200	50	0	0	0	0	1	7
MRI-CGCM3	50	50	0	0	1	1	5	55
MRI-CGCM3	100	50	0	0	0	1	3	30
MRI-CGCM3	200	50	0	0	0	0	3	12

Table A4. 112: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	4
CNRM-CM5	100	40	0	0	0	0	1	2
CNRM-CM5	200	40	0	0	0	0	1	1
GFDL-ESM2G	50	40	0	0	0	0	1	6
GFDL-ESM2G	100	40	0	0	0	0	1	3
GFDL-ESM2G	200	40	0	0	0	0	1	1
HadGEM2-ES	50	40	0	0	0	1	2	14
HadGEM2-ES	100	40	0	0	0	0	2	6
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	1	1
2050-2099								
CNRM-CM5	50	50	0	0	0	0	4	18
CNRM-CM5	100	50	0	0	0	0	2	9
CNRM-CM5	200	50	0	0	0	0	1	2
GFDL-ESM2G	50	50	0	0	0	1	3	18
GFDL-ESM2G	100	50	0	0	0	0	3	9
GFDL-ESM2G	200	50	0	0	0	0	2	4
HadGEM2-ES	50	50	0	0	1	2	3	51
HadGEM2-ES	100	50	0	0	0	1	3	31
HadGEM2-ES	200	50	0	0	0	1	2	14
MIROC5	50	50	0	0	0	0	2	10
MIROC5	100	50	0	0	0	0	1	5
MIROC5	200	50	0	0	0	0	1	3
MRI-CGCM3	50	50	0	0	0	0	3	14
MRI-CGCM3	100	50	0	0	0	0	2	7
MRI-CGCM3	200	50	0	0	0	0	1	1

Table A4. 113: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	2
CNRM-CM5	100	40	0	0	0	0	1	1
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	3
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	4
CNRM-CM5	100	50	0	0	0	0	1	2
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	4
GFDL-ESM2G	100	50	0	0	0	0	1	3
GFDL-ESM2G	200	50	0	0	0	0	1	1
HadGEM2-ES	50	50	0	0	0	1	2	23
HadGEM2-ES	100	50	0	0	0	0	1	11
HadGEM2-ES	200	50	0	0	0	0	2	5
MIROC5	50	50	0	0	0	0	1	4
MIROC5	100	50	0	0	0	0	1	3
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	3
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 114: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	4	7	9	11	14	348
CNRM-CM5	100	40	1	4	5.5	6.5	11	223
CNRM-CM5	200	40	0	2.5	4	4.5	7	140
GFDL-ESM2G	50	40	0	0	1	2	3	42
GFDL-ESM2G	100	40	0	0	0	1	2	20
GFDL-ESM2G	200	40	0	0	0	0.5	1	10
HadGEM2-ES	50	40	0	1	2	4	7	104
HadGEM2-ES	100	40	0	1	1	2	5	60
HadGEM2-ES	200	40	0	0	1	1	3	31
MIROC5	50	40	0	0	1	1	3	40
MIROC5	100	40	0	0	0	1	2	22
MIROC5	200	40	0	0	0	0	1	7
MRI-CGCM3	50	40	0	1	1	2	6	64
MRI-CGCM3	100	40	0	0	1	1	4	33
MRI-CGCM3	200	40	0	0	0	1	2	16
2050-2099								
CNRM-CM5	50	50	4	9	11	13	18	551
CNRM-CM5	100	50	3	6	8	9	14	402
CNRM-CM5	200	50	3	5	6	8	11	310
GFDL-ESM2G	50	50	0	3	4.5	6	11	231
GFDL-ESM2G	100	50	0	2	3	4	9	155
GFDL-ESM2G	200	50	0	1	2	3	9	89
HadGEM2-ES	50	50	4	6	8	9	13	386
HadGEM2-ES	100	50	2	4	5	7	11	289
HadGEM2-ES	200	50	0	3	4	5	9	200
MIROC5	50	50	0	2	3	5	8	172
MIROC5	100	50	0	1	2	4	8	121
MIROC5	200	50	0	0	1	2	4	65
MRI-CGCM3	50	50	0	3	4	6	10	214
MRI-CGCM3	100	50	0	2	3	4	7	149
MRI-CGCM3	200	50	0	0	1	3	5	83

Table A4. 115: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	1	5	7	8	13	275
CNRM-CM5	100	40	0	3	4	5.5	8	160
CNRM-CM5	200	40	0	2	2	4	7	111
GFDL-ESM2G	50	40	0	0	0	1	2	12
GFDL-ESM2G	100	40	0	0	0	0	1	8
GFDL-ESM2G	200	40	0	0	0	0	1	2
HadGEM2-ES	50	40	0	1	1	2	4	54
HadGEM2-ES	100	40	0	0	0	1	3	27
HadGEM2-ES	200	40	0	0	0	0	2	10
MIROC5	50	40	0	0	0	1	2	16
MIROC5	100	40	0	0	0	0	1	6
MIROC5	200	40	0	0	0	0	1	1
MRI-CGCM3	50	40	0	0	0	1	3	25
MRI-CGCM3	100	40	0	0	0	1	2	13
MRI-CGCM3	200	40	0	0	0	0	1	3
2050-2099								
CNRM-CM5	50	50	6	10	12	13	18	583
CNRM-CM5	100	50	4	7	8.5	10	13	432
CNRM-CM5	200	50	1	5	6	8	12	323
GFDL-ESM2G	50	50	0	1	2.5	4	9	130
GFDL-ESM2G	100	50	0	1	1	2	7	81
GFDL-ESM2G	200	50	0	0	1	1	5	41
HadGEM2-ES	50	50	1	4	5.5	7	14	291
HadGEM2-ES	100	50	1	3	4	6	9	218
HadGEM2-ES	200	50	0	2	2	3	9	143
MIROC5	50	50	0	1	1.5	3	6	96
MIROC5	100	50	0	0	1	2	4	58
MIROC5	200	50	0	0	0	1	3	28
MRI-CGCM3	50	50	0	1	2	4	7	122
MRI-CGCM3	100	50	0	0	1	2	6	73
MRI-CGCM3	200	50	0	0	0	1	3	30

Table A4. 116: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	2	3	5	8	143
CNRM-CM5	100	40	0	2	3	4	8	113
CNRM-CM5	200	40	0	0.5	1	2	5	58
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	1	2	15
HadGEM2-ES	100	40	0	0	0	0	1	6
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	3
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	6
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	4	7	9	11	16	468
CNRM-CM5	100	50	1	5	7	9	15	354
CNRM-CM5	200	50	1	3	4.5	6	11	231
GFDL-ESM2G	50	50	0	0	1	1	6	44
GFDL-ESM2G	100	50	0	0	0	1	4	25
GFDL-ESM2G	200	50	0	0	0	0	2	13
HadGEM2-ES	50	50	0	2	3	4	9	162
HadGEM2-ES	100	50	0	1	2	3	7	116
HadGEM2-ES	200	50	0	0	1	2	5	58
MIROC5	50	50	0	0	0	1	3	32
MIROC5	100	50	0	0	0	1	3	21
MIROC5	200	50	0	0	0	0	1	8
MRI-CGCM3	50	50	0	0	1	1	3	35
MRI-CGCM3	100	50	0	0	0	1	3	20
MRI-CGCM3	200	50	0	0	0	0	2	11

Table A4. 117: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1	2	3	7	91
CNRM-CM5	100	40	0	0.5	1	2	5	62
CNRM-CM5	200	40	0	0	0	1	3	22
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	4
HadGEM2-ES	100	40	0	0	0	0	1	1
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	1	5	7	9	14	352
CNRM-CM5	100	50	0	3	5	6	13	259
CNRM-CM5	200	50	0	1	3	5	8	161
GFDL-ESM2G	50	50	0	0	0	1	3	18
GFDL-ESM2G	100	50	0	0	0	0	2	12
GFDL-ESM2G	200	50	0	0	0	0	2	7
HadGEM2-ES	50	50	0	1	2	2	5	93
HadGEM2-ES	100	50	0	0	1	1	5	55
HadGEM2-ES	200	50	0	0	0	1	2	24
MIROC5	50	50	0	0	0	1	2	15
MIROC5	100	50	0	0	0	0	1	8
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	3	17
MRI-CGCM3	100	50	0	0	0	0	3	9
MRI-CGCM3	200	50	0	0	0	0	1	2

A4.3.5 Narrogin

Table A4. 118: Summary statistics for count of the number of separate events per year when AHL>threshold. Location=Narrogin, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
1960-1999								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0

Table A4. 119: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	2
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	3
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	7
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	3	7
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	6
CNRM-CM5	100	50	0	0	0	0	1	1
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	3
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	10
HadGEM2-ES	100	50	0	0	0	0	1	3
HadGEM2-ES	200	50	0	0	0	0	1	1
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	12
MRI-CGCM3	100	50	0	0	0	0	1	2
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 120: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	1
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	1
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	3
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	2
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 121: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	 p25	 median	 p75	 max	 all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	1
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 122: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	0	0
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 123: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	1	1
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0.5	1	10
HadGEM2-ES	100	40	0	0	0	0	1	3
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	1	2
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	2	9
MRI-CGCM3	100	40	0	0	0	0	1	2
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	3	10
CNRM-CM5	100	50	0	0	0	0	1	3
CNRM-CM5	200	50	0	0	0	0	1	1
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	3	23
HadGEM2-ES	100	50	0	0	0	0	1	5
HadGEM2-ES	200	50	0	0	0	0	1	1
MIROC5	50	50	0	0	0	0	1	4
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	1	3	18
MRI-CGCM3	100	50	0	0	0	0	1	4
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 124: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	1	1
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	3
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	2
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	1	3
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	1	2
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	5
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	3
MRI-CGCM3	100	50	0	0	0	0	1	1
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 125: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	1	1
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 126: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	0	0
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	0	0	0	0
CNRM-CM5	100	50	0	0	0	0	0	0
CNRM-CM5	200	50	0	0	0	0	0	0
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	1
HadGEM2-ES	100	50	0	0	0	0	0	0
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 127: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	2	3.5	4.5	6.5	11	203
CNRM-CM5	100	40	0	1	1.5	3	7	75
CNRM-CM5	200	40	0	0	0	1	3	24
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	1	2
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	2	9
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	1	1
MIROC5	50	40	0	0	0	0	1	3
MIROC5	100	40	0	0	0	0	1	1
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	5
MRI-CGCM3	100	40	0	0	0	0	1	1
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	6	9	12	13	21	571
CNRM-CM5	100	50	1	5	6	7	13	310
CNRM-CM5	200	50	0	2	2	4	7	133
GFDL-ESM2G	50	50	0	0	0	0	1	7
GFDL-ESM2G	100	50	0	0	0	0	1	3
GFDL-ESM2G	200	50	0	0	0	0	1	1
HadGEM2-ES	50	50	0	0	1	2	3	54
HadGEM2-ES	100	50	0	0	0	1	2	24
HadGEM2-ES	200	50	0	0	0	0	1	5
MIROC5	50	50	0	0	0	1	2	20
MIROC5	100	50	0	0	0	0	1	3
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	1	2	4	45
MRI-CGCM3	100	50	0	0	0	0	2	13
MRI-CGCM3	200	50	0	0	0	0	1	2

Table A4. 128: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	1	2	3	7	93
CNRM-CM5	100	40	0	0	1	1	3	31
CNRM-CM5	200	40	0	0	0	0.5	2	12
GFDL-ESM2G	50	40	0	0	0	0	1	2
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	1	2
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	1	2
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	1	1
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	2	6	7	10	13	375
CNRM-CM5	100	50	0	2	3	5	8	180
CNRM-CM5	200	50	0	0	1	3	6	75
GFDL-ESM2G	50	50	0	0	0	0	1	3
GFDL-ESM2G	100	50	0	0	0	0	1	1
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	1	2	24
HadGEM2-ES	100	50	0	0	0	0	1	4
HadGEM2-ES	200	50	0	0	0	0	1	1
MIROC5	50	50	0	0	0	0	1	2
MIROC5	100	50	0	0	0	0	1	2
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	1	8
MRI-CGCM3	100	50	0	0	0	0	1	2
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 129: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod	AHL	Count of years	Summary of number of separate events per year (consecutive days when AHL>threshold)					
Model	threshold	(n)	min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	1	3	25
CNRM-CM5	100	40	0	0	0	0.5	2	11
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	1	2
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	2	3	4	7	153
CNRM-CM5	100	50	0	1	1	3	6	72
CNRM-CM5	200	50	0	0	0	1	3	31
GFDL-ESM2G	50	50	0	0	0	0	1	1
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	1	2
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	1	1
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

Table A4. 130: Summary statistics for count of the number of separate events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	Count of years (n)	Summary of number of separate events per year (consecutive days when AHL>threshold) min	p25	median	p75	max	all yrs
2010-2049								
CNRM-CM5	50	40	0	0	0	0	1	7
CNRM-CM5	100	40	0	0	0	0	0	0
CNRM-CM5	200	40	0	0	0	0	0	0
GFDL-ESM2G	50	40	0	0	0	0	0	0
GFDL-ESM2G	100	40	0	0	0	0	0	0
GFDL-ESM2G	200	40	0	0	0	0	0	0
HadGEM2-ES	50	40	0	0	0	0	0	0
HadGEM2-ES	100	40	0	0	0	0	0	0
HadGEM2-ES	200	40	0	0	0	0	0	0
MIROC5	50	40	0	0	0	0	0	0
MIROC5	100	40	0	0	0	0	0	0
MIROC5	200	40	0	0	0	0	0	0
MRI-CGCM3	50	40	0	0	0	0	0	0
MRI-CGCM3	100	40	0	0	0	0	0	0
MRI-CGCM3	200	40	0	0	0	0	0	0
2050-2099								
CNRM-CM5	50	50	0	0	1	2	6	70
CNRM-CM5	100	50	0	0	0	1	2	28
CNRM-CM5	200	50	0	0	0	0	2	9
GFDL-ESM2G	50	50	0	0	0	0	0	0
GFDL-ESM2G	100	50	0	0	0	0	0	0
GFDL-ESM2G	200	50	0	0	0	0	0	0
HadGEM2-ES	50	50	0	0	0	0	1	2
HadGEM2-ES	100	50	0	0	0	0	1	1
HadGEM2-ES	200	50	0	0	0	0	0	0
MIROC5	50	50	0	0	0	0	0	0
MIROC5	100	50	0	0	0	0	0	0
MIROC5	200	50	0	0	0	0	0	0
MRI-CGCM3	50	50	0	0	0	0	0	0
MRI-CGCM3	100	50	0	0	0	0	0	0
MRI-CGCM3	200	50	0	0	0	0	0	0

A4.4 Additional tables for median duration of events in days per year when AHL>threshold

A4.4.1 Caroona

Table A4. 131: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	5	1	1	2	2	3
CNRM-CM5	100	1	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	3	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	8	1	1	1	1.5	2
HadGEM2-ES	100	2	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	3	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	7	1	1.5	2	2	2
MRI-CGCM3	100	2	1	1	1	1	1
MRI-CGCM3	200	0	.	.	.	.	.

Summaries based only on data from events of 1 day or more in duration

Table A4. 132: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	16	1	1.25	2	2	5
CNRM-CM5	100	10	2	2	2	2	5
CNRM-CM5	200	3	2	2	2	3	3
GFDL-ESM2G	50	10	1	2	2	2	4.5
GFDL-ESM2G	100	5	1	2	2	3	3
GFDL-ESM2G	200	1	2	2	2	2	2
HadGEM2-ES	50	22	1	1	1.5	2	3
HadGEM2-ES	100	6	1	1	1.5	2	3
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	9	1	1	1	2	3
MIROC5	100	3	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	8	1	1.5	2	2	2
MRI-CGCM3	100	3	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	32	1	2	2	3	8
CNRM-CM5	100	19	2	2	2.5	3	8
CNRM-CM5	200	10	1	2	3.5	6	8
GFDL-ESM2G	50	12	1	2	2.75	3.5	6
GFDL-ESM2G	100	8	1	2	3	3.5	4
GFDL-ESM2G	200	4	1	1.5	2	2.5	3
HadGEM2-ES	50	34	1	1	1.5	2.5	6.5
HadGEM2-ES	100	18	1	2	2	3	5
HadGEM2-ES	200	7	2	3	3	3.5	5
MIROC5	50	17	1	1.5	2	2.5	7
MIROC5	100	8	2	2	2.75	3	6
MIROC5	200	1	4	4	4	4	4
MRI-CGCM3	50	23	1	2	2	3	5
MRI-CGCM3	100	15	1.5	2	3	4	6
MRI-CGCM3	200	5	3	3	4	4	5

Table A4. 133: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	7	1	1	2	2	3
CNRM-CM5	100	2	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	3	1	1	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	9	1	1	1	1	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	2	1	1	1.5	2	2
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	3	1	1	2	2	2
MRI-CGCM3	100	1	1	1	1	1	1
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	19	1	1.5	2	2.5	7
CNRM-CM5	100	10	1	1.5	2	4	7
CNRM-CM5	200	3	2	2	2	3	3
GFDL-ESM2G	50	7	2	2	2	3	3
GFDL-ESM2G	100	4	1	1.5	2	2	2
GFDL-ESM2G	200	1	2	2	2	2	2
HadGEM2-ES	50	18	1	1	1	2	3
HadGEM2-ES	100	6	2	2	2.25	3	3
HadGEM2-ES	200	2	2	2	2	2	2
MIROC5	50	6	1	2	2	2	4
MIROC5	100	4	1	1	1.5	3	4
MIROC5	200	1	3	3	3	3	3
MRI-CGCM3	50	10	1	1.5	2	2	4
MRI-CGCM3	100	3	2	2	3	4	4
MRI-CGCM3	200	2	2	2	2.5	3	3

Table A4. 134: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	1	1	1	1	1	1
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	2	2	2	2	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	4	1	1.5	2.5	4.5	6
CNRM-CM5	100	1	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	1	2	2	2	2	2
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	4	1	1.5	2	2.5	3
HadGEM2-ES	100	2	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	1	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	2	2	2.5	3	3
MRI-CGCM3	100	1	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 135: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	2	2	2	2	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	1	2	2	2	2	2
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	1	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	2	2	2	2	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 136: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	17	1	2	2	3	5
CNRM-CM5	100	9	2	2	2	2.5	8
CNRM-CM5	200	2	2	2	2	2	2
GFDL-ESM2G	50	11	1	1	2	2	3.5
GFDL-ESM2G	100	4	2	2	2	3	4
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	25	1	1	1.5	2	5
HadGEM2-ES	100	11	1	1	2	3	3.5
HadGEM2-ES	200	3	2	2	2	5	5
MIROC5	50	5	1	2	2	2	3
MIROC5	100	1	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	10	1	1	2	2	4
MRI-CGCM3	100	2	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	39	1	2	2	3	11
CNRM-CM5	100	30	1.5	2	3	4	12.5
CNRM-CM5	200	20	1	2	2	4.5	9
GFDL-ESM2G	50	35	1	2	2	3	7
GFDL-ESM2G	100	21	1	2	2	3	14
GFDL-ESM2G	200	7	3	3	6	9	10
HadGEM2-ES	50	40	1	1	2	2	11
HadGEM2-ES	100	26	1	1	2	5	10
HadGEM2-ES	200	12	2	2.5	4	5	9
MIROC5	50	20	1	1.5	2	2.5	5
MIROC5	100	10	1	2	2	3	4
MIROC5	200	4	2	2	2.5	3	3
MRI-CGCM3	50	23	1	2	2	3	5.5
MRI-CGCM3	100	12	2	2	2	2.75	4
MRI-CGCM3	200	6	2	2	3	4	7

Table A4. 137: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	5	1.5	2	2	2	2.5
CNRM-CM5	100	3	2	2	2	2	2
CNRM-CM5	200	1	2	2	2	2	2
GFDL-ESM2G	50	2	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	9	1	1	1	2	2.5
HadGEM2-ES	100	2	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	1	2	2	2	2	2
MIROC5	100	1	1	1	1	1	1
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	1	1	1	1	1
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	25	1	2	2	3	8
CNRM-CM5	100	17	2	2	2	3	7
CNRM-CM5	200	6	1	2	3.75	5	6
GFDL-ESM2G	50	14	1	2	2	4	6
GFDL-ESM2G	100	6	1	2	2.5	5	9
GFDL-ESM2G	200	3	3	3	3	4	4
HadGEM2-ES	50	26	1	1	2	2	6
HadGEM2-ES	100	8	1	2	2	4	6
HadGEM2-ES	200	4	2	2	2.5	3.25	3.5
MIROC5	50	5	2	2	2	3	3
MIROC5	100	2	1	1	1.5	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	10	1.5	2	2	2	4
MRI-CGCM3	100	5	2	2	2	3	3
MRI-CGCM3	200	1	3	3	3	3	3

Table A4. 138: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	1	2	2	2	2	2
CNRM-CM5	100	1	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	2	2	2	2	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	11	1	2	2	4	6
CNRM-CM5	100	5	1	2	3	4	6
CNRM-CM5	200	2	1	1	2	3	3
GFDL-ESM2G	50	2	3	3	3	3	3
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	6	2	2	2.5	4	4
HadGEM2-ES	100	4	2	2	2.5	3	3
HadGEM2-ES	200	2	2	2	2	2	2
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	1	1	1	1	1
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 139: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	2	2	2	2	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	3	2	2	3	5	5
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	4	2	2	2	2	2
HadGEM2-ES	100	2	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 140: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	2	3	4	7.5
CNRM-CM5	100	38	1.5	2.5	3.5	5	23.5
CNRM-CM5	200	35	1	3	4	6	22
GFDL-ESM2G	50	14	1	1.5	2	2	3
GFDL-ESM2G	100	4	1	1.5	2.25	4.75	7
GFDL-ESM2G	200	1	6	6	6	6	6
HadGEM2-ES	50	32	1	1	1.75	2	4
HadGEM2-ES	100	14	1	2	2	3	9
HadGEM2-ES	200	3	2	2	2.5	7	7
MIROC5	50	8	1	2	2	2	3
MIROC5	100	4	1	1	1.5	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	11	1	1.5	2	2	3
MRI-CGCM3	100	5	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1	2	3	4	11
CNRM-CM5	100	50	2	3	4.25	7	15
CNRM-CM5	200	50	2	3.5	5	9	90
GFDL-ESM2G	50	45	1	2	3	4	14
GFDL-ESM2G	100	36	1	2	2.5	4.5	17
GFDL-ESM2G	200	22	2	2.5	3.75	5.5	11
HadGEM2-ES	50	49	1	2	2.5	3.5	13.5
HadGEM2-ES	100	46	1	2	3	3.5	19
HadGEM2-ES	200	39	2	2	4	6	57
MIROC5	50	33	1	2	2	4	11
MIROC5	100	20	1.5	2	3	5.25	12
MIROC5	200	12	2	2	3.5	7.5	12
MRI-CGCM3	50	43	1	2	2.5	4	13
MRI-CGCM3	100	35	2	2	3	4	12
MRI-CGCM3	200	20	1	2	3	4	11.5

