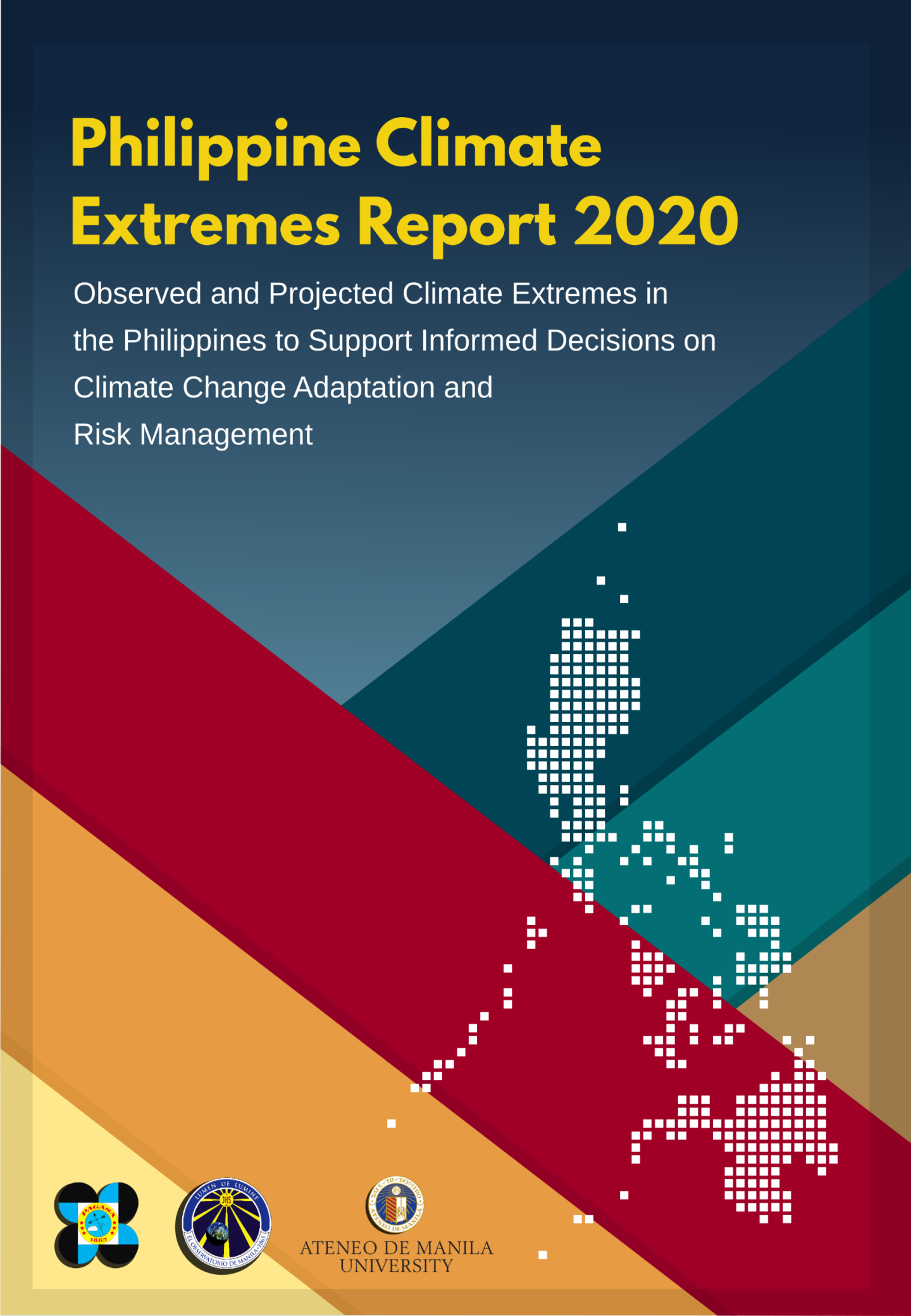
Philippine Climate Extremes Report 2020

Observed and Projected Climate Extremes in the Philippines to Support Informed Decisions on Climate Change Adaptation and Risk Management