Table A4. 141: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	39	1	1	2	3.5	8
CNRM-CM5	100	33	1	2	2.5	3.5	9
CNRM-CM5	200	28	1	2	2.5	3.5	7
GFDL-ESM2G	50	2	2.5	2.5	3.75	5	5
GFDL-ESM2G	100	2	2	2	3.5	5	5
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	15	1	1	1	2	4
HadGEM2-ES	100	4	1	1	1.5	2.25	2.5
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	2	2	2	2	2	2
MIROC5	100	1	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	3	2	2	2	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1	2.5	3	4	7
CNRM-CM5	100	50	2	3	3.25	4.5	28
CNRM-CM5	200	50	1.5	3	4	6	86
GFDL-ESM2G	50	33	1	2	2	3	9
GFDL-ESM2G	100	18	2	2	2.75	4	9
GFDL-ESM2G	200	9	1	2	3	5	6
HadGEM2-ES	50	46	1	2	2	3	11
HadGEM2-ES	100	36	1	2	2	3.5	12
HadGEM2-ES	200	19	1	2	2.5	8	19
MIROC5	50	19	1	2	2	3	7.5
MIROC5	100	10	2	2	3	4	6
MIROC5	200	5	1	2	2	3	3
MRI-CGCM3	50	29	1	2	2	3	7
MRI-CGCM3	100	14	1	2	2	4	7
MRI-CGCM3	200	5	1	2	3	3	4

Table A4. 142: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	33	1	2	2	3	7
CNRM-CM5	100	27	2	2	2	3	6
CNRM-CM5	200	12	1	2	2	4	7.5
GFDL-ESM2G	50	1	4	4	4	4	4
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	2	2	2	2	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1.5	2	3	4	8
CNRM-CM5	100	49	1.5	2.5	3	5	13.5
CNRM-CM5	200	48	1	2.5	4	6.25	25.5
GFDL-ESM2G	50	9	1	2	2	3	5
GFDL-ESM2G	100	5	1	2	3	3	5
GFDL-ESM2G	200	1	3	3	3	3	3
HadGEM2-ES	50	24	1	1.25	2	3.75	14
HadGEM2-ES	100	15	2	2	3	5	14
HadGEM2-ES	200	5	2	3	3	6	6.5
MIROC5	50	6	2	2	2	2.5	3
MIROC5	100	2	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	5	1	2	2	3	3
MRI-CGCM3	100	2	1	1	2	3	3
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 143: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Caroona, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	22	1	2	2	2	5
CNRM-CM5	100	10	2	2	2	3	5
CNRM-CM5	200	3	2	2	2	3	3
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	2	2	2	2	2
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	1	1	1	1	1	1
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	2	2	3	4	12
CNRM-CM5	100	48	1	2	3.25	4.25	17
CNRM-CM5	200	39	1	3	4	6	23
GFDL-ESM2G	50	2	1	1	1.5	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	12	1	2	2	2	3
HadGEM2-ES	100	5	1	2	2	2	3
HadGEM2-ES	200	2	2	2	2	2	2
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

A4.4.2 Comet

Table A4. 144: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Comet, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
1960-1999							
CNRM-CM5	50	14	1	2	2	3	9
CNRM-CM5	100	5	2	2	2.5	5	7
CNRM-CM5	200	2	3	3	4	5	5
GFDL-ESM2G	50	18	1	2	2	3	6
GFDL-ESM2G	100	8	1	2	2	2.5	4
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	34	1	1	1	2	4
HadGEM2-ES	100	14	1	1	2	3	6
HadGEM2-ES	200	1	5	5	5	5	5
MIROC5	50	10	1	1	2	4	5
MIROC5	100	4	1	1.5	2.5	4	5
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	20	1	2	2.25	5.25	11
MRI-CGCM3	100	10	2	2	4.5	6	9
MRI-CGCM3	200	7	2	2	5	6	7

Summaries based only on data from events of 1 day or more in duration

Table A4. 145: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	33	1	2	3	4	9
CNRM-CM5	100	24	1	2	3	5.5	9
CNRM-CM5	200	8	2	2	2	6	9
GFDL-ESM2G	50	39	1	2	3	5.5	21
GFDL-ESM2G	100	28	2	3	4	8.5	22
GFDL-ESM2G	200	17	2	3	7	11	32
HadGEM2-ES	50	40	1	1.25	2	3	9
HadGEM2-ES	100	33	1	2	3.5	4	9
HadGEM2-ES	200	19	1	2	3	5	12
MIROC5	50	24	1	1.5	2	3.5	13
MIROC5	100	10	2	2	4.25	6	13
MIROC5	200	3	3	3	3	10	10
MRI-CGCM3	50	13	1	2	2	3	7
MRI-CGCM3	100	5	2	2	2	2	6
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	42	1	2	3	5	18
CNRM-CM5	100	32	1	2	4.25	6.75	22
CNRM-CM5	200	18	1	3	8	15	21
GFDL-ESM2G	50	32	1	2	3.25	4.5	14
GFDL-ESM2G	100	21	2	2	3.5	6	22
GFDL-ESM2G	200	11	1	2.5	3.5	6	20
HadGEM2-ES	50	49	1	1	2.5	3	13
HadGEM2-ES	100	43	2	2	3.5	6	18.5
HadGEM2-ES	200	28	2	3	3.5	5	15
MIROC5	50	36	1	2	3	5	12.5
MIROC5	100	21	2	3	4	5.5	11.5
MIROC5	200	14	2	3	4.5	7	17
MRI-CGCM3	50	30	1	2	3	4	21
MRI-CGCM3	100	15	1.5	2	3	8	17
MRI-CGCM3	200	5	2	2	5	7	7

Table A4. 146: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	9	1	2	2	2.5	6
CNRM-CM5	100	4	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	20	1	2	3	4	9
GFDL-ESM2G	100	12	2	2	3	3.75	6.5
GFDL-ESM2G	200	2	3	3	3.5	4	4
HadGEM2-ES	50	35	1	1	2	3	7
HadGEM2-ES	100	17	1	2	2	3	4.5
HadGEM2-ES	200	6	3	3	4.5	5	5
MIROC5	50	6	1	1	2.75	3	4
MIROC5	100	1	3	3	3	3	3
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	36	24	1	2	2.75	5.25
CNRM-CM5	100	20	14	2	2.5	4	7
CNRM-CM5	200	11	5	4	4	4	7
GFDL-ESM2G	50	31	14	1	2	2.75	3
GFDL-ESM2G	100	26	7	1	2	2	3
GFDL-ESM2G	200	10	0	.	.	.	.
HadGEM2-ES	50	48	43	1	1	2	3
HadGEM2-ES	100	42	27	1	2	3	3
HadGEM2-ES	200	23	13	2	2	3	4
MIROC5	50	12	18	1	2	2	4
MIROC5	100	9	9	1	2	3	4
MIROC5	200	1	4	2	2.5	3	3.5
MRI-CGCM3	50	10	6	1	2	2.5	3.5
MRI-CGCM3	100	8	2	2	2	3	4
MRI-CGCM3	200	2	0	.	.	.	.

Table A4. 147: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	2	2	2	3.25	4.5	4.5
GFDL-ESM2G	100	2	2	2	2.5	3	3
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	13	1	2	3	3	5
HadGEM2-ES	100	6	3	3	4	5	6
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	1	3	3	3	3	3
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	4	2	2.5	4.5	6.5	7
CNRM-CM5	100	1	5	5	5	5	5
CNRM-CM5	200	1	3	3	3	3	3
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	22	1	2	2.75	3	6
HadGEM2-ES	100	14	1	2	3	4	7
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	3	3	3	3	6	6
MIROC5	100	2	3	3	3	3	3
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 148: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	4	1	1	1.5	2.5	3
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	9	1	2	2	2	2
HadGEM2-ES	100	1	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	2	3	3
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 149: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	33	1	2	3	4	11
CNRM-CM5	100	20	1	2	3	5.25	9
CNRM-CM5	200	8	1	2	2	3.5	6
GFDL-ESM2G	50	34	1	2	2	4	17
GFDL-ESM2G	100	21	2	2	4	6	16
GFDL-ESM2G	200	11	2	3	4	7	8
HadGEM2-ES	50	40	1	1.5	2	3.75	10.5
HadGEM2-ES	100	34	1	2	3.5	5	12.5
HadGEM2-ES	200	17	1	3	3	6.5	15
MIROC5	50	22	1	1.5	2	3	9
MIROC5	100	9	1	2	3	4	7
MIROC5	200	3	2	2	3	3	3
MRI-CGCM3	50	16	1.5	2	2.75	3.75	9
MRI-CGCM3	100	8	2	2	2.5	5.5	6
MRI-CGCM3	200	1	1	1	1	1	1
2050-2099							
CNRM-CM5	50	49	2	3	4.5	6	54
CNRM-CM5	100	44	2	3	5	7.5	52
CNRM-CM5	200	31	2	3	5	11	66
GFDL-ESM2G	50	49	1	2.5	3.5	5.5	57.5
GFDL-ESM2G	100	44	2	2.25	4.5	9	48
GFDL-ESM2G	200	32	2	4	7.5	15	97
HadGEM2-ES	50	50	1	2	3.5	5	29
HadGEM2-ES	100	47	1	3	5	8	42
HadGEM2-ES	200	41	2	3	4.5	6.5	79
MIROC5	50	37	1	2	3.5	5	17
MIROC5	100	26	2	2.5	4.5	7	16
MIROC5	200	10	2	3	6.25	14	23
MRI-CGCM3	50	35	1	2.5	4.5	8	22
MRI-CGCM3	100	23	1	3	4	8	21
MRI-CGCM3	200	9	3	4	5	6	19

Table A4. 150: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	14	1	1.5	2	3	6
CNRM-CM5	100	5	2	2	2	2	3
CNRM-CM5	200	1	2	2	2	2	2
GFDL-ESM2G	50	15	1	2	2	3	6
GFDL-ESM2G	100	7	2	2	3	4	5
GFDL-ESM2G	200	1	2	2	2	2	2
HadGEM2-ES	50	36	1	1	2	2.5	11
HadGEM2-ES	100	21	1	2	2	3	11
HadGEM2-ES	200	7	1	2	3	7	9
MIROC5	50	5	1	1.5	2.5	3	3
MIROC5	100	2	2	2	2.5	3	3
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	4	1	1.5	2	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	36	1	2	3	4	24
CNRM-CM5	100	20	2	2.75	4	6.75	24
CNRM-CM5	200	11	2	3	5	10	21
GFDL-ESM2G	50	31	1	2	3.5	5	11
GFDL-ESM2G	100	26	2	3	4	7	9
GFDL-ESM2G	200	10	2	4	4.75	7	8
HadGEM2-ES	50	48	1	1	3	4	12
HadGEM2-ES	100	42	1	2	3.25	5	19
HadGEM2-ES	200	23	1	3	3	6	18
MIROC5	50	12	2	2.5	3.75	6	7
MIROC5	100	9	1	2	3	4	5
MIROC5	200	1	2	2	2	2	2
MRI-CGCM3	50	10	1	2	3.5	4	7
MRI-CGCM3	100	8	1	2	3	5	7
MRI-CGCM3	200	2	2	2	2.5	3	3

Table A4. 151: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	2	3	3	3	3	3
GFDL-ESM2G	100	2	2	2	2	2	2
GFDL-ESM2G	200	1	2	2	2	2	2
HadGEM2-ES	50	15	1	2	3	4.5	8
HadGEM2-ES	100	5	3	3	3	4	6
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	1	2	2	2	2	2
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	7	2.5	3	3	10	10
CNRM-CM5	100	5	1	2	3	10	10
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	8	2	2.5	4	6	7
GFDL-ESM2G	100	4	2	2.5	5	7	7
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	37	1	2	3	4	8.5
HadGEM2-ES	100	22	2	2	3	4	11
HadGEM2-ES	200	2	4	4	7	10	10
MIROC5	50	2	3	3	3	3	3
MIROC5	100	1	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	2	2	2	2	2
MRI-CGCM3	100	1	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 152: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	4	1	1	1.5	2	2
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	2	1	1	1.5	2	2
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	17	1	2	2	2	3
HadGEM2-ES	100	7	1	2	2	2	3
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	2	2	2	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 153: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	2.25	4	6	145
CNRM-CM5	100	40	1.5	5.5	8.5	54.75	185
CNRM-CM5	200	40	1	6	11.5	81.5	180
GFDL-ESM2G	50	33	1	2	4	6	20
GFDL-ESM2G	100	28	1.5	3	4	7.5	19
GFDL-ESM2G	200	16	2	2	4.5	7	24
HadGEM2-ES	50	39	1	1.5	2.5	3	9
HadGEM2-ES	100	34	1	2	3	5	11.5
HadGEM2-ES	200	19	2	3	4	6.5	16
MIROC5	50	26	1	2	3.25	6	17
MIROC5	100	17	2	2	4	5	15
MIROC5	200	8	2	2.5	3	7	13
MRI-CGCM3	50	18	1	2	2	4	7
MRI-CGCM3	100	7	2	2	2	6	7
MRI-CGCM3	200	1	2	2	2	2	2
2050-2099							
CNRM-CM5	50	50	1	2.5	4	7	140.5
CNRM-CM5	100	50	2	4	8	105.5	278
CNRM-CM5	200	50	2	7	112.25	190	278
GFDL-ESM2G	50	50	1.5	4	5.75	7.5	74
GFDL-ESM2G	100	50	2	3.5	6.5	10	73
GFDL-ESM2G	200	44	2	5	8	14.5	144
HadGEM2-ES	50	50	2	3	4	6	23
HadGEM2-ES	100	50	2	4	6	10	60
HadGEM2-ES	200	50	3	7	12	41.5	139
MIROC5	50	48	1	3.25	5	9	108
MIROC5	100	44	2	3.5	5.75	10.5	92
MIROC5	200	34	2	4	7.5	17	90
MRI-CGCM3	50	49	2	4.5	6	8.5	64
MRI-CGCM3	100	47	2	3.5	6	12	64.5
MRI-CGCM3	200	31	1	4	9	21.5	111

Table A4. 154: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	2.25	3.75	5.25	13.5
CNRM-CM5	100	40	2	4	5.75	9.5	139
CNRM-CM5	200	40	2	4	6	11.5	137
GFDL-ESM2G	50	19	1	2	2	4	10
GFDL-ESM2G	100	7	2	2	4	6	10
GFDL-ESM2G	200	1	2	2	2	2	2
HadGEM2-ES	50	36	1	1	2	3	5
HadGEM2-ES	100	23	1	1.5	2	3.5	5.5
HadGEM2-ES	200	9	1	2	3	4	8
MIROC5	50	12	1	1.5	2.25	3.5	9
MIROC5	100	6	1	2	2.5	7	9
MIROC5	200	2	2	2	3	4	4
MRI-CGCM3	50	2	2	2	2	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1	2	4	5.5	186
CNRM-CM5	100	50	1	4	6.75	12.5	230
CNRM-CM5	200	50	2	6	35	113	230
GFDL-ESM2G	50	44	1	2.5	5	8	46.5
GFDL-ESM2G	100	34	2	4	5.5	11	86
GFDL-ESM2G	200	27	2	4	7	14.5	66
HadGEM2-ES	50	50	1	3	4	6	22
HadGEM2-ES	100	50	1.5	4	5	8	75
HadGEM2-ES	200	45	2	4	5.5	12	82
MIROC5	50	37	1	3	4	6.5	20
MIROC5	100	27	2	3	5	8.5	15
MIROC5	200	15	3	4	5	9	13
MRI-CGCM3	50	34	2	3	5	10.5	62
MRI-CGCM3	100	22	1	4	7	17	61
MRI-CGCM3	200	14	1	5	6.75	14	59

Table A4. 155: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	2	3	4	5.25	12
CNRM-CM5	100	38	2	3	4.5	6	13
CNRM-CM5	200	34	1	3	4.25	8	25
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	17	1	2	2	3	5
HadGEM2-ES	100	8	2	2.5	3	4.25	6
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	2	2	2.5	3	3
MIROC5	100	1	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	2	4	5.25	9	93
CNRM-CM5	100	50	2	4	7.5	47.5	163
CNRM-CM5	200	50	2.5	6	11.25	69	198
GFDL-ESM2G	50	22	2	4	7	9	24
GFDL-ESM2G	100	15	3	4	7	11	14
GFDL-ESM2G	200	4	2	3	4.5	14.5	24
HadGEM2-ES	50	48	1.5	3	4	6.25	54
HadGEM2-ES	100	42	2	3	4.5	13	72
HadGEM2-ES	200	26	3	4	6	14	65
MIROC5	50	13	1	2.5	4	5	7
MIROC5	100	8	2	2	3	5.25	7
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	7	3	5	7	9	24
MRI-CGCM3	100	3	5	5	6	20	20
MRI-CGCM3	200	1	4	4	4	4	4

Table A4. 156: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Comet, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	36	1.5	2	2.25	4.75	18
CNRM-CM5	100	25	2	2	3.5	6	14
CNRM-CM5	200	18	1.5	2	4	9	22
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	6	1	2	2	2	2
HadGEM2-ES	100	1	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	2	3.5	5.25	8.5	141
CNRM-CM5	100	50	3	4	7.25	12	141
CNRM-CM5	200	50	2	5.5	8	16	139
GFDL-ESM2G	50	7	2	2	2.5	3	3
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	40	1.5	2	2	2.75	4
HadGEM2-ES	100	29	1	2	2	3	4
HadGEM2-ES	200	4	2	2.5	3	3.5	4
MIROC5	50	3	2	2	2	3	3
MIROC5	100	1	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	2	2	2	2	2
MRI-CGCM3	100	1	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.

A4.4.3 Dalby

Table A4. 157: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Dalby, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
1960-1999							
CNRM-CM5	50	1	2	2	2	2	2
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	6	1	1	1	1	2
HadGEM2-ES	100	1	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	5	1	2	2	2	5
MRI-CGCM3	100	2	2	2	2.5	3	3
MRI-CGCM3	200	0	.	.	.	.	.