ATENEO DE MANILA UNIVERSITY

Philippine Climate Extremes Report 2020

Observed and Projected Climate Extremes in the Philippines to Support Informed Decisions on Climate Change Adaptation and Risk Management

Republic of the Philippines
Department of Science and Technology (DOST)
Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)

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The data supporting the findings of this study may be provided upon request and collaborative research agreement with DOST-PAGASA, Manila Observatory and collaborating partners. CORDEX-Southeast Asia data may be downloaded from the Southeast Asia Regional Climate Change Information System (SARCCIS) website (http://www.rucore.ru.ac.th/SARCCIS).

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Acronyms

CCAM	Conformal-Cubic Atmospheric Model
CDRA	Climate and Disaster Risk Assessment
CERAM	Climate Extreme Risk Analysis Matrix
CLIMDEX	Climate extreme indices
CLIRAM	Climate Information and Risk Analysis Matrix
CORDEX	Coordinated Regional Climate Downscaling Experiment
DOST	Department of Science and Technology
ESGF	Earth System Grid Federation
ETCCDI	Expert Team on Climate Change Detection and Indices
GCM	Global Climate Model
GHG	Greenhouse Gas
LGU	Local Government Unit
MO	Manila Observatory
PAGASA	Philippine Astronomical, Geophysical and Astronomical Services Administration
PRECIS	Providing Regional Climates for Impacts Studies
RCM	Regional Climate Model
RCP	Representative Concentration Pathway
RegCM4.3	Regional Climate Modeling System version 4.3
SACA&D	Southeast Asian Climate Assessment & Dataset
SA-OBS	Gridded daily observational dataset based on SACA&D information
SARCCIS	Southeast Asia Regional Climate Change Information System
SEA	Southeast Asia
SEACLID	Southeast Asia Regional Climate Downscaling

Message
DOST-PAGASA

The Philippines has been consistently ranked by international risk assessment agencies and indices as one of the countries that is most susceptible to climate-related disasters. Changes in temperature and rainfall extremes will further exacerbate the adverse effects of climate change and variability that the country is currently experiencing. Thus, continuous effort is exerted by the Philippine Atmospheric, Geophysical and Astronomical Services Administration of the Department of Science and Technology (DOST-PAGASA) to provide necessary climate information that will guide the development of coping and adaptation strategies and reduce our vulnerability to such climate-related disasters.

In previous years, the Observed Climate Trends and Projected Climate Change in the Philippines, published in 2018, and the Climate Change in the Philippines issued in 2011, have both become primary sources of information on how the state of the Philippine climate is projected to change in the future. These climate projections have been extended to include climate extreme indices that better show the future changes in magnitude, frequency and duration of local climate.

The Philippine Climate Extremes Report 2020: Observed and Projected Climate Extremes in the Philippines to Support Informed Decisions on Climate Change Adaptation and Risk Management encompasses the collective findings of DOST-PAGASA, Manila Observatory and the international climate modelling community on historical climate conditions and demonstrates their possible integration ito climate change adaptation and disaster risk reduction and management.

On behalf of the DOST-PAGASA and our partners, I am proud to share the results of the Philippines' Climate Extremes Report.

Vicente B. Malano, PhD
Administrator
DOST-PAGASA

Message

Manila Observatory and the Ateneo de Manila University

With the recent declaration of a climate emergency in the Philippines, through House Resolution No. 1377, climate information has become a vital resource for evidence-based planning and policy-making for climate change adaptation and disaster risk management.

The perennial devastation and development challenges brought about by high exposure to multiple hazards, such as typhoons, flooding and drought, compounded by the country's socio-economic vulnerability, and currently exacerbated by the COVID-19 pandemic, place climate at the center of policy decision-making from the local to the national level.