Summaries based only on data from events of 1 day or more in duration

Table A4. 158: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none		years with events	Event duration: median number of days per event, per annum				
Model	**AHL threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**
2010-2049							
CNRM-CM5	50	5	1	1.5	2	2	3
CNRM-CM5	100	2	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	4	2	3	4	4.5	5
GFDL-ESM2G	100	4	2	2	2	2	2
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	22	1	1	1	2	3
HadGEM2-ES	100	4	1	1.5	2	2.5	3
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	4	1	1.5	2	3	4
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	2	2	2	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	14	2	2	3	4	11
CNRM-CM5	100	8	2	2.5	4	5.25	10
CNRM-CM5	200	4	3	3	3.5	6	8
GFDL-ESM2G	50	6	1	1	2	3	4
GFDL-ESM2G	100	2	2	2	2.5	3	3
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	26	1	1	2	2	4
HadGEM2-ES	100	10	1	2	2.5	3	4
HadGEM2-ES	200	3	1	1	2	4	4
MIROC5	50	10	1	1	2.5	3	7
MIROC5	100	4	2	2	3	4.5	5
MIROC5	200	2	3	3	3	3	3
MRI-CGCM3	50	4	2	2	2	2.5	3
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 159: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	2	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	9	1	1	1	1	2
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	7	1	2	2	4	6
CNRM-CM5	100	4	1	1.5	2	3.5	5
CNRM-CM5	200	1	2	2	2	2	2
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	16	1	1	1	2	4
HadGEM2-ES	100	3	1	1	1.5	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	3	2	2	2	3	3
MIROC5	100	1	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 160: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	1	2	2	2	2	2
CNRM-CM5	100	1	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	2	2	2	2	2
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	1	2	2	2	2	2
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 161: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 162: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	5	1	2	2	3	4
CNRM-CM5	100	2	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	8	1	2	2	2.5	5
GFDL-ESM2G	100	1	2	2	2	2	2
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	24	1	1	1	2	3
HadGEM2-ES	100	5	1	1	2	3	3
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	6	1	1	2	2	4
MIROC5	100	2	2	2	2.5	3	3
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	1	1	1.5	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	15	1	3	5	7	23
CNRM-CM5	100	12	2	3.25	6.5	11	64.5
CNRM-CM5	200	9	1	4	9	10	111
GFDL-ESM2G	50	25	1	2	2	3	10
GFDL-ESM2G	100	12	2	2	2.75	6.5	15
GFDL-ESM2G	200	5	2	2	4	5	10
HadGEM2-ES	50	38	1	2	2	3	6
HadGEM2-ES	100	27	1	2	3	4	6
HadGEM2-ES	200	9	2	2	2	3	5
MIROC5	50	5	1.5	3	4	5	7
MIROC5	100	3	2	2	5	5	5
MIROC5	200	1	3	3	3	3	3
MRI-CGCM3	50	6	1	2	2	3	5
MRI-CGCM3	100	3	2	2	3	4	4
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 163: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	9	1	1	1	1	2
HadGEM2-ES	100	2	2	2	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	8	3	3.25	6	8.75	62
CNRM-CM5	100	5	2	7	10	18	61
CNRM-CM5	200	4	5	5	10.5	37.5	59
GFDL-ESM2G	50	9	2	2	2	3	5
GFDL-ESM2G	100	6	2	2	2	2	2
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	25	1	1	2	2	5
HadGEM2-ES	100	9	2	2	2	2	4
HadGEM2-ES	200	3	2	2	3	4	4
MIROC5	50	1	4	4	4	4	4
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 164: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	1	1	1	1	1
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	3	5	5	7	24	24
CNRM-CM5	100	2	5	5	12.5	20	20
CNRM-CM5	200	1	4	4	4	4	4
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	6	1	2	2	3	4
HadGEM2-ES	100	2	3	3	3.5	4	4
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 165: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
	2010-2049						
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	1	2	2	2	2	2
CNRM-CM5	100	1	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	2	2	2	2	2
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 166: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	2	2	3	7.5
CNRM-CM5	100	40	2	3	4	5.25	63
CNRM-CM5	200	38	1.5	3	4	8	61
GFDL-ESM2G	50	5	1	2	2.5	3	4
GFDL-ESM2G	100	3	2	2	2	2	2
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	27	1	1	2	2.5	5
HadGEM2-ES	100	12	1	2	2	2.5	3
HadGEM2-ES	200	2	2	2	2	2	2
MIROC5	50	4	1	1.5	3	4.5	5
MIROC5	100	2	2	2	2.5	3	3
MIROC5	200	1	2	2	2	2	2
MRI-CGCM3	50	3	2	2	2	3	3
MRI-CGCM3	100	1	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1	2.5	3.5	5	11
CNRM-CM5	100	50	2	4	5.5	8	72
CNRM-CM5	200	50	2	4	6	18.5	83
GFDL-ESM2G	50	36	2	2	2.75	5	11.5
GFDL-ESM2G	100	27	2	2	3.5	5	13
GFDL-ESM2G	200	12	2	2	3.75	7	8
HadGEM2-ES	50	49	1	2	3	4	23.5
HadGEM2-ES	100	43	1	2.5	4	6	22
HadGEM2-ES	200	33	2	3	4	7	24.5
MIROC5	50	32	1	2	2.25	3.75	8.5
MIROC5	100	18	2	2	2.75	5	10
MIROC5	200	6	2	2	3.25	7	9
MRI-CGCM3	50	19	1	2	2	5	12
MRI-CGCM3	100	9	2	2	3	4.5	8
MRI-CGCM3	200	2	3	3	4.5	6	6

Table A4. 167: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	1.75	2	3	5
CNRM-CM5	100	34	2	2	2.75	4	8
CNRM-CM5	200	26	1	1.5	2	4	14
GFDL-ESM2G	50	3	1	1	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	16	1	1	1	1.25	2
HadGEM2-ES	100	3	2	2	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	1	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	1	1	1	1	1
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	2	3	3	4	10.5
CNRM-CM5	100	50	2	3	4	5.5	33.5
CNRM-CM5	200	50	2	3	4	8	32
GFDL-ESM2G	50	18	1	2	2.5	3.5	6
GFDL-ESM2G	100	8	2	2	2.25	4	5
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	42	1	2	2.75	4	13.5
HadGEM2-ES	100	32	1	2	3	5	9.5
HadGEM2-ES	200	22	1	2	3	4	8.5
MIROC5	50	11	1	2	2.5	4	7
MIROC5	100	3	2	2	3	6	6
MIROC5	200	1	4	4	4	4	4
MRI-CGCM3	50	4	2	2	2	2.5	3
MRI-CGCM3	100	1	3	3	3	3	3
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 168: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	29	1	2	2	3	11
CNRM-CM5	100	21	1	2	2	2.5	10
CNRM-CM5	200	7	2	2	3	8	10
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	2	2	2	2	2
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1	2	3	4	9
CNRM-CM5	100	50	2	2	3.5	6.5	34
CNRM-CM5	200	48	1	3	5.75	11.25	64
GFDL-ESM2G	50	1	4	4	4	4	4
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	26	1	2	2.75	4	5
HadGEM2-ES	100	22	1	2	3	4	5
HadGEM2-ES	200	1	4	4	4	4	4
MIROC5	50	1	2	2	2	2	2
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 169: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Dalby, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	9	2	2.5	3	4	6
CNRM-CM5	100	7	1	2	2	3	6
CNRM-CM5	200	2	2	2	3	4	4
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1.5	2	3	4.5	23
CNRM-CM5	100	44	1	2.5	3.5	5	21.5
CNRM-CM5	200	34	2	2.5	3	6	20
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	16	1	1.5	2	2	2
HadGEM2-ES	100	3	1.5	1.5	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

A4.4.4 Leeton

Table A4. 170: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Leeton, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
1960-1999							
CNRM-CM5	50	11	1	1	2	4	6
CNRM-CM5	100	4	1	2	3.5	4.5	5
CNRM-CM5	200	3	2	2	2	5	5
GFDL-ESM2G	50	14	1	2	2	3	7
GFDL-ESM2G	100	8	1.5	2	2	3	6
GFDL-ESM2G	200	3	2	2	2	3	3
HadGEM2-ES	50	22	1	1	2	2	4
HadGEM2-ES	100	10	1	2	2.5	3.5	7
HadGEM2-ES	200	4	2	2	2	2.5	3
MIROC5	50	9	1	1.5	3	4	6
MIROC5	100	6	1	1	2.5	4	5
MIROC5	200	3	1	1	3	3	3
MRI-CGCM3	50	23	1.5	2	2	3	5
MRI-CGCM3	100	14	1.5	2	2.5	4	8
MRI-CGCM3	200	7	1.5	2	2	3	6

Summaries based only on data from events of 1 day or more in duration

Table A4. 171: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	28	1	2	2.5	3.75	12
CNRM-CM5	100	22	1.5	2	3	4	10
CNRM-CM5	200	11	1	3	3	5	10
GFDL-ESM2G	50	28	1	2	2	2.5	5
GFDL-ESM2G	100	17	1	2	2	3	5
GFDL-ESM2G	200	6	1	2	3	4	7
HadGEM2-ES	50	33	1	2	2	3	7
HadGEM2-ES	100	26	1	2	2.75	4	7
HadGEM2-ES	200	12	2	2	3	3.75	6
MIROC5	50	26	1	2	2	3	8
MIROC5	100	16	2	2	2	3	7
MIROC5	200	5	2	2	3	5	7
MRI-CGCM3	50	30	1	2	2	3	6
MRI-CGCM3	100	25	1	2	2.5	3	9
MRI-CGCM3	200	10	2	2	3	7	8
2050-2099							
CNRM-CM5	50	39	1	2	2.5	4	9
CNRM-CM5	100	32	1	2	3	4	9
CNRM-CM5	200	22	2	2	3	6	16
GFDL-ESM2G	50	37	1	2	2	3	6
GFDL-ESM2G	100	27	1	2	2	3	5.5
GFDL-ESM2G	200	12	1	2	2.5	4.5	7
HadGEM2-ES	50	46	1	2	2.25	3	10
HadGEM2-ES	100	38	1	2	3.5	5	10
HadGEM2-ES	200	28	1	2	3	4.75	15
MIROC5	50	34	1	2	2	3	7
MIROC5	100	21	1	2	3	4	7
MIROC5	200	10	2	2	2.5	4	7
MRI-CGCM3	50	40	1	2	2	3	7
MRI-CGCM3	100	32	1	2	2.75	3.75	10
MRI-CGCM3	200	19	1	2	3	4	10

Table A4. 172: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	18	1	2	2	3	6
CNRM-CM5	100	10	1	2	3	5	6
CNRM-CM5	200	4	2	2	2.5	3.5	4
GFDL-ESM2G	50	12	1	1.5	2	3	7
GFDL-ESM2G	100	6	1	2	2.5	3	5
GFDL-ESM2G	200	3	1	1	3	3	3
HadGEM2-ES	50	20	1	1	2	3.25	4
HadGEM2-ES	100	12	1	2	2	3.25	6
HadGEM2-ES	200	6	1	1	1.75	4	4
MIROC5	50	14	1	2	2	2	6
MIROC5	100	5	2	2	3	3.5	6
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	20	1	1.75	2	2	7
MRI-CGCM3	100	10	1	1	2.5	4	6
MRI-CGCM3	200	4	3	3	3	3.5	4
2050-2099							
CNRM-CM5	50	28	1	2	2	3.75	7
CNRM-CM5	100	18	1	2	3	4	8
CNRM-CM5	200	9	1	3	4	4	13
GFDL-ESM2G	50	21	1	2	2	2.5	6.5
GFDL-ESM2G	100	11	1.5	2	2	3	6
GFDL-ESM2G	200	2	3	3	4	5	5
HadGEM2-ES	50	36	1	1.75	2	3.25	9
HadGEM2-ES	100	25	1	2	2.5	3.5	9
HadGEM2-ES	200	14	1.5	2	2.75	3	7.5
MIROC5	50	14	1	2	2	3	6
MIROC5	100	8	1	2	2.75	3	6
MIROC5	200	5	1	2	2	2	9
MRI-CGCM3	50	31	1	2	2	3	7
MRI-CGCM3	100	16	1	2	2.5	4	8
MRI-CGCM3	200	7	2	2	3	6	12

Table A4. 173: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	5	1	1.5	2	3	5
CNRM-CM5	100	2	2	2	2.5	3	3
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	3	1	1	3	3	3
GFDL-ESM2G	100	2	3	3	3	3	3
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	5	1	2	2	2	4
HadGEM2-ES	100	2	1	1	2.5	4	4
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	3	5	5
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	5	2	3	3	5	5
MRI-CGCM3	100	2	3	3	3.5	4	4
MRI-CGCM3	200	1	2	2	2	2	2
2050-2099							
CNRM-CM5	50	7	1	2	3	5	12
CNRM-CM5	100	4	2	2.5	3.5	7.5	11
CNRM-CM5	200	1	10	10	10	10	10
GFDL-ESM2G	50	4	1	1	1.75	2.75	3
GFDL-ESM2G	100	1	2	2	2	2	2
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	19	1	1.5	2	3	7
HadGEM2-ES	100	11	2	2	2.5	4	6.5
HadGEM2-ES	200	4	1	2	3	6.5	10
MIROC5	50	4	2	2	2	2	2
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	7	2	2	3	6	12
MRI-CGCM3	100	5	2	2	2	6	10
MRI-CGCM3	200	1	3	3	3	3	3

Table A4. 174: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	2	2	2	2	2	2
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	2	2	2	2	2
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	2	2	2	2	2
MRI-CGCM3	100	1	1	1	1	1	1
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	2	1	1	2	3	3
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	9	1	2	2	3	4.5
HadGEM2-ES	100	4	1	1.5	2.5	4	5
HadGEM2-ES	200	2	2	2	3	4	4
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	4	1	1.5	2	2	2
MRI-CGCM3	100	1	1	1	1	1	1
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 175: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none		years with events	Event duration: median number of days per event, per annum				
Model	**AHL threshold**	**(n)**	**min**	**p25**	**median**	**p75**	**max**
2010-2049							
CNRM-CM5	50	28	1	2	2.5	4	8
CNRM-CM5	100	21	2	2	3	4	7.5
CNRM-CM5	200	10	1	2	3	5	9
GFDL-ESM2G	50	32	1	2	2	3.25	7
GFDL-ESM2G	100	23	1	2	3	4	6
GFDL-ESM2G	200	11	2	2	3	5	8
HadGEM2-ES	50	37	1	2	2.5	4	10
HadGEM2-ES	100	34	1	2	3	5.5	10
HadGEM2-ES	200	25	1	2	4	6	15
MIROC5	50	26	1	1.5	2	3	5
MIROC5	100	19	1	2	2	4	7
MIROC5	200	6	1	2.5	3	3	4
MRI-CGCM3	50	31	1	2	2	4	7.5
MRI-CGCM3	100	25	1	2	3	4	11
MRI-CGCM3	200	11	1	2	3	4	10
2050-2099							
CNRM-CM5	50	46	1	2	3	4	9
CNRM-CM5	100	38	2	2	3	4.5	8.5
CNRM-CM5	200	26	1	2	3	5	8
GFDL-ESM2G	50	45	1	2	2.5	3.5	7
GFDL-ESM2G	100	37	1	2	3	4	8
GFDL-ESM2G	200	26	1	2	3	5	9
HadGEM2-ES	50	50	1	2	2.75	3.5	10
HadGEM2-ES	100	46	2	2	3	5	10
HadGEM2-ES	200	37	1.5	2.5	4	6.5	16
MIROC5	50	42	1	2	2.5	3	12
MIROC5	100	30	2	2	3	4	11
MIROC5	200	19	1	2	3	4	10
MRI-CGCM3	50	48	1	2	2	3	7
MRI-CGCM3	100	43	1	2	2.5	4	10
MRI-CGCM3	200	24	1	2	2.5	4.5	9

Table A4. 176: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	21	1	2	2	3	5
CNRM-CM5	100	9	2	2	3	4	7
CNRM-CM5	200	4	2	2	2.5	3.5	4
GFDL-ESM2G	50	18	1	2	2	3	4
GFDL-ESM2G	100	8	2	2	2.25	3.5	4
GFDL-ESM2G	200	5	2	2	3	3	3
HadGEM2-ES	50	33	1	1.5	2	3	8
HadGEM2-ES	100	21	1	2	3	4	6
HadGEM2-ES	200	11	1	2	3	4	5
MIROC5	50	14	1	2	2	3	3
MIROC5	100	7	1	1	2	3	3
MIROC5	200	1	2	2	2	2	2
MRI-CGCM3	50	20	1	1.5	2	3	8
MRI-CGCM3	100	9	1	2	2	3	8
MRI-CGCM3	200	2	1	1	4	7	7
2050-2099							
CNRM-CM5	50	36	1	2	2	3	7
CNRM-CM5	100	20	1	2	2.75	4	7
CNRM-CM5	200	13	2	2	2	3	6
GFDL-ESM2G	50	34	1	2	2	3	7
GFDL-ESM2G	100	25	2	2	3	3.5	6
GFDL-ESM2G	200	13	2	2	3	3.5	5
HadGEM2-ES	50	43	1	2	2.5	3.5	9
HadGEM2-ES	100	39	1	2	3	4	15
HadGEM2-ES	200	29	1	2	3	4	14
MIROC5	50	23	1	2	2	3	7
MIROC5	100	14	2	2	2	3	6
MIROC5	200	7	2	2	4	6	10
MRI-CGCM3	50	36	1	2	2	3.25	7
MRI-CGCM3	100	22	1	2	2	3	8
MRI-CGCM3	200	10	1	2	2.5	4	13

Table A4. 177: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	4	2	2.5	3	3	3
CNRM-CM5	100	2	3	3	3	3	3
CNRM-CM5	200	1	3	3	3	3	3
GFDL-ESM2G	50	6	2	2	2	3	3
GFDL-ESM2G	100	3	2	2	2	3	3
GFDL-ESM2G	200	1	1	1	1	1	1
HadGEM2-ES	50	10	1	2	2.5	3	4
HadGEM2-ES	100	5	1	2	2	3	3
HadGEM2-ES	200	1	3	3	3	3	3
MIROC5	50	1	3	3	3	3	3
MIROC5	100	1	2	2	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	2	2	4.5	7	7
MRI-CGCM3	100	1	6	6	6	6	6
MRI-CGCM3	200	1	6	6	6	6	6
2050-2099							
CNRM-CM5	50	12	2	2	2	3	5
CNRM-CM5	100	7	1	2	2	4	7
CNRM-CM5	200	2	3	3	7.5	12	12
GFDL-ESM2G	50	14	1	2	3	3	5
GFDL-ESM2G	100	7	2	2	3	4	5
GFDL-ESM2G	200	3	2	2	2.5	3	3
HadGEM2-ES	50	33	1	1.5	2	3	7
HadGEM2-ES	100	21	2	2	3	3.5	6
HadGEM2-ES	200	11	2	2	3	4	13
MIROC5	50	8	1	1.5	2.5	3	3
MIROC5	100	5	2	2	2	3	5
MIROC5	200	3	2	2	2	3	3
MRI-CGCM3	50	11	1	2	2	3	10
MRI-CGCM3	100	6	1	2	3	6	9
MRI-CGCM3	200	1	3	3	3	3	3

Table A4. 178: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	2	2	2	2	2	2
CNRM-CM5	100	1	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	2	2	2	2	2
GFDL-ESM2G	100	1	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	3	1	1	1	3	3
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	1	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	5	5	5	5	5
MRI-CGCM3	100	1	3	3	3	3	3
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	4	2	2	2	4	6
CNRM-CM5	100	2	2	2	4	6	6
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	4	2	2	2.5	3	3
GFDL-ESM2G	100	3	2	2	3	3	3
GFDL-ESM2G	200	1	1	1	1	1	1
HadGEM2-ES	50	16	1.5	2	2	2.75	6.5
HadGEM2-ES	100	10	1	2	2.25	3	10
HadGEM2-ES	200	4	2	2.5	3	6.5	10
MIROC5	50	4	1	1.5	2.5	3	3
MIROC5	100	3	2	2	2	3	3
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	3	1	1	2	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 179: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	2	3	3.25	8
CNRM-CM5	100	40	1	2.75	3.75	5.5	8
CNRM-CM5	200	38	2	3	4.5	7	71
GFDL-ESM2G	50	27	1	2	2	3	9
GFDL-ESM2G	100	18	1	2	2	3	8
GFDL-ESM2G	200	10	1	2	2	3	6
HadGEM2-ES	50	36	1	2	2	3	10
HadGEM2-ES	100	31	1	2	3	5	10
HadGEM2-ES	200	21	2	2	3	4.5	15
MIROC5	50	27	1	1.5	2	3	5.5
MIROC5	100	17	2	2	2	4.5	9
MIROC5	200	7	1	2	2	6	6
MRI-CGCM3	50	32	1.5	2	2	3	6
MRI-CGCM3	100	22	1	2	3	3.5	8
MRI-CGCM3	200	15	1	2	2	4	7
2050-2099							
CNRM-CM5	50	50	1.5	2	3	3.5	26.5
CNRM-CM5	100	50	2	2.5	4	5	40
CNRM-CM5	200	50	2	3	4	6	38
GFDL-ESM2G	50	49	1	2	2.5	3.5	7.5
GFDL-ESM2G	100	46	2	2	3	4.5	11
GFDL-ESM2G	200	39	2	2.5	3	5.5	16
HadGEM2-ES	50	50	2	2	3	3.5	8
HadGEM2-ES	100	50	2	3	3.75	4.5	8
HadGEM2-ES	200	49	2	3	4	7	40
MIROC5	50	49	1	2	3	3.5	8
MIROC5	100	44	2	2	3	4	8
MIROC5	200	34	1	2	3	4.5	16
MRI-CGCM3	50	49	1	2	2.5	3	6
MRI-CGCM3	100	46	1	2	3	4	17
MRI-CGCM3	200	37	2	2	3	4.5	17

Table A4. 180: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	2	2.25	3	5
CNRM-CM5	100	38	1	2	3	4	14.5
CNRM-CM5	200	38	2	2	3	4.5	15.5
GFDL-ESM2G	50	11	2	2	2	3	4
GFDL-ESM2G	100	8	1	2	2	2.5	4
GFDL-ESM2G	200	2	1	1	2.5	4	4
HadGEM2-ES	50	30	1	2	2	3.5	6
HadGEM2-ES	100	17	1	2	2.5	3	4.5
HadGEM2-ES	200	9	2	2	3	4	6
MIROC5	50	14	1	2	2	3	5
MIROC5	100	6	1	1	2.5	4	5
MIROC5	200	1	3	3	3	3	3
MRI-CGCM3	50	18	1	2	2	3	7
MRI-CGCM3	100	12	1	2	2	3	7
MRI-CGCM3	200	3	3	3	3	5	5
2050-2099							
CNRM-CM5	50	50	2	2	3	3	9
CNRM-CM5	100	50	2	2	3	4	10
CNRM-CM5	200	50	2	2.5	3.25	5	41.5
GFDL-ESM2G	50	45	1	2	2.5	3	7
GFDL-ESM2G	100	39	1	2	2.5	3.5	15
GFDL-ESM2G	200	26	1	2	3	4	8
HadGEM2-ES	50	50	1.5	2	3	3.5	7
HadGEM2-ES	100	50	2	2.5	3	4	7
HadGEM2-ES	200	49	1	2.5	3	6.5	20
MIROC5	50	42	1	2	2.5	3	7
MIROC5	100	32	1	2	3	4.25	6
MIROC5	200	22	1	2	3	6	8
MRI-CGCM3	50	43	1	2	2.5	3	9
MRI-CGCM3	100	37	1	2	2.5	3	8
MRI-CGCM3	200	22	2	2	3	4	10

Table A4. 181: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	38	1.5	2	2.5	4	11
CNRM-CM5	100	38	1.5	2	2.5	3	9.5
CNRM-CM5	200	30	1.5	2	3	5	9.5
GFDL-ESM2G	50	3	2	2	2	3	3
GFDL-ESM2G	100	1	3	3	3	3	3
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	13	1	1	2	3	7
HadGEM2-ES	100	6	1	2	3.5	5	6
HadGEM2-ES	200	1	3	3	3	3	3
MIROC5	50	3	1	1	3	3	3
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	6	1	2	2.5	3	3
MRI-CGCM3	100	2	3	3	3	3	3
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1	2	3	4	7
CNRM-CM5	100	50	2	2	3	4	34
CNRM-CM5	200	50	2	2.5	3.5	5.5	43
GFDL-ESM2G	50	28	1.5	2	3	3.5	9
GFDL-ESM2G	100	20	1	2	3	4	9
GFDL-ESM2G	200	11	1	2	3	4	7
HadGEM2-ES	50	48	2	2.5	3	4.75	9
HadGEM2-ES	100	47	1	2	3	5	16
HadGEM2-ES	200	36	1.5	2	4	5.5	14
MIROC5	50	23	1	2	3	4.5	9
MIROC5	100	17	1	2	4	4	7
MIROC5	200	8	1	2.5	3	3.5	10
MRI-CGCM3	50	26	1	2	2	4	9
MRI-CGCM3	100	16	1	2	3	5	9
MRI-CGCM3	200	10	1	3	4	5	6.5