This report comes at a crucial time when essential information on projected changes in climate extremes are most needed in the Philippines. The creation of a 12-member multi-model ensemble of climate projections, the largest model ensemble for the country to date, is among the fruits of the three-year collaboration between the Manila Observatory and the Ateneo de Manila University with the Philippine Atmospheric, Geophysical and Astronomical Services Administration (DOST-PAGASA). This is also a result of the existing international partnerships in the SEACLID/CORDEX-SEA project, with the UK Met Office and CSIRO, and the funding support from the Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD).

This high-resolution climate dataset provides decision-makers and policymakers a wider range of plausible futures necessary for local, to regional and national planning. Following the 2018 DOST-PAGASA report that also introduced the CLIRAM tool, this report introduces the Climate Extremes Risk Assessment Matrix (CERAM), a complementary risk assessment tool to assist local government units (LGUs) in creating their local plans. Furthermore, climate information from this report can enable LGUs to provide stronger justification for adaptation-related proposals for projects, including the People's Survival Fund.

In addition to the contribution of DOST-PCIEERD and local and international academic and research partners, we wish to acknowledge the valuable contribution and support provided by the local stakeholders, particularly the LGUs of Tuguegarao City, Cagayan; Tiwi, Albay; Pasig City; Tubigon, Bohol; Del Carmen, Surigao del Norte; and Guiuan, Eastern Samar, as well as national government agencies. Their generous inputs from stakeholder workshops and consultations have been our guide to ensure the relevance and usefulness of this report. It is our hope that this additional information on climate extremes will contribute to building a more climate-resilient Philippines.

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- The Meteorological Office (Met Office), United Kingdom
- SA-OBS dataset and the data providers in the SACA&D project (http://saca-bmkg.knmi.nl)
- The World Meteorological Organisation (WMO), the Expert Team on Sector-specific Climate Indices (ET-SCI) and the Pacific Climate Impacts Consortium (PCIC)
- The project staff of the "Analysing CORDEX-SEA Regional Climate Simulations for Improved Climate Information over the Philippines: SST Influence, Variability and Extremes, Tropical Cyclone Activity" program for the period 2018–2020:

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Executive Summary

The Philippine Atmospheric, Geophysical and Astronomical Services Administration of the Department of Science and Technology (DOST-PAGASA) regularly conducts climate modeling initiatives, in collaboration with domestic and international partners to better understand climate change and its effects in the country. In partnership with the Manila Observatory and the Ateneo de Manila University, DOST-PAGASA took part in the “Analyzing CORDEX-SEA (Coordinated Regional Climate Downscaling Experiment — Southeast Asia) Regional Climate Simulations for Improved Climate Information over the Philippines: SST Influence, Variability and Extremes, Tropical Cyclone Activity” program that aims to generate high-resolution climate change information from multiple state-of-the-art climate models.

In this report, the downscaled historical and projected daily extremes data were used to calculate the projected changes in 24 climate extremes indices for two Representative Concentration Pathways: RCP4.5 and RCP8.5. Historical simulations for the baseline period (1986–2005) served as the threshold. The multi-model ensemble consisted of 12 models consisting of three regional climate models (RCMs) forced with data from 10 global climate models (GCMs) from the Coupled Model Intercomparison Project — Phase 5 (CMIP5) archive. SA-OBS, a daily gridded observational dataset for Southeast Asia based on the Southeast Asian Climate Assessment & Dataset (SACA&D) project was used as the historically observed baseline data.

The Philippine Climate Extremes Report 2020 presents information on historical and projected annual climate extremes indices of the country and demonstrates their relevance to sector-specific climate impacts assessment. This report extends the climate projection information released by DOST-PAGASA in 2018 which used the 10th, 50th and 90th percentile thresholds of temperature and rainfall to describe the average annual and seasonal changes in future climate scenarios. The annual climate extremes indices may be used to identify areas and sectors which are most at risk to climate extremes and thus require rapid disaster risk assessment and climate adaptation planning to minimize current and future impacts. Local government units may use this report in formulating local climate change action plans and mainstreaming of national climate change initiatives.