Table A4. 182: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Leeton, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	35	1	2	2	3	5.5
CNRM-CM5	100	30	1	2	2	3	6
CNRM-CM5	200	16	2	2	3	5	9
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	4	2	2	2.5	3	3
HadGEM2-ES	100	1	2	2	2	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	2	2	2	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1.5	2	3	3	7
CNRM-CM5	100	49	1.5	2	3	4	13
CNRM-CM5	200	49	1	2.5	3	5	19
GFDL-ESM2G	50	14	1	2	2	3	3
GFDL-ESM2G	100	10	2	2	2	3	5.5
GFDL-ESM2G	200	5	1	2	2	2	3
HadGEM2-ES	50	45	1	2	2	3.5	7
HadGEM2-ES	100	33	1	2	2	3	9.5
HadGEM2-ES	200	18	2	2	2	3.5	9.5
MIROC5	50	14	1	2	2	2	3
MIROC5	100	8	1	1	2	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	12	1	1.5	2.25	3.5	4
MRI-CGCM3	100	7	2	2	2	4	4
MRI-CGCM3	200	2	2	2	2	2	2

A4.4.5 Narrogin

Table A4. 183: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location=Narrogin, time period= 1960-1999. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
1960-1999							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1.5	2	2
HadGEM2-ES	100	2	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	1	1	1	1	1
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Summaries based only on data from events of 1 day or more in duration

Table A4. 184: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	2	1	1	1	1	1
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	3	1	1	1	1	1
GFDL-ESM2G	100	1	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	7	1	1	1	2	2
HadGEM2-ES	100	2	1	1	1.5	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	1	1	1
MIROC5	100	1	1	1	1	1	1
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	5	1	1	1	2	2
MRI-CGCM3	100	2	1	1	1.5	2	2
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	6	1	1	1	1	2
CNRM-CM5	100	1	2	2	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	3	1	1	1	1	1
GFDL-ESM2G	100	1	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	10	1	1	1	2	2
HadGEM2-ES	100	3	1	1	2	2	2
HadGEM2-ES	200	1	1	1	1	1	1
MIROC5	50	2	1	1	1.5	2	2
MIROC5	100	2	1	1	1	1	1
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	12	1	1	1	2	2
MRI-CGCM3	100	2	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 185: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1.5	2	2
HadGEM2-ES	100	2	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	1	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	1	1	1.5	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	1	1	1	1	1	1
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	3	1	1	1	2	2
HadGEM2-ES	100	2	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	1	1	1	1	1
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 186: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	1	1	1	1	1
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1	1	1
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 187: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP2.6, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 188: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	2	1	1	1	1	1
GFDL-ESM2G	100	1	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	10	1	1	1	1	2
HadGEM2-ES	100	3	1	1	1	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	1.5	2	2
MIROC5	100	2	1	1	1	1	1
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	8	1	1	1.25	2	2
MRI-CGCM3	100	2	1	1	1.5	2	2
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	8	1	1	1.5	2	4
CNRM-CM5	100	3	1	1	2	3	3
CNRM-CM5	200	1	1	1	1	1	1
GFDL-ESM2G	50	2	1	1	1	1	1
GFDL-ESM2G	100	1	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	18	1	1	1	1	3
HadGEM2-ES	100	5	1	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	4	1	1	1	1.5	2
MIROC5	100	2	1	1	1	1	1
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	16	1	1	1	2	3
MRI-CGCM3	100	4	1	1	1.5	2	2
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 189: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	1	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	3	1	1	1	2	2
HadGEM2-ES	100	2	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	2	1	1	1.5	2	2
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	3	1	1	1	2	2
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	2	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	5	1	1	1	2	2
HadGEM2-ES	100	2	1	1	1.5	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	3	1	1	1	1	1
MRI-CGCM3	100	1	1	1	1	1	1
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 190: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1	1	1
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1	1	1
HadGEM2-ES	100	1	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 191: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP4.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	0	.	.	.	.	.
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	1	1	1	1	1	1
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 192: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. No mitigation implemented.

mit=none		years with events	Event duration: median number of days per event, per annum				
Model	AHL threshold	(n)	min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	40	1	1	1.5	2	6
CNRM-CM5	100	37	1	1	2	3	6
CNRM-CM5	200	18	1	2	2	4	7
GFDL-ESM2G	50	2	1	1	1	1	1
GFDL-ESM2G	100	2	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	8	1	1	1	1.5	2
HadGEM2-ES	100	2	2	2	2	2	2
HadGEM2-ES	200	1	1	1	1	1	1
MIROC5	50	3	1	1	1	1	1
MIROC5	100	1	1	1	1	1	1
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	5	1	1	1	2	2
MRI-CGCM3	100	1	2	2	2	2	2
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	50	1	1	2	2	4.5
CNRM-CM5	100	50	1	2	2	3	8
CNRM-CM5	200	48	1	2	3	4	9
GFDL-ESM2G	50	7	1	1	1	2	4
GFDL-ESM2G	100	3	1	1	1	3	3
GFDL-ESM2G	200	1	2	2	2	2	2
HadGEM2-ES	50	34	1	1	1.5	2	4
HadGEM2-ES	100	18	1	1	1.75	2	5
HadGEM2-ES	200	5	1	1	2	3	3
MIROC5	50	17	1	1	2	2	3
MIROC5	100	3	1	1	1	2	2
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	28	1	1	1.5	2	4.5
MRI-CGCM3	100	12	1	1	2	2.5	3
MRI-CGCM3	200	2	1	1	1	1	1

Table A4. 193: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Mild mitigation implemented.

mit=mild Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	37	1	1	1	2	5
CNRM-CM5	100	21	1	1	2	2	5.5
CNRM-CM5	200	10	1	1	1.75	2	3.5
GFDL-ESM2G	50	2	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1.5	2	2
HadGEM2-ES	100	2	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	2	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	1	1	1	1	1	1
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	1	1	1.5	2	4.5	
CNRM-CM5	100	49	1	1.5	2	2.5	7
CNRM-CM5	200	37	1	2	2	3	7
GFDL-ESM2G	50	3	1	1	1	2	2
GFDL-ESM2G	100	1	1	1	1	1	1
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	18	1	1	1	1.5	3
HadGEM2-ES	100	4	2	2	2	2	2
HadGEM2-ES	200	1	2	2	2	2	2
MIROC5	50	2	1	1	1.5	2	2
MIROC5	100	2	1	1	1	1	1
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	8	1	1	1	2.5	3
MRI-CGCM3	100	2	1	1	1.5	2	2
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 194: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Moderate mitigation implemented.

mit=mod Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	19	1	1	2	2	3
CNRM-CM5	100	10	1	1	2	2	2
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1	1	1
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	48	1	1	2	2	6
CNRM-CM5	100	38	1	1	2	3	7
CNRM-CM5	200	22	1	2	2	3	6.5
GFDL-ESM2G	50	1	1	1	1	1	1
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	2	2	2	2	2
HadGEM2-ES	100	2	1	1	1.5	2	2
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	1	1	1	1	1	1
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

Table A4. 195: Summary statistics for the median duration of heat load events per year when AHL>threshold. Location= Narrogin, RCP8.5, time periods= 2010-2049 and 2050-2099. Maximal mitigation implemented.

mit=max Model	AHL threshold	years with events (n)	Event duration: median number of days per event, per annum min	p25	median	p75	max
2010-2049							
CNRM-CM5	50	7	1	1	1	2	2
CNRM-CM5	100	0	.	.	.	.	.
CNRM-CM5	200	0	.	.	.	.	.
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	0	.	.	.	.	.
HadGEM2-ES	100	0	.	.	.	.	.
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.
2050-2099							
CNRM-CM5	50	36	1	1	2	2	4.5
CNRM-CM5	100	20	1.5	2	2	2.5	5
CNRM-CM5	200	7	1	2	2	2	2.5
GFDL-ESM2G	50	0	.	.	.	.	.
GFDL-ESM2G	100	0	.	.	.	.	.
GFDL-ESM2G	200	0	.	.	.	.	.
HadGEM2-ES	50	2	1	1	1.5	2	2
HadGEM2-ES	100	1	1	1	1	1	1
HadGEM2-ES	200	0	.	.	.	.	.
MIROC5	50	0	.	.	.	.	.
MIROC5	100	0	.	.	.	.	.
MIROC5	200	0	.	.	.	.	.
MRI-CGCM3	50	0	.	.	.	.	.
MRI-CGCM3	100	0	.	.	.	.	.
MRI-CGCM3	200	0	.	.	.	.	.

A4.5 Additional plots of heat load days per year

Accumulated heat load units (AHLU) were plotted directly against time for each location, model and scenario to provide detailed plots of heat load measures.

Each page has nine plots.

The first plot shows the AHLU measures for the historic period (1960-1999).

Then each successive pair of plots shows the AHLU for the RCP and time period combinations:

- RCP2.6 & 2010-2049
- RCP2.6 & 2050-2099
- RCP4.5 & 2010-2049
- RCP4.5 & 2050-2099
- RCP8.5 & 2010-2049
- RCP8.5 & 2050-2099

The last two plots on each page (plots h and i) show the effects of two mitigation strategies (moderate and maximal), just on the RCP8.5 and 2050-2099 background. Details on the mitigation strategies can be found in the methodology section of the main report.

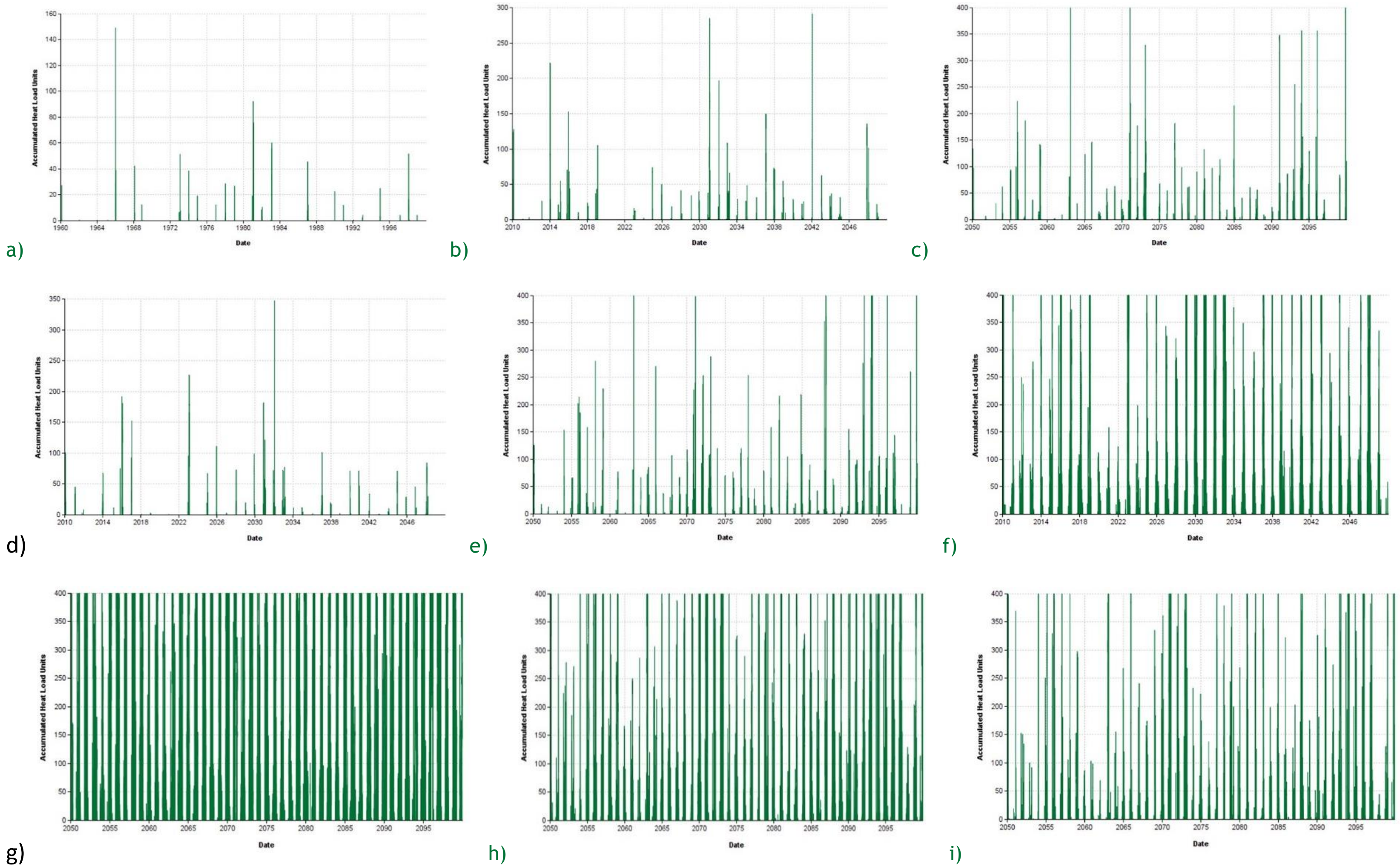


Figure A4. 5: Plots of Accumulated Heat Load Units (AHLU) over time for Caroona using GCM=CNRM-CM5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

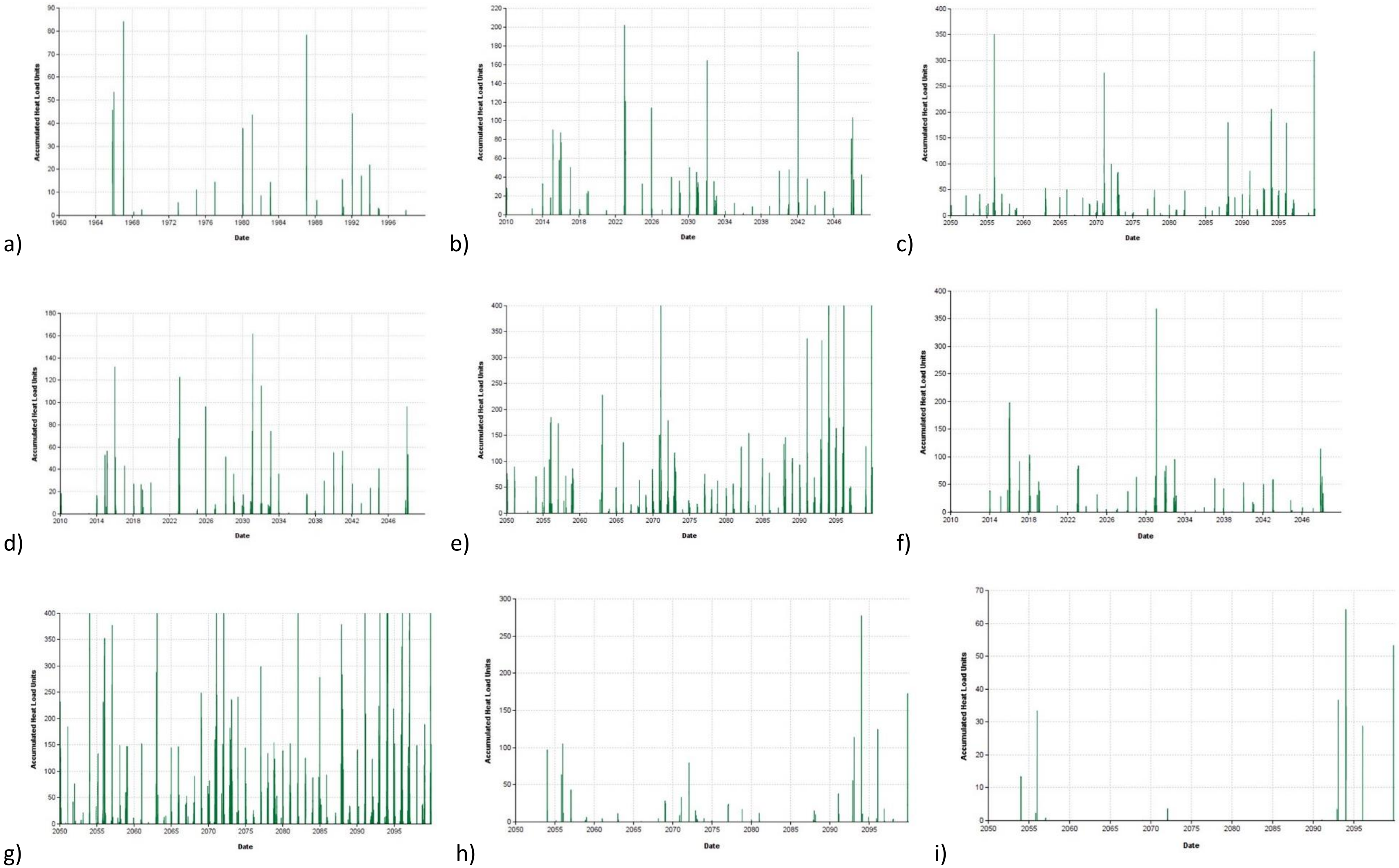


Figure A4. 6: Plots of Accumulated Heat Load Units (AHLU) over time for Caroona using GCM=GFDL-ESM2G: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

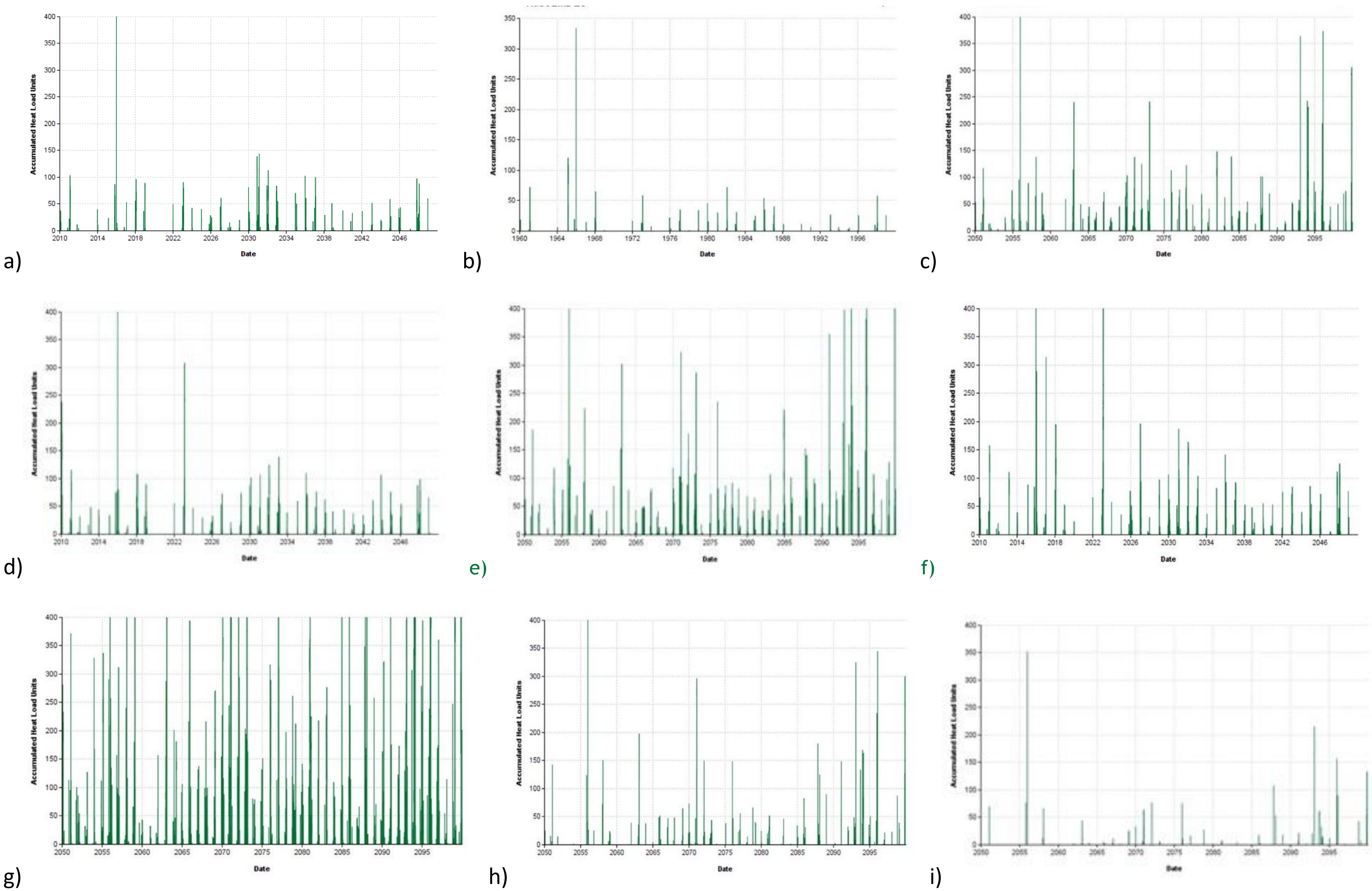


Figure A4. 7: Plots of Accumulated Heat Load Units (AHLU) over time for Caroona using GCM=HadGEM2-ES: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

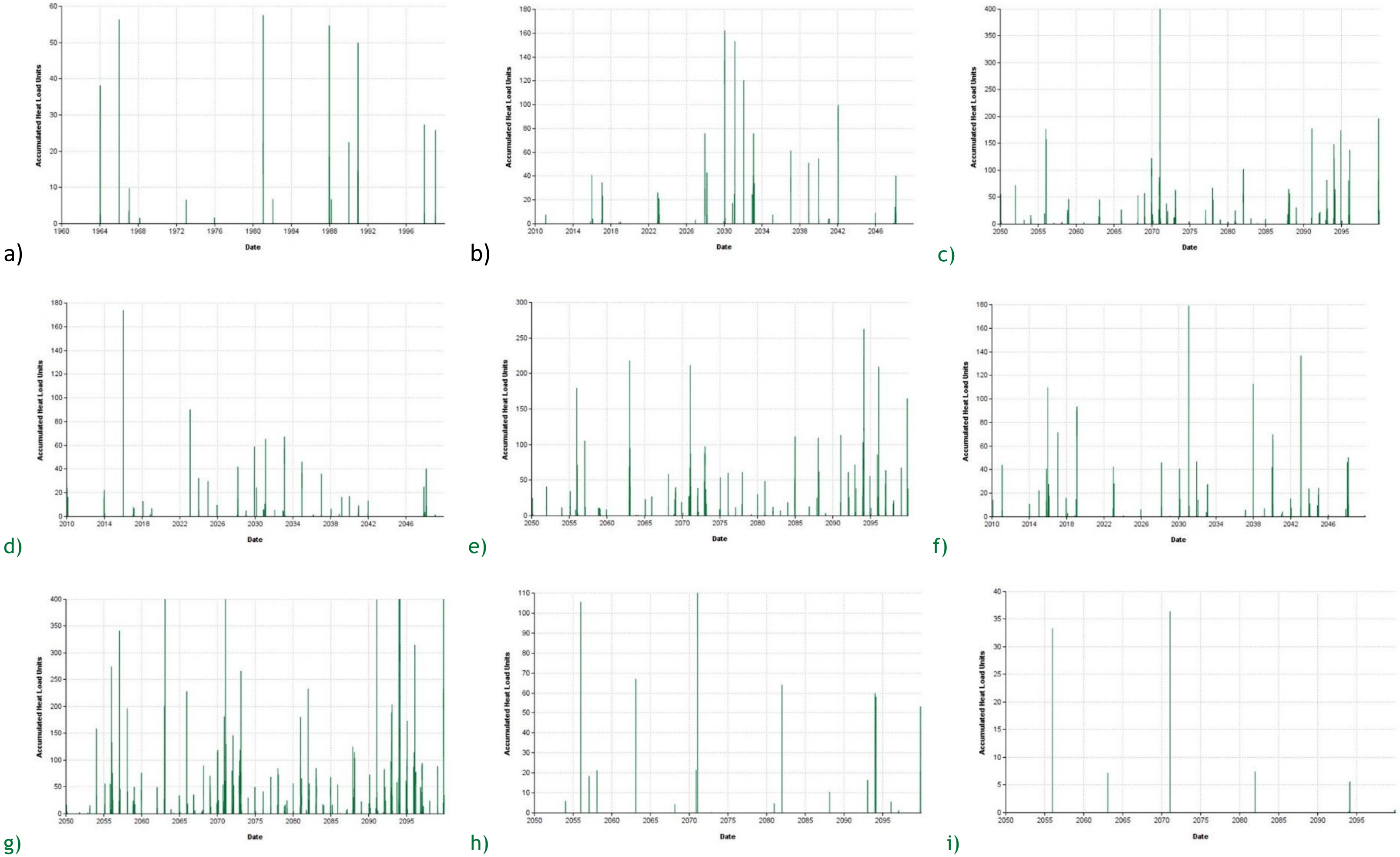
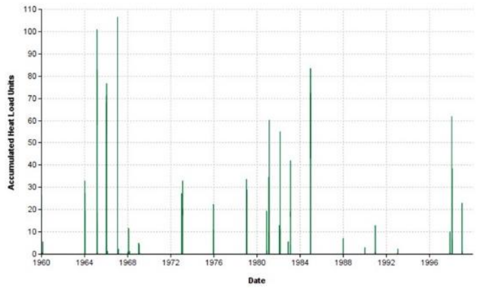


Figure A4. 8: Plots of Accumulated Heat Load Units (AHLU) over time for Caroona using GCM=MIROC5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.



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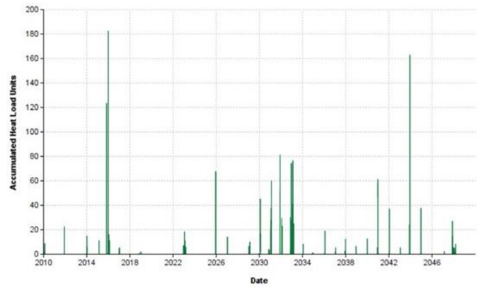

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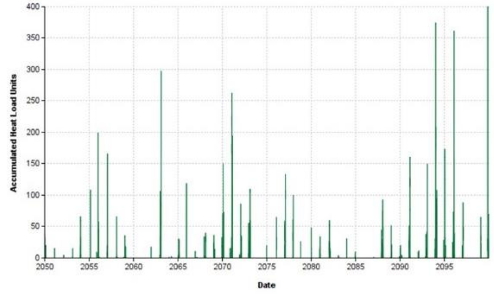

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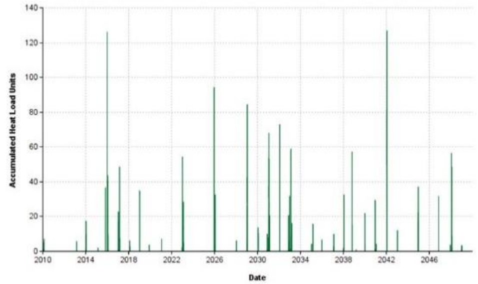

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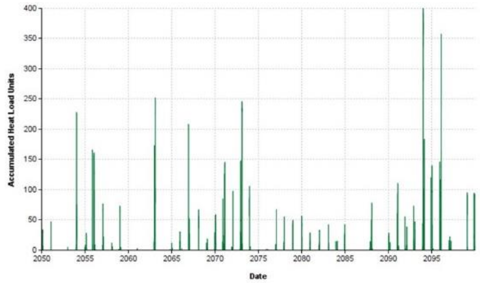

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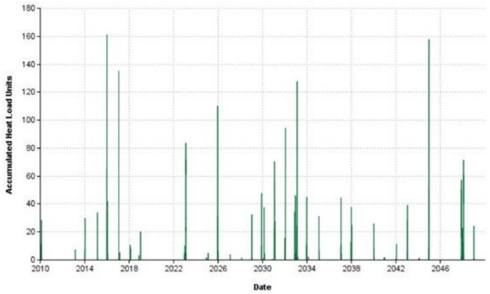

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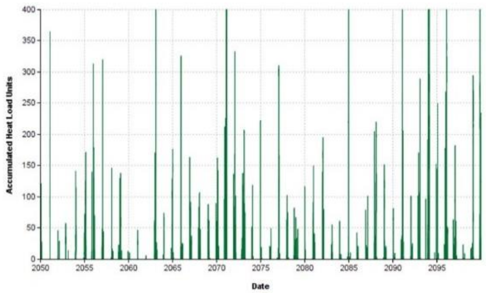

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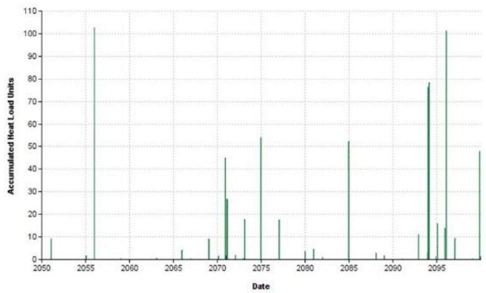

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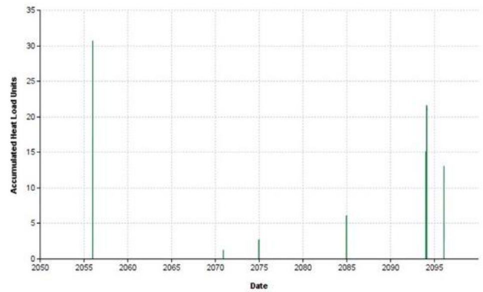


i)

Figure A4. 9: Plots of Accumulated Heat Load Units (AHLU) over time for Caroona using GCM=MRI-CGCM3: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

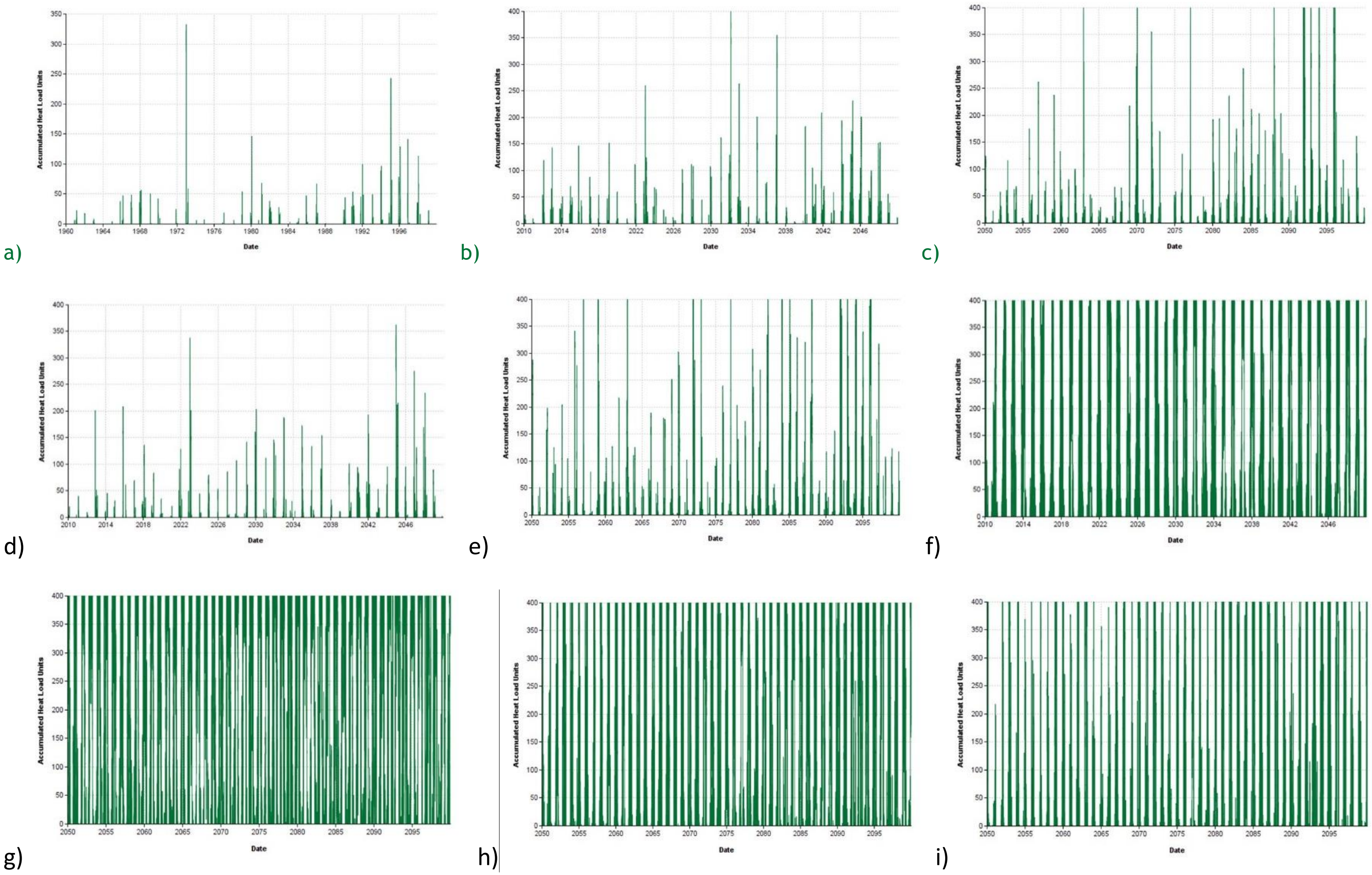


Figure A4. 10: Plots of Accumulated Heat Load Units (AHLU) over time for Comet using GCM=CNRM-CM5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

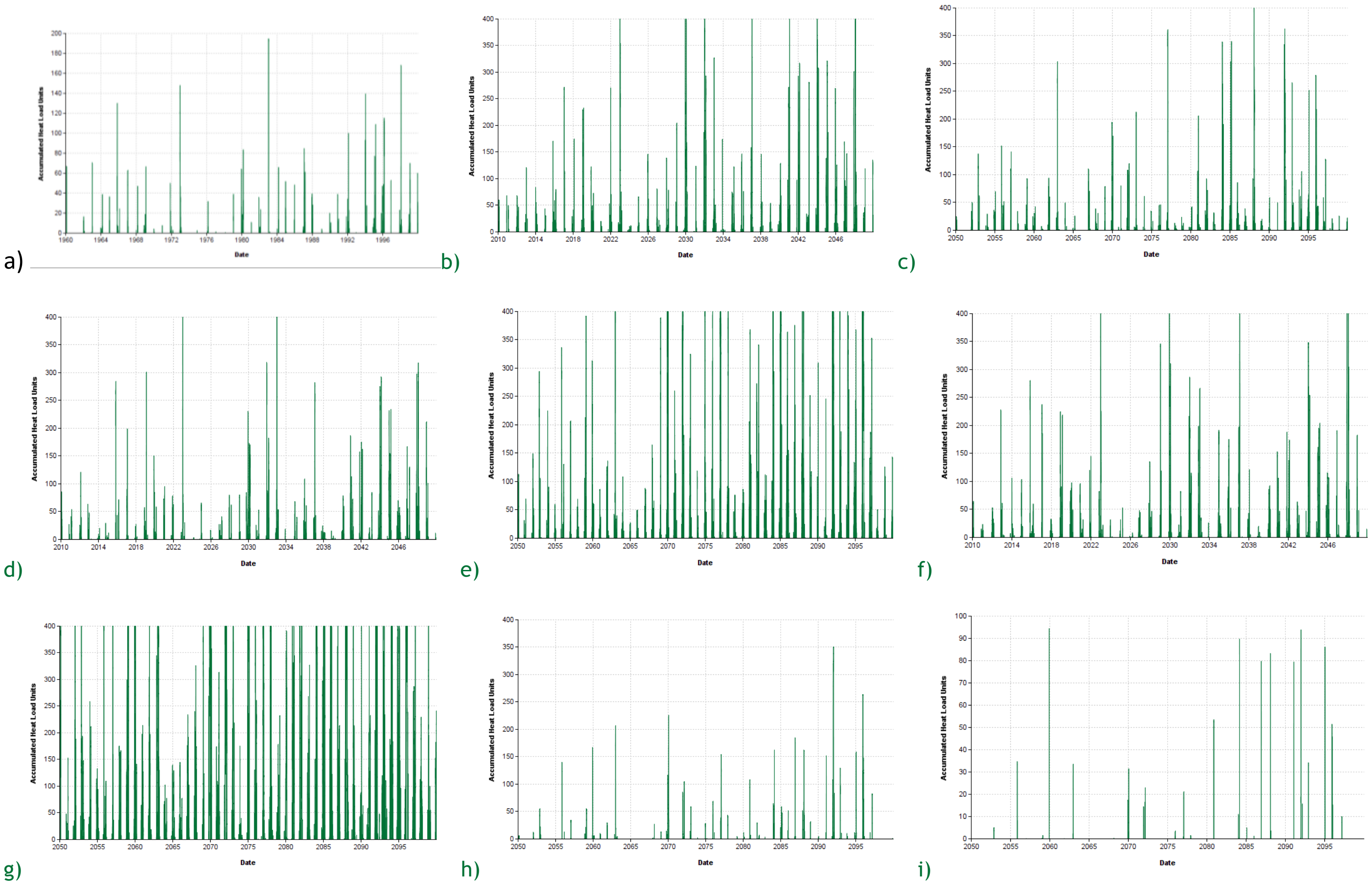


Figure A4. 11: Plots of Accumulated Heat Load Units (AHLU) over time for Comet using GCM=GFDL-ESM2G: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

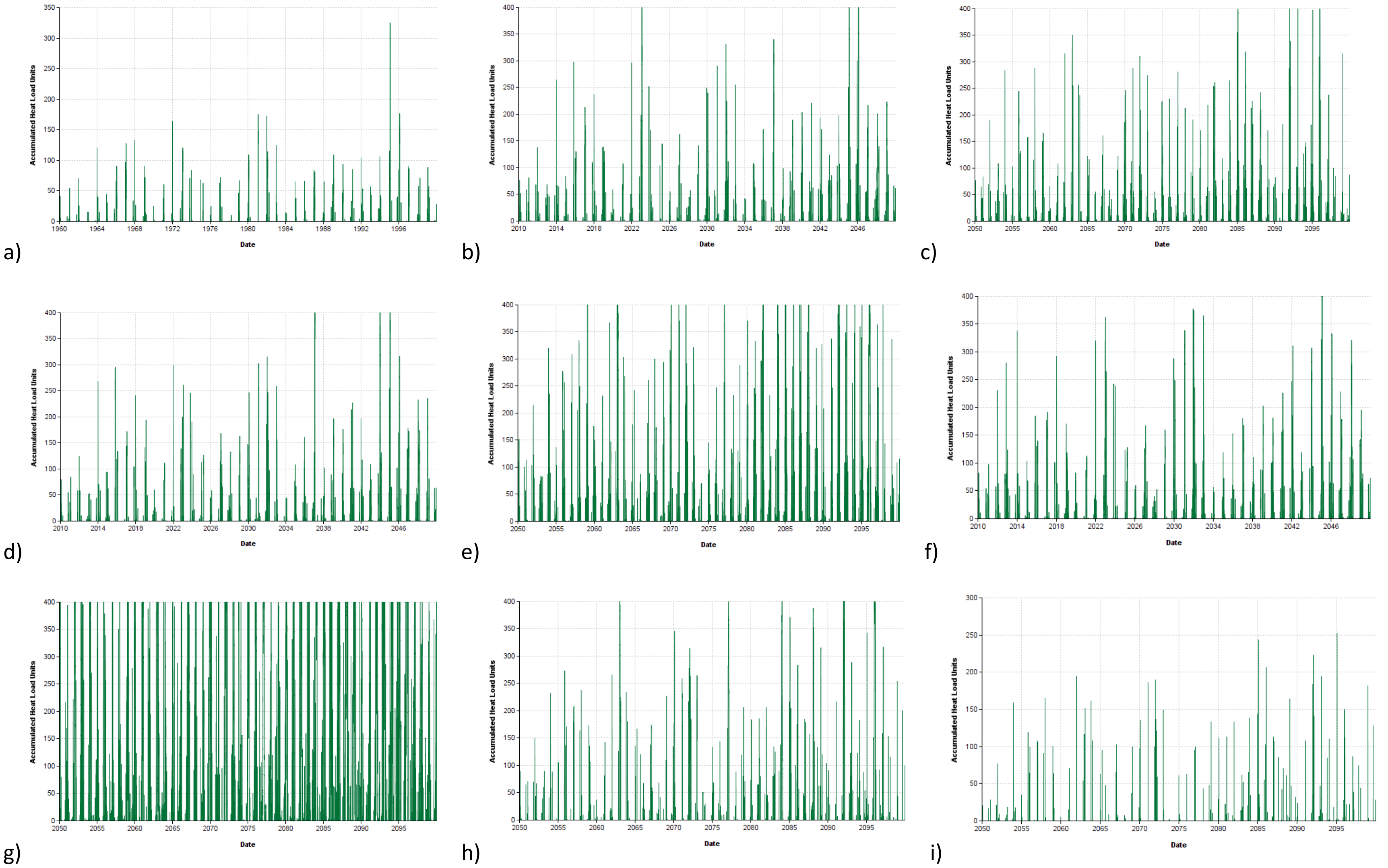


Figure A4. 12: Plots of Accumulated Heat Load Units (AHLU) over time for Comet using GCM=HadGEM2-ES: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

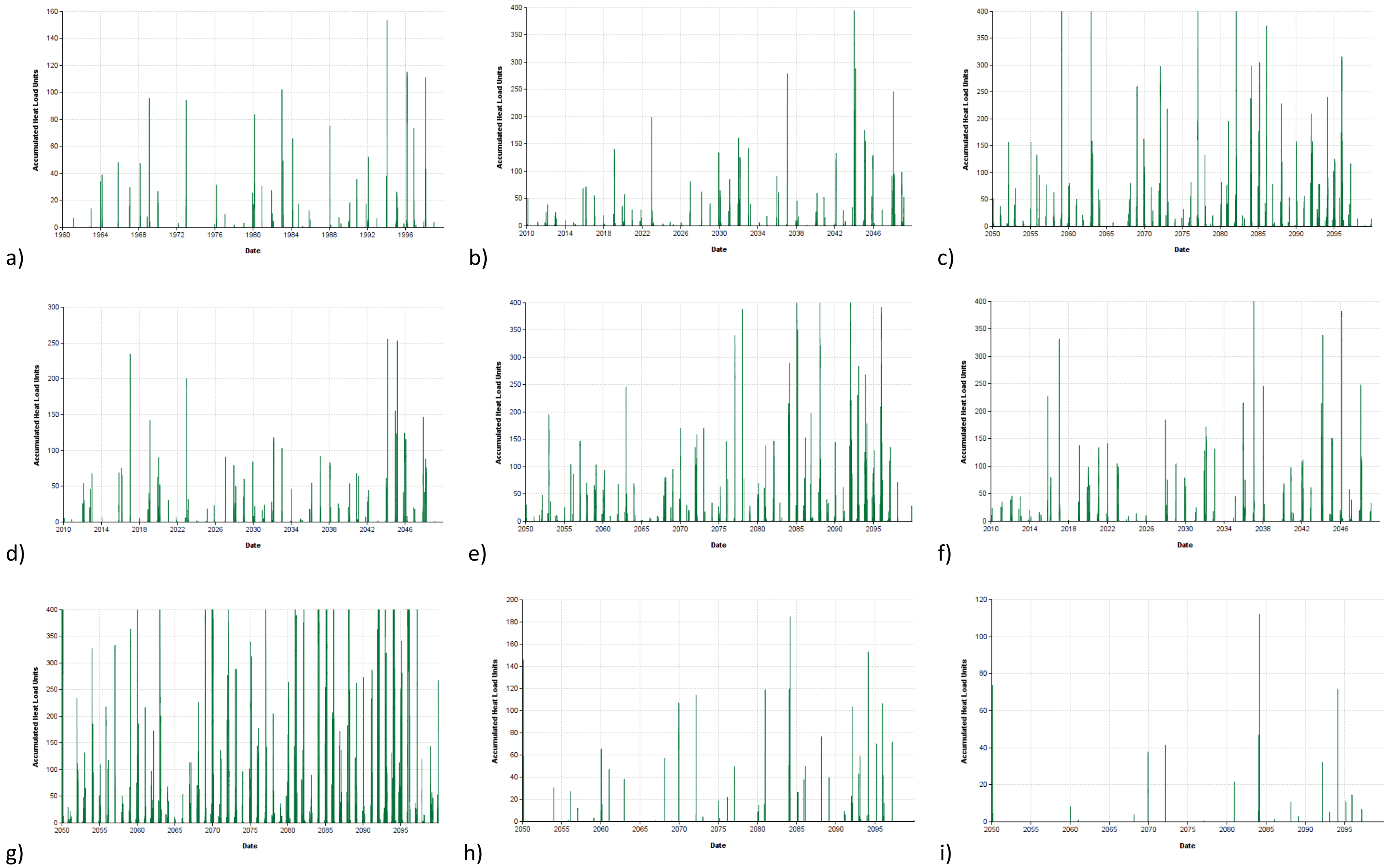


Figure A4. 13: Plots of Accumulated Heat Load Units (AHLU) over time for Comet using GCM=MIROC5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