Historical observed data show that temperature extremes indices have a large spatial variability throughout the Philippines: with “cool” extremes generally occurring at high elevations and inland while the “hot” extremes occurring at low elevations and near the coasts. Small islands are particularly exposed to these “hot” extremes. On the other hand, projected changes indicate a generally spatially uniform warming trend with the magnitude, frequency and duration of warming increasing in the future throughout the country.

The precipitation extremes indices show distinct spatial variability in the historically observed data, roughly following the rainfall-based Coronas climate types, particularly for the magnitude and frequency extreme indices. The projected changes indicate a general drying trend but also the occurrence of localized extreme rainfall “wet spots”. Prolonged wet events tend to decrease, but prolonged dry events also show localized decreases, indicating possibilities of increased frequency of wet events in the future which could interrupt the long-duration dry events.

The spatial variability in the projected changes in both temperature and rainfall extremes thus require a more localized analysis of these changes; perhaps even the need to further downscale the climate data to pinpoint where and how these local variations develop. However, despite being limited by the 25km by 25km horizontal resolution and daily temporal resolution, estimates at the provincial level can still be useful.

Since the choice of climate change adaptation strategies is rooted in the proper understanding of the impacts of extreme events, this report also presents a framework for analyzing possible impacts and assessing adaptation options for highly sensitive sectors.

Section 1 provides an overview of the methodology used in generating projections using climate models; an introduction of climate extremes and the indices used in the report; and a short description of how historical and projected climate information are currently being used by local stakeholders.

Section 2 describes climate extremes indices in detail and presents the observed and projected changes in these extremes indices on a national level.

Section 3 highlights the documented impacts of observed climate extremes and how projected changes will affect crucial sectors such as agriculture, human health, water resources, environment and biodiversity, and infrastructure. Examples of adaptation options that may help reduce possible impacts of these changes in the extremes are also presented.

Section 4 presents the Climate Extremes Risk Analysis Matrix (CERAM), a complementary tool to CLIRAM, that is intended to help users develop their disaster risk assessment and climate adaptation plans following the Climate and Disaster Risk Assessment (CDRA) process.

Provincial tables of observed and projected changes in climate extremes are provided in the Annex as reference.

Section 1: Introduction

The Philippine Climate Extremes Report 2020 is a publication of DOST-PAGASA which features the results from the "Multitemporal and extremes analysis of modeled climatology over the Philippines in the SEA-CORDEX domain (CVAR) project which is part of the Analyzing CORDEX-SEA (Coordinated Regional Climate Downscaling Experiment — Southeast Asia) Regional Climate Simulations for Improved Climate Information over the Philippines: SST Influence, Variability and Extremes, Tropical Cyclone Activity" Program. This program, which is implemented by the Manila Observatory and the Ateneo de Manila University in collaboration with the DOST-PAGASA, aims to generate high-resolution climate change information derived from multiple scenarios and state-of-the art climate models to facilitate improved regional climate change adaptation and impact assessment.

This report on the projected extremes follows the DOST-PAGASA's reports on the observed climate change in the Philippines in 2011 and on the projected mean climate change in the Philippines in 2018 [1].