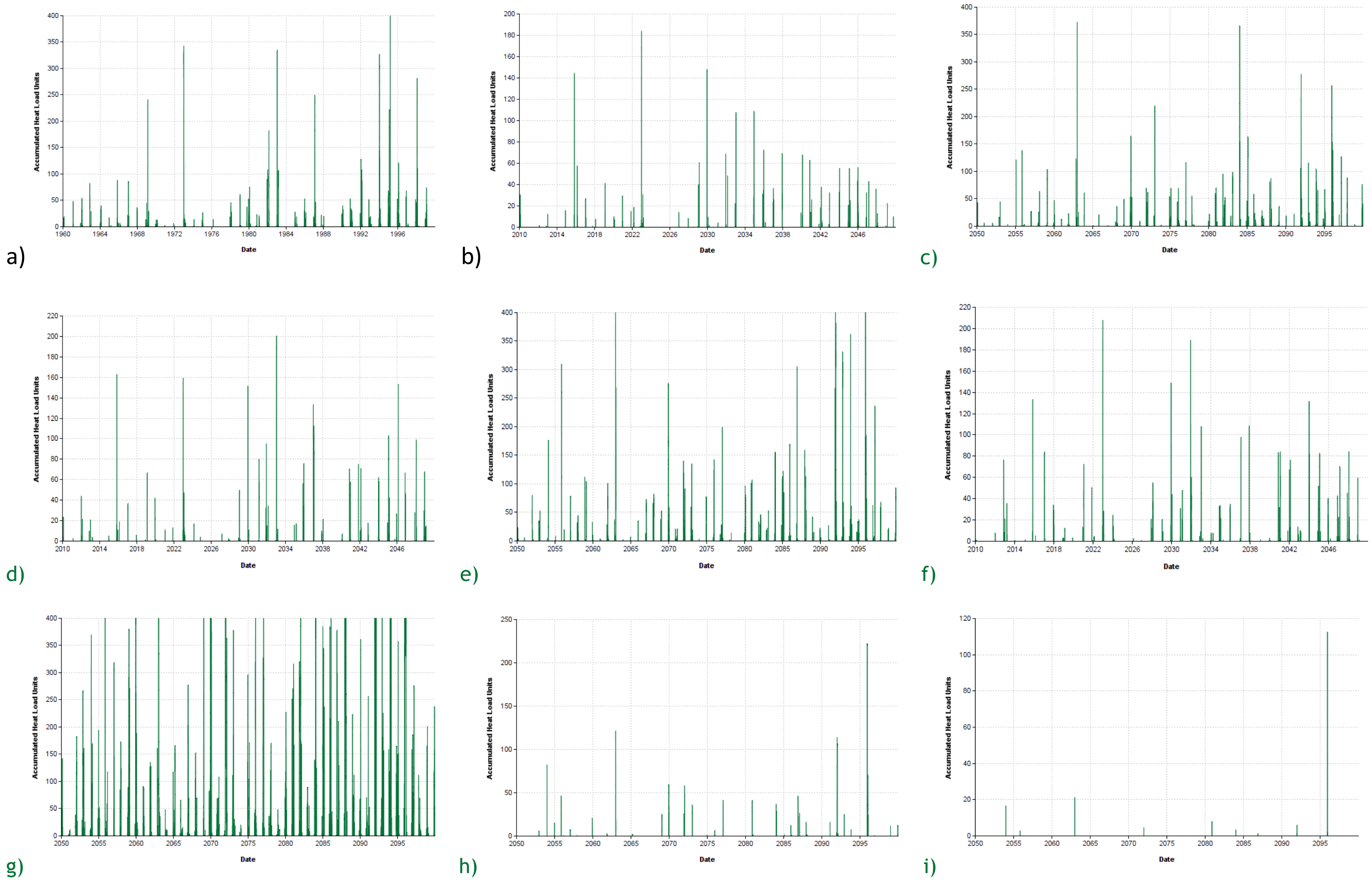


Figure A4. 14: Plots of Accumulated Heat Load Units (AHLU) over time for Comet using GCM=MRI-CGCM3: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

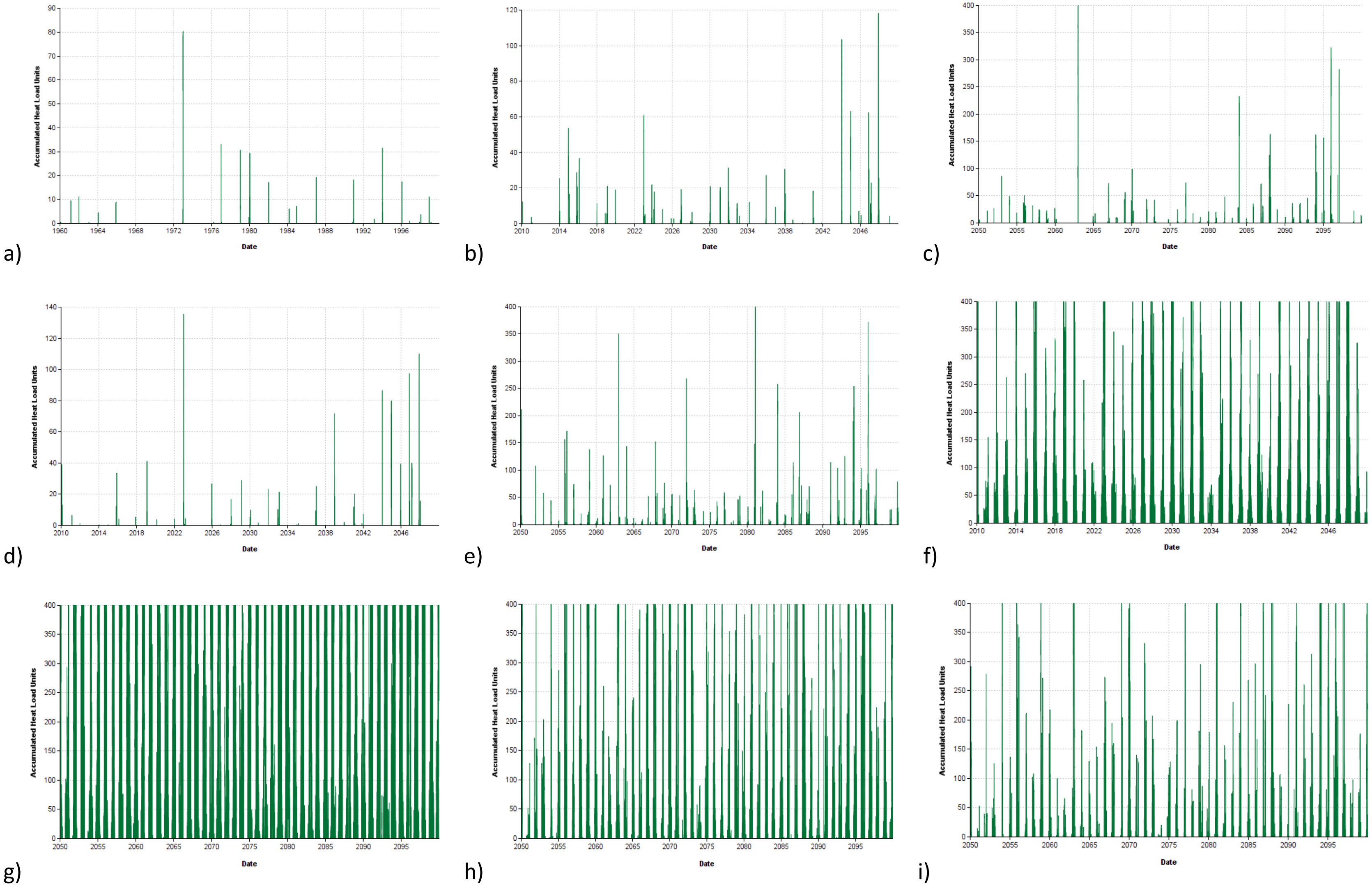


Figure A4. 15: Plots of Accumulated Heat Load Units (AHLU) over time for Dalby using GCM=CNRM-CM5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

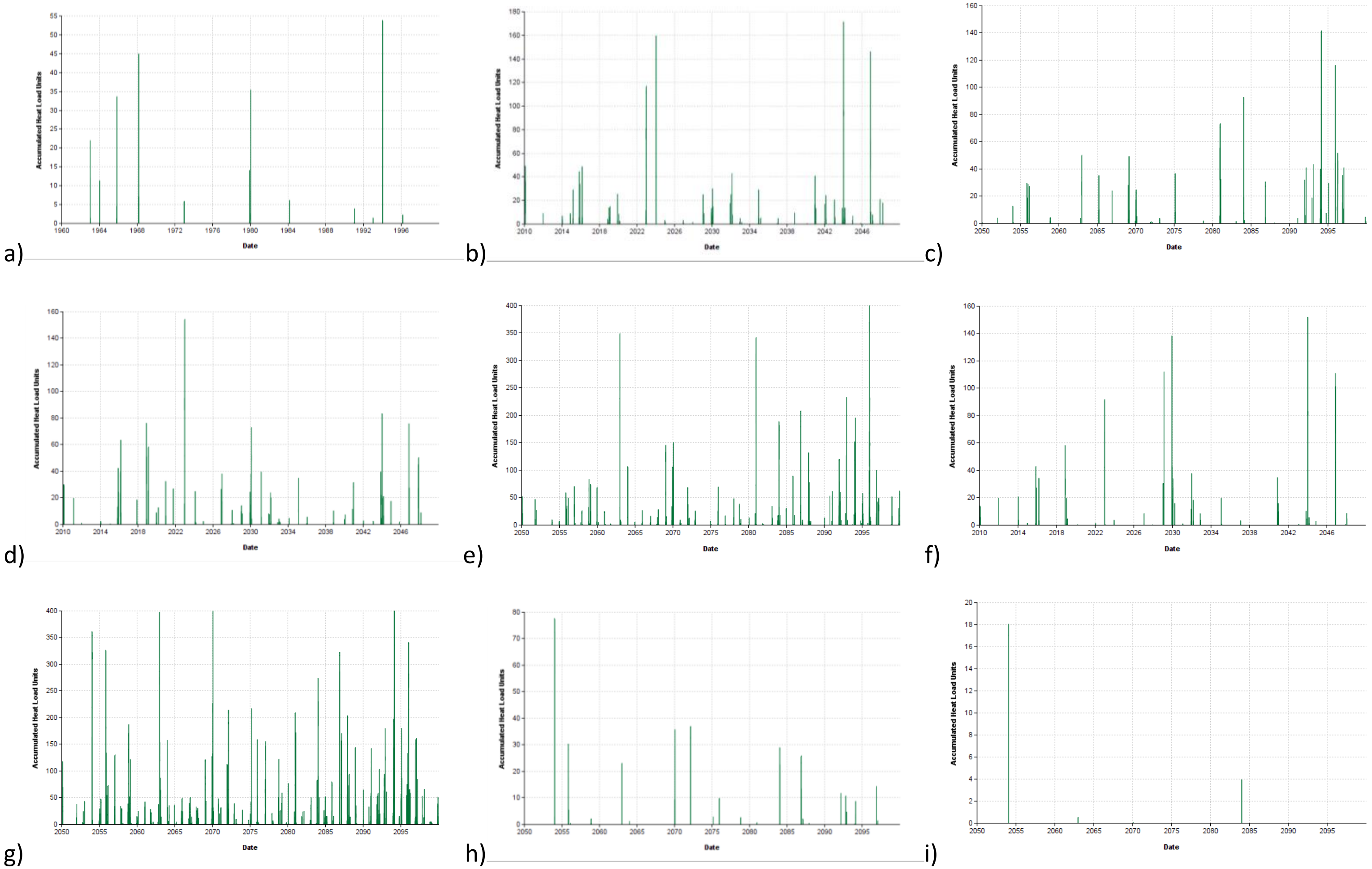


Figure A4. 16: Plots of Accumulated Heat Load Units (AHLU) over time for Dalby using GCM=GFDL-ESM2G: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

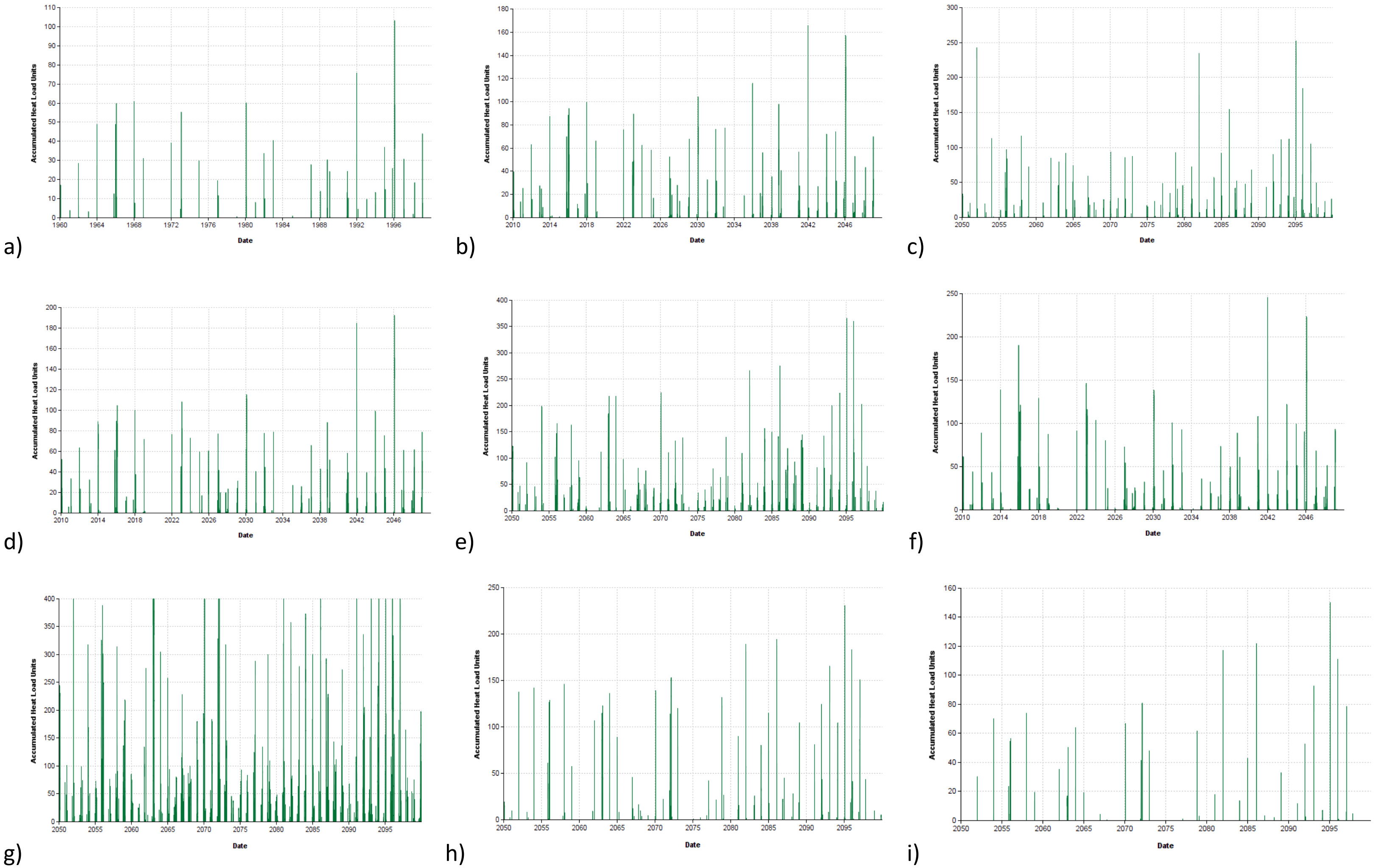


Figure A4. 17: Plots of Accumulated Heat Load Units (AHLU) over time for Dalby using GCM=HadGEM2-ES: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

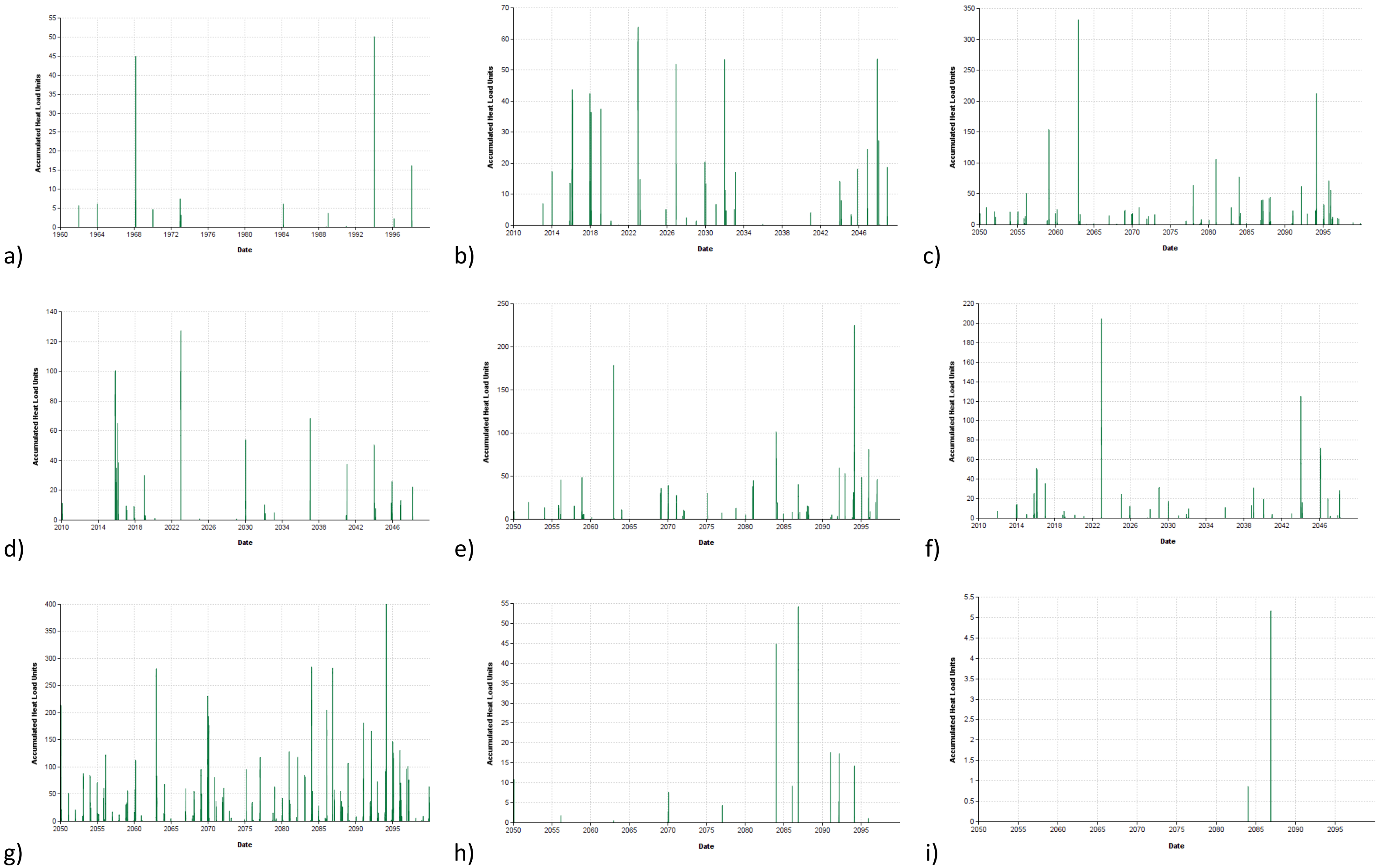
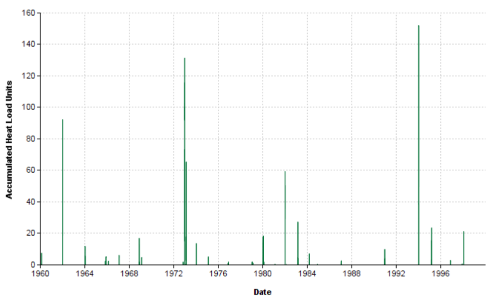
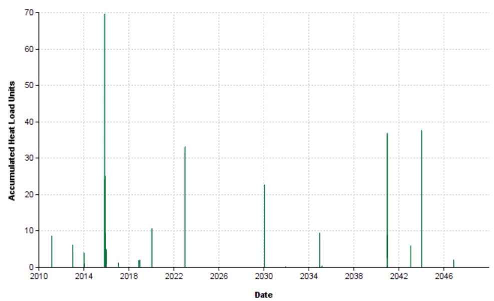


Figure A4. 18: Plots of Accumulated Heat Load Units (AHLU) over time for Dalby using GCM=MIROC5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.



a)



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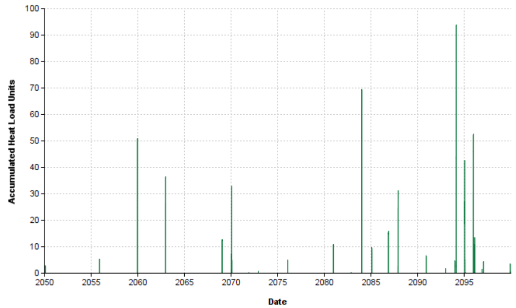

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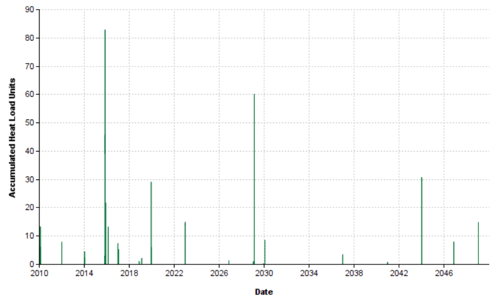

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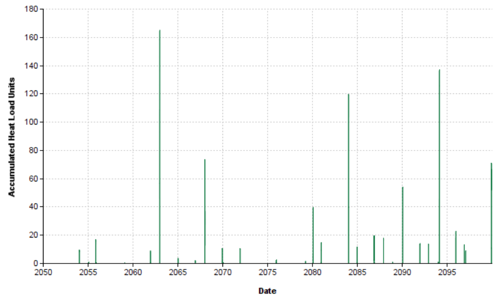

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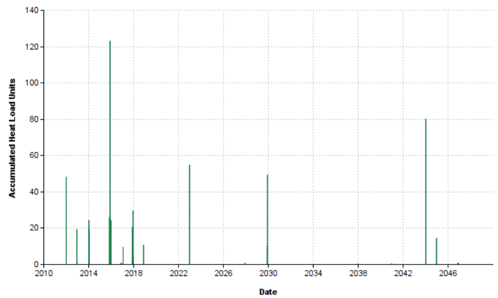

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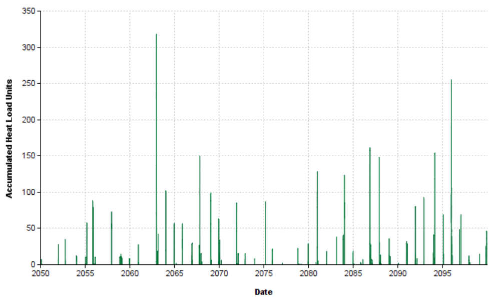

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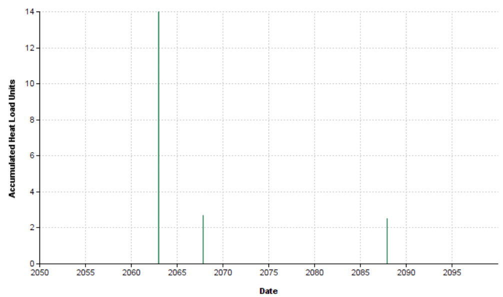

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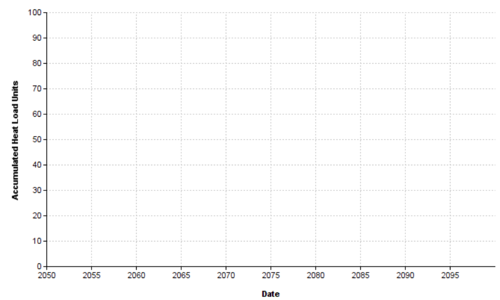


i)

Figure A4. 19: Plots of Accumulated Heat Load Units (AHLU) over time for Dalby using GCM=MRI-CGCM3: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

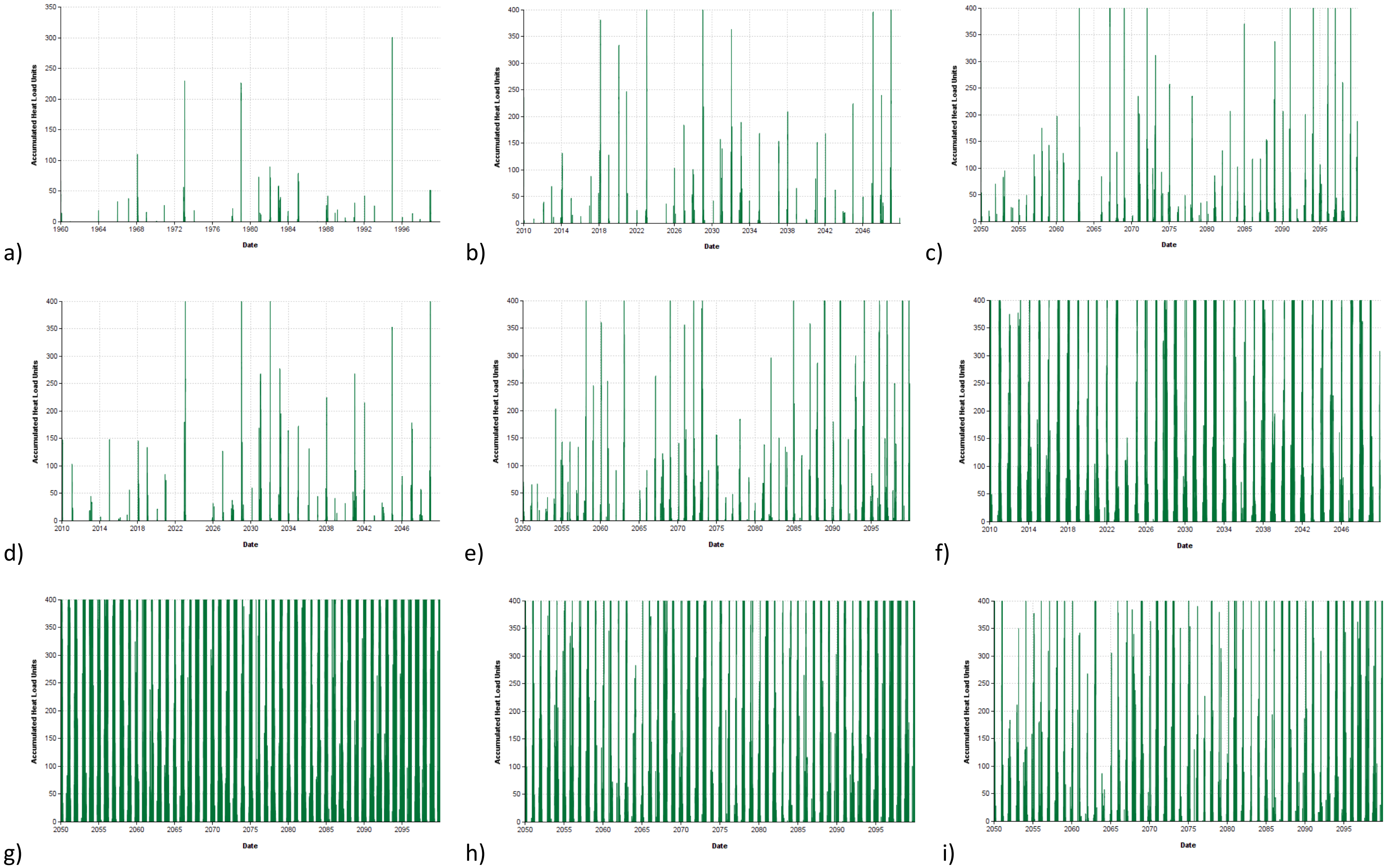
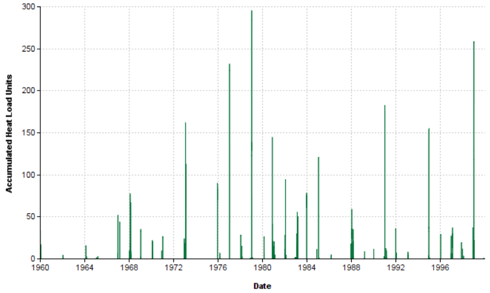


Figure A4. 20: Plots of Accumulated Heat Load Units (AHLU) over time for Leeton using GCM=CNRM-CM5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.



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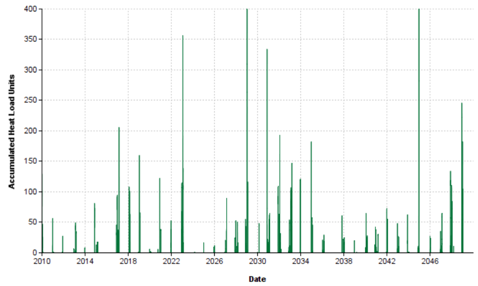

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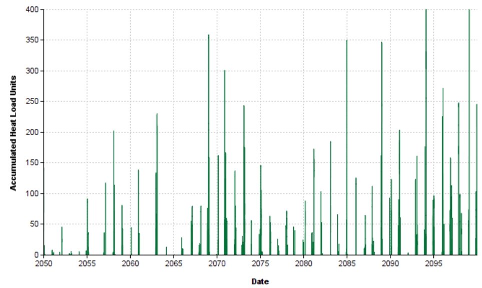

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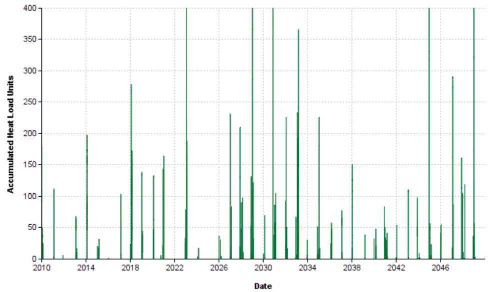

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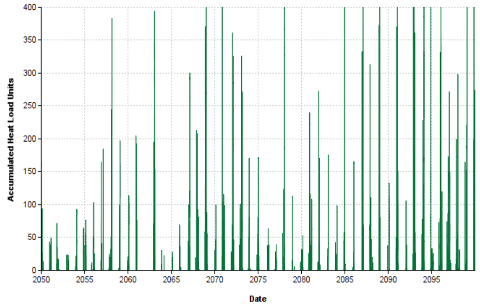

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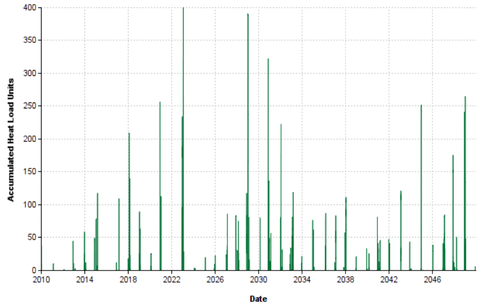

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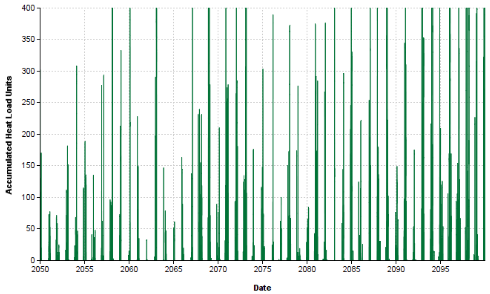

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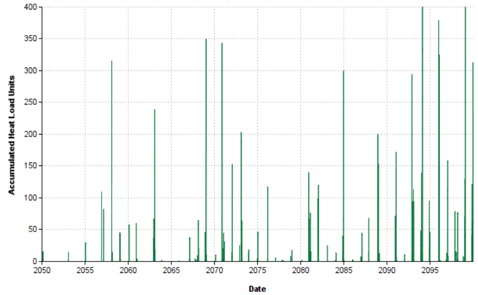

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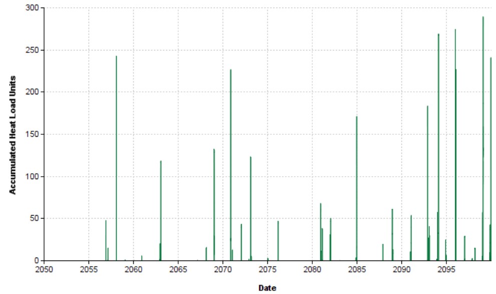

i)

Figure A4. 21: Plots of Accumulated Heat Load Units (AHLU) over time for Leeton using GCM=GFDL-ESM2G: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

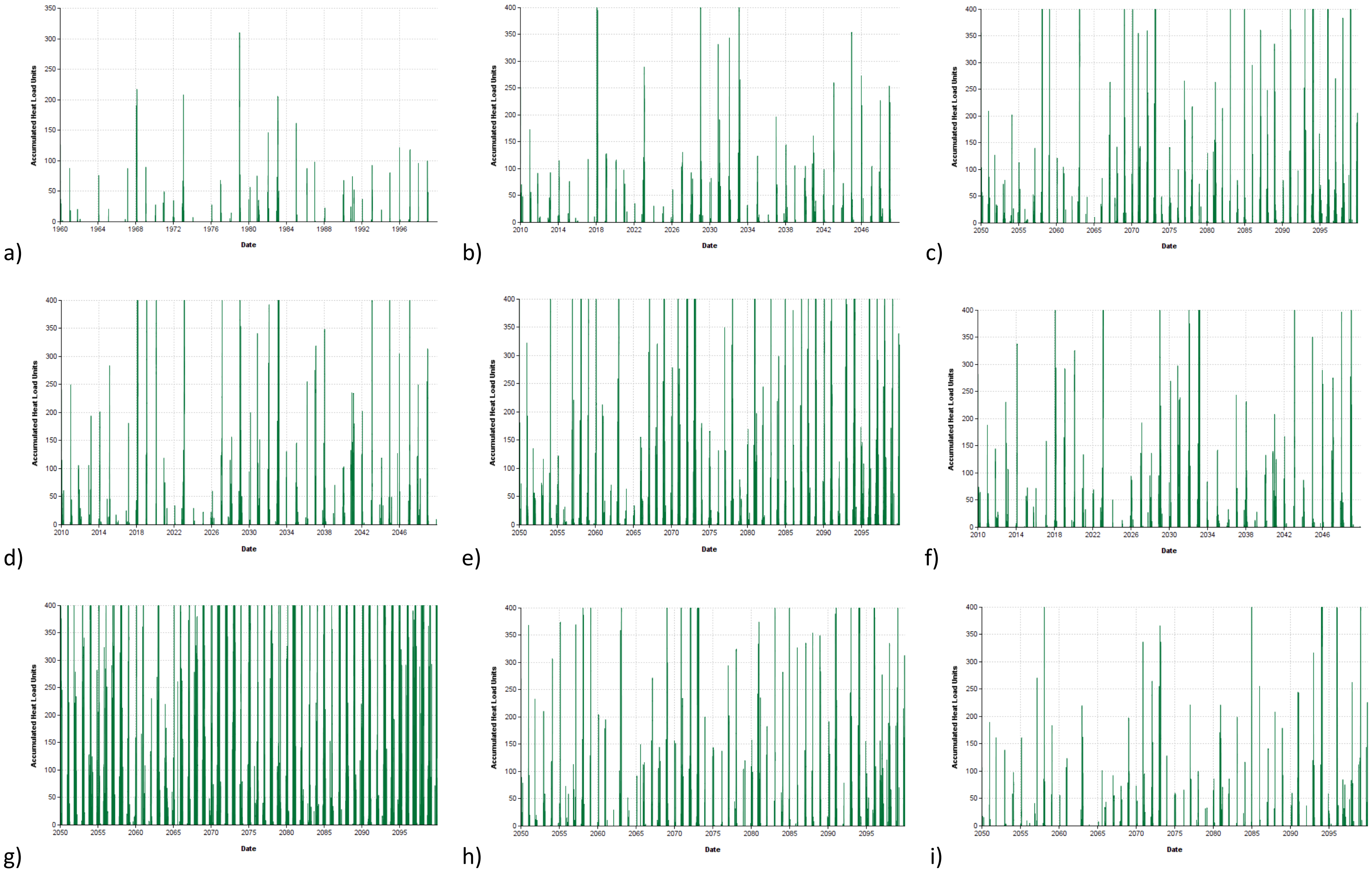

Figure A4. 22: Plots of Accumulated Heat Load Units (AHLU) over time for Leeton using GCM=HadGEM2-ES: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

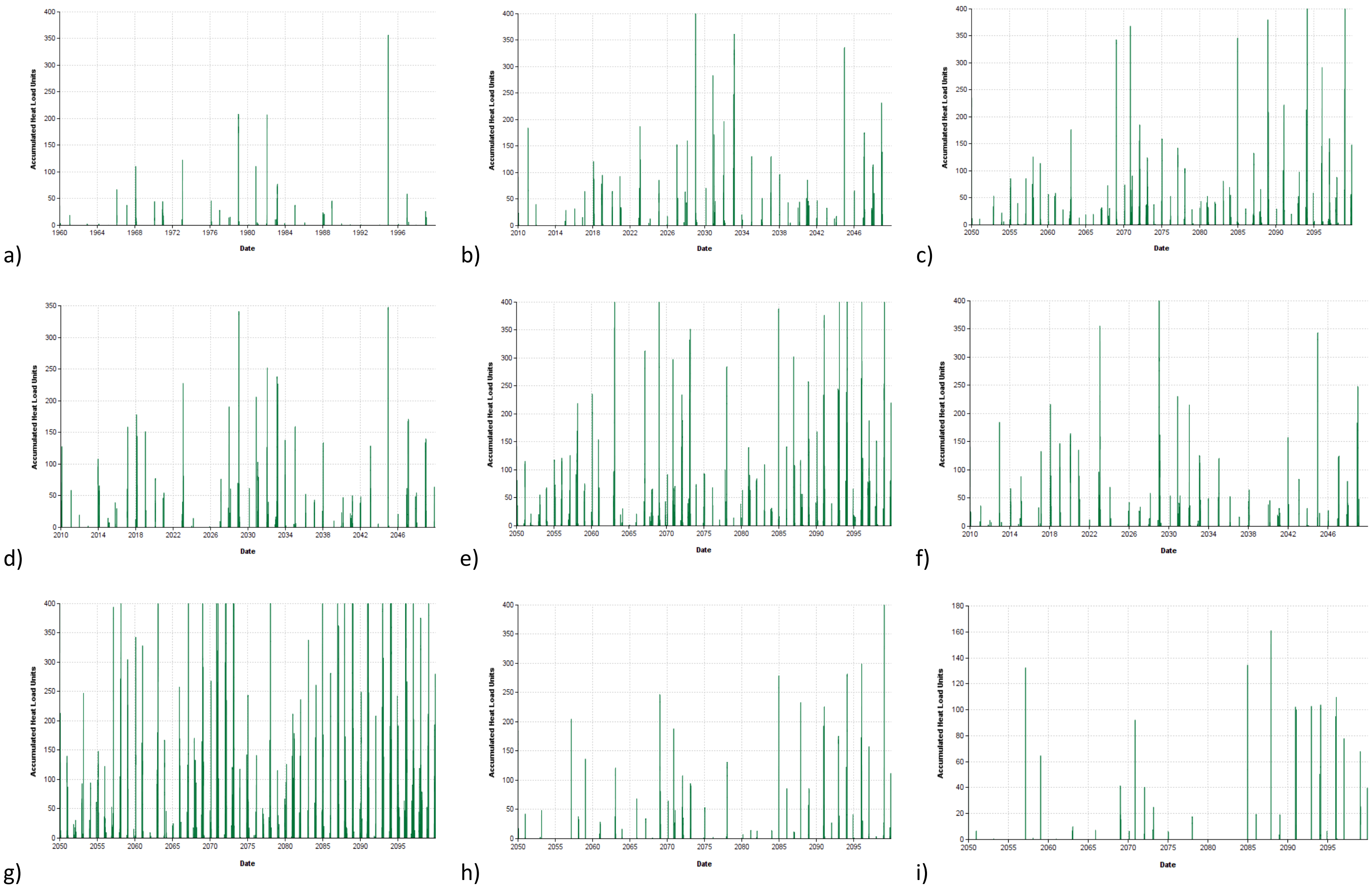

Figure A4. 23: Plots of Accumulated Heat Load Units (AHLU) over time for Leeton using GCM=MIROC5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

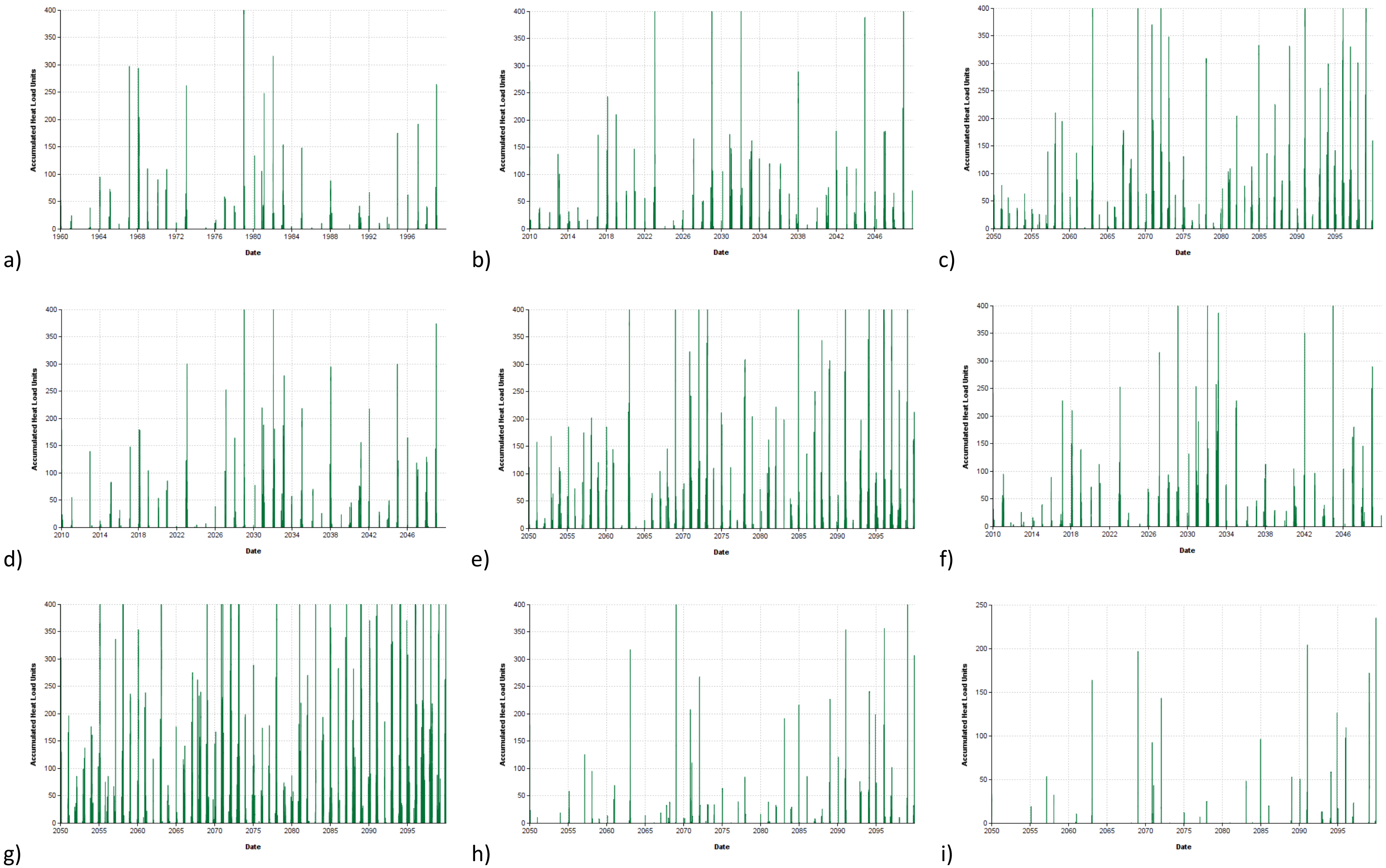

Figure A4. 24: Plots of Accumulated Heat Load Units (AHLU) over time for Leeton using GCM=MRI-CGCM3: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

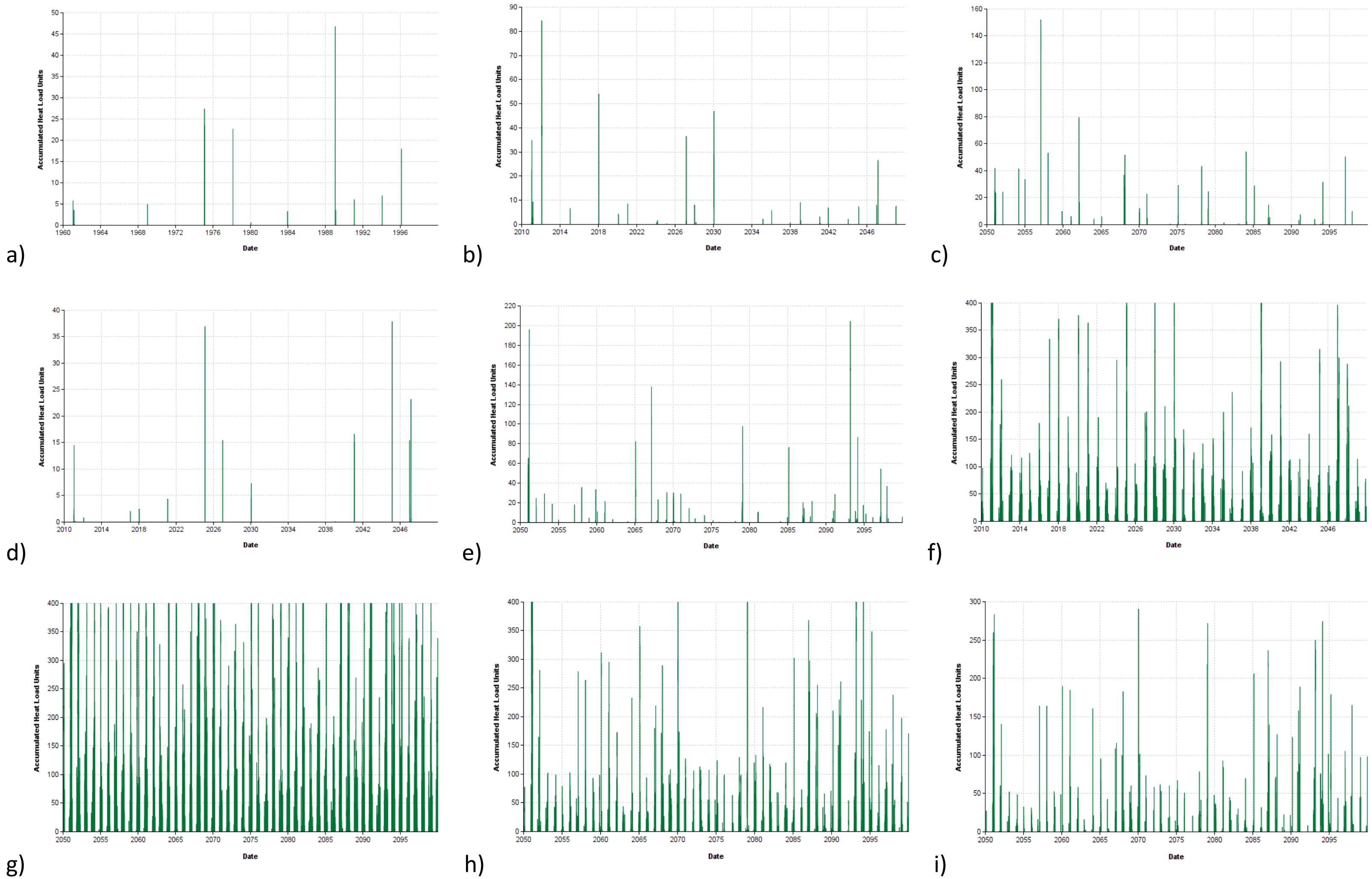

Figure A4. 25: Plots of Accumulated Heat Load Units (AHLU) over time for Narrogin using GCM=CNRM-CM5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

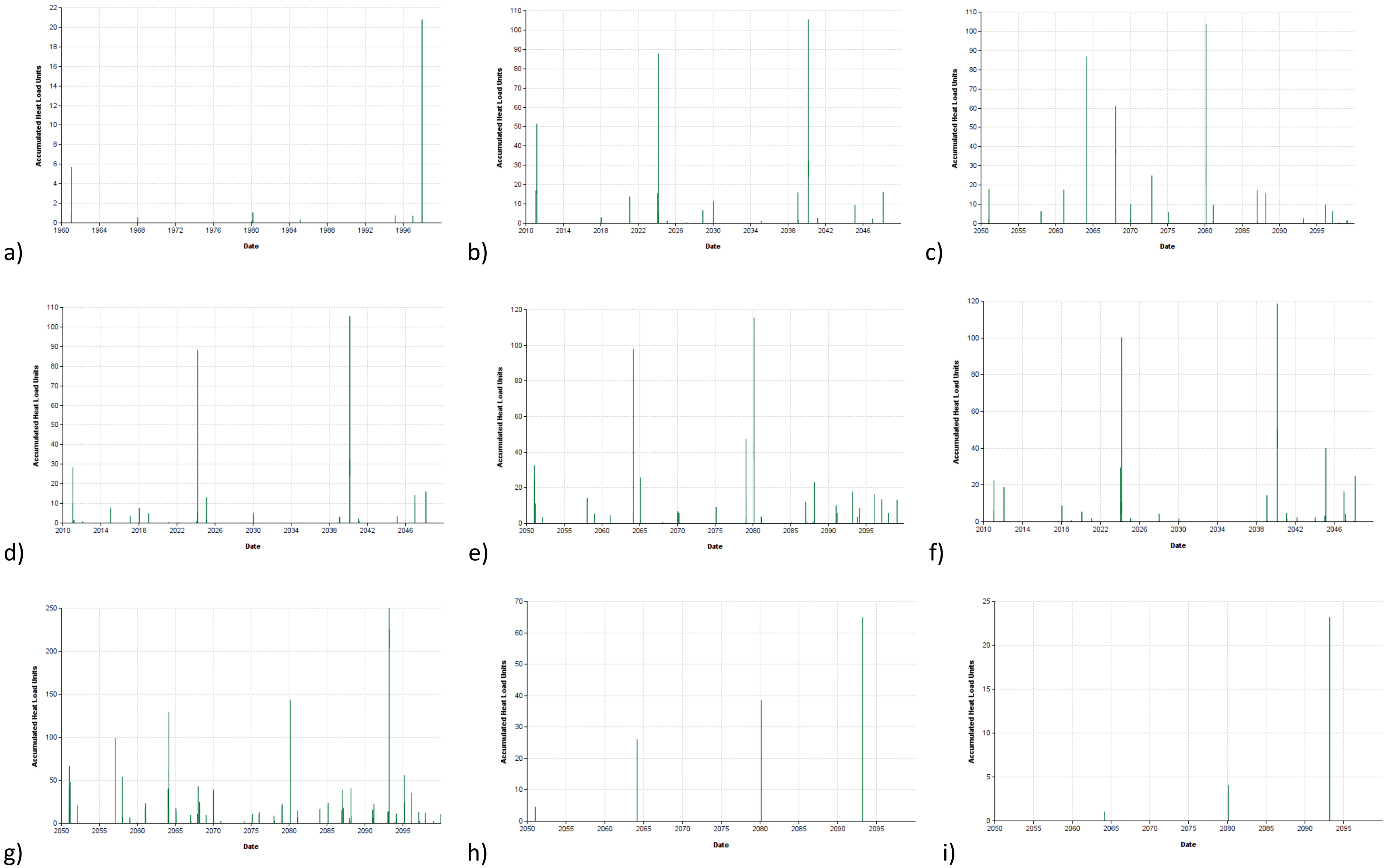

Figure A4. 26: Plots of Accumulated Heat Load Units (AHLU) over time for Narrogin using GCM=GFDL-ESM2G: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

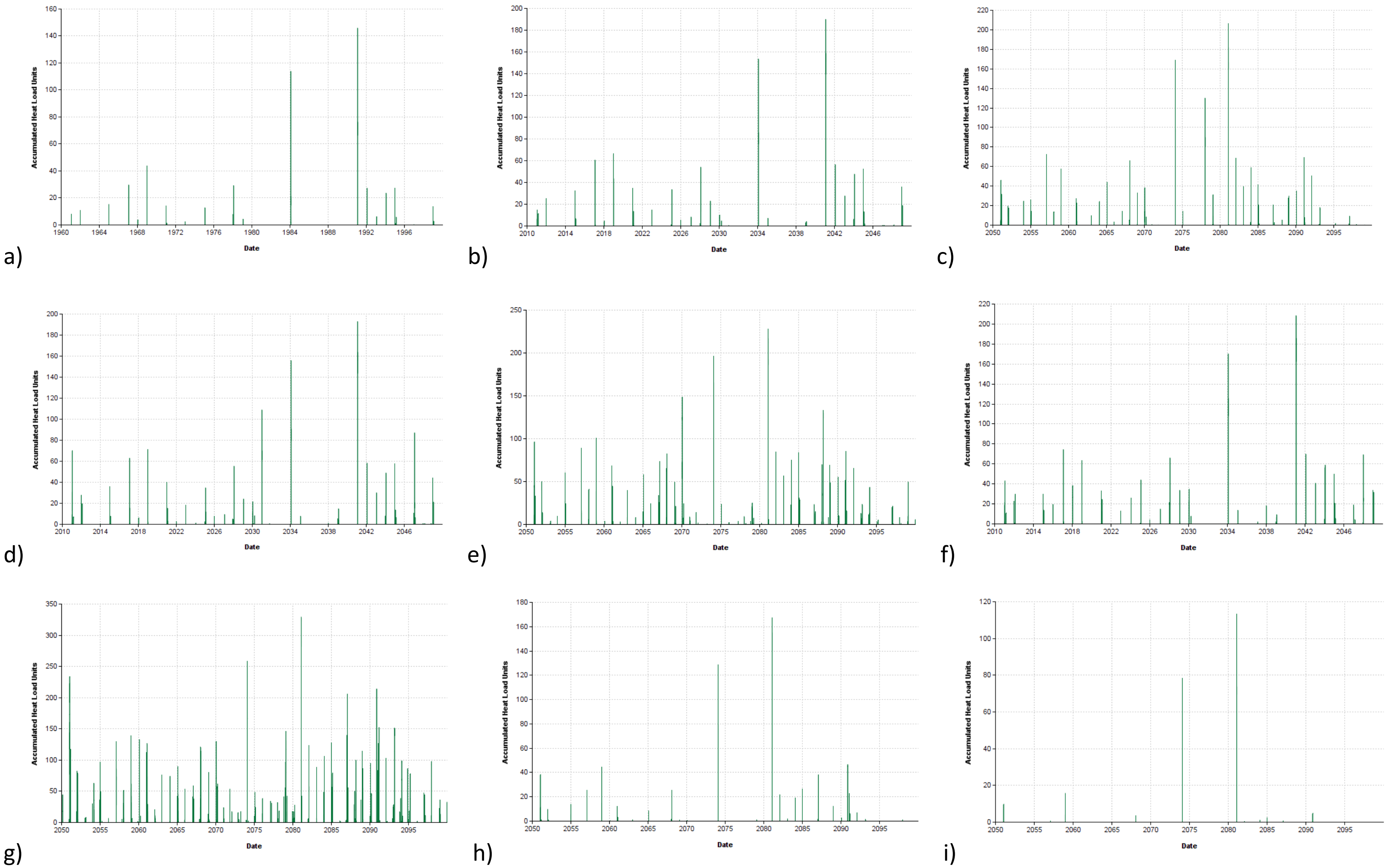

Figure A4. 27: Plots of Accumulated Heat Load Units (AHLU) over time for Narrogin using GCM=HadGEM2-ES: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

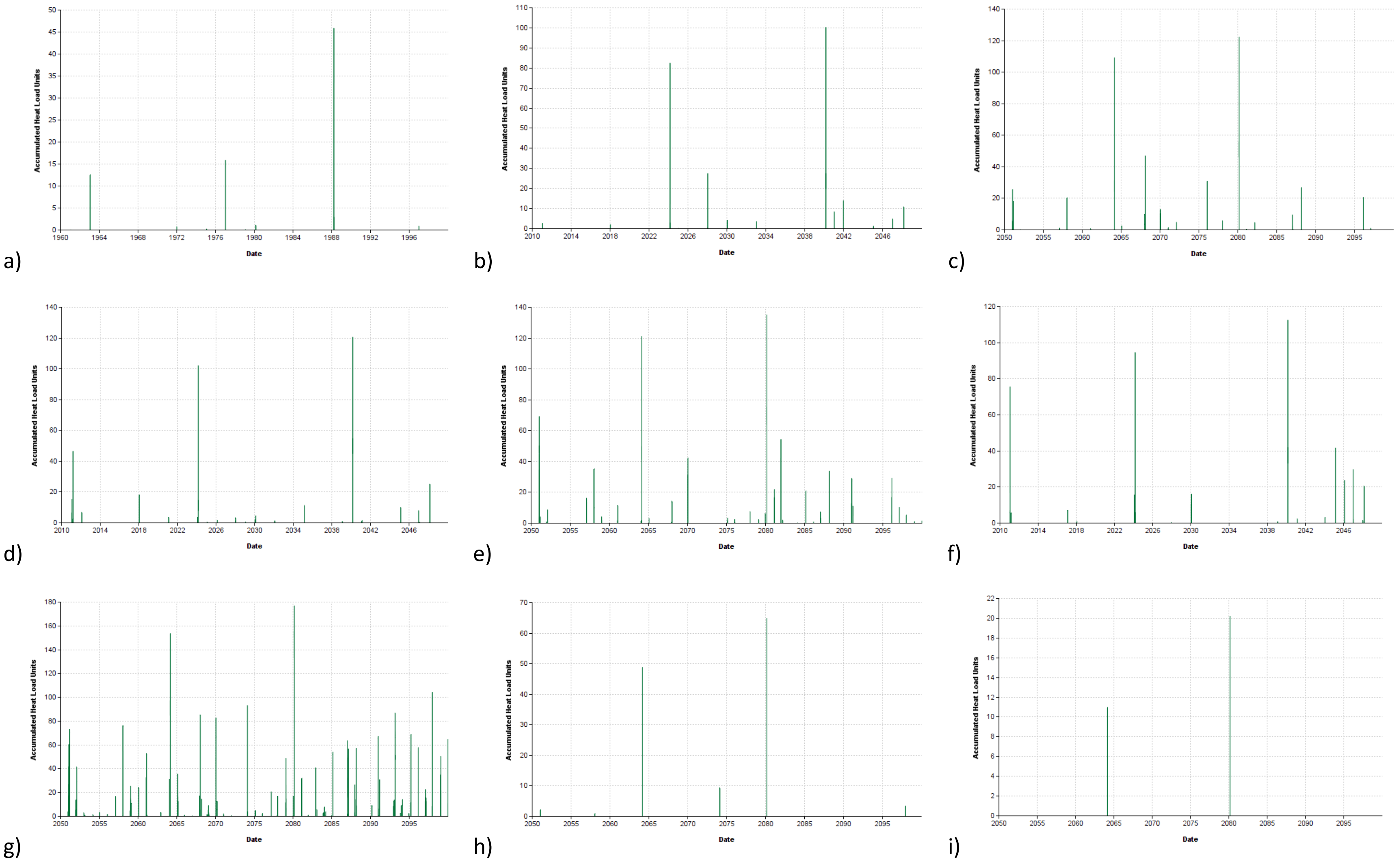

Figure A4. 28: Plots of Accumulated Heat Load Units (AHLU) over time for Narrogin using GCM=MIROC5: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

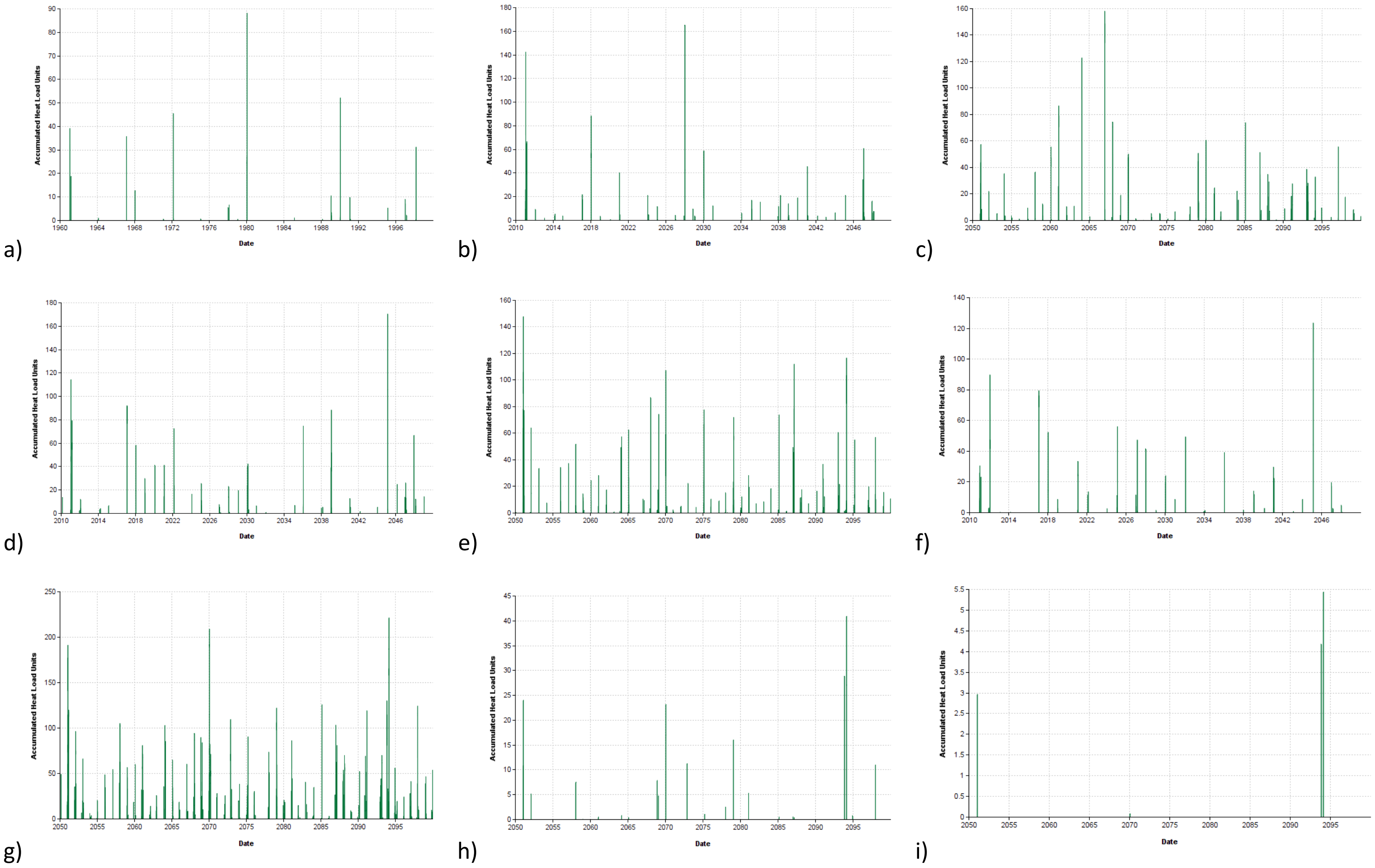

Figure A4. 29: Plots of Accumulated Heat Load Units (AHLU) over time for Narrogin using GCM=MRI-CGCM3: a) RCP2.6 & 1960-99; b) RCP2.6 & 2010-2049; c) RCP2.6 & 2050-2099; d) RCP4.5 & 2010-49; e) RCP4.5 & 2050-99; f) RCP8.5 & 2010-49; g) RCP8.5 & 2050-99; h) RCP8.5 & 2050-99 & moderate mitigation; i) RCP8.5 & 2050-99 & maximal mitigation.

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