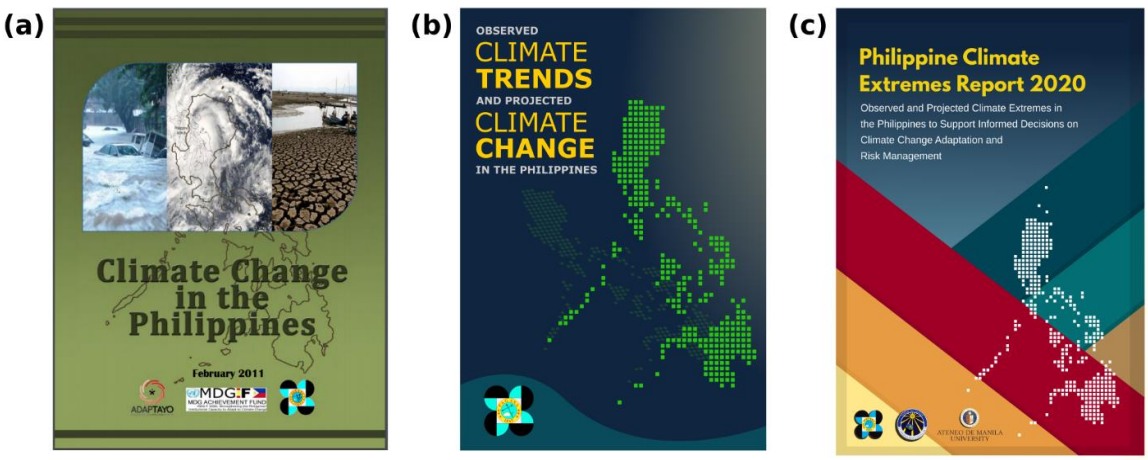


Figure 1. Climate Change Reports released by DOST-PAGASA in (a) 2011, presented the observed changes in the Philippine Climate; (b) 2018, presented the projected change in the mean climate and introduced the CLIRAM tool. This report (c) presents the projected changes in the climate extremes and introduces the CERAM tool.

The main goal of this report is to provide LGUs with climate information so that they can integrate climate extremes information into their planning for socio-economic development, climate change adaptation, greenhouse gas reduction and disaster risk reduction and management.

1.1 Regional Climate Modeling

Climate models are useful tools in understanding the climate system and how it will change in the future. Global climate models (GCMs) simulate the earth system by solving numerical equations that represent the complex interactions and feedbacks between the different components of the climate system; regional climate models (RCMs) produce higher resolution simulations of the climate system within a limited area by downscaling the results from the GCMs.

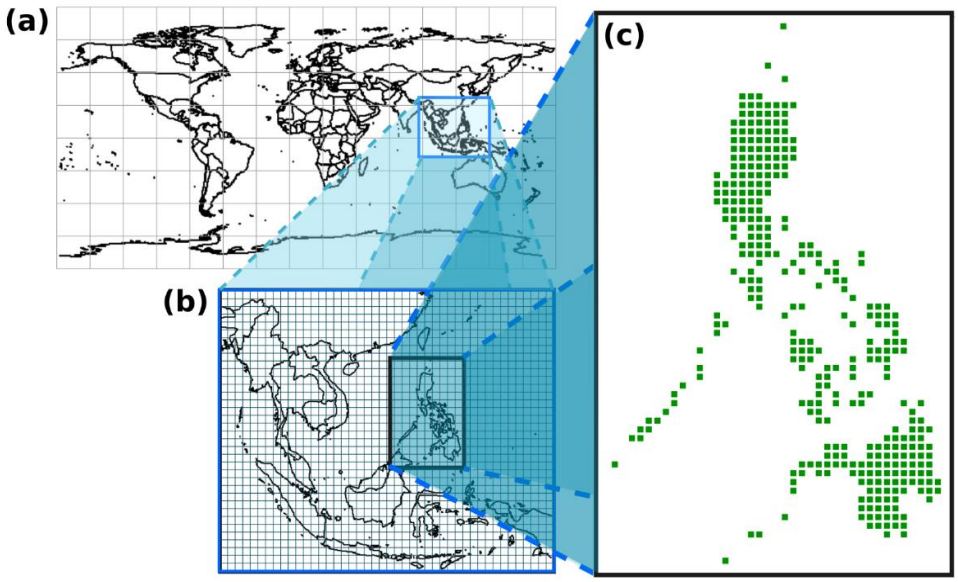


Figure 2. The downscaling process used for this report used results from the (a) coarse-resolution CMIP5 GCMs as forcing for the (b) RCMs over the Southeast Asia domain; producing 25-km resolution data. (c) The resulting daily extremes over the Philippine domain were then used to calculate the extremes indices.

Climate modeling requires substantial human and computational resources to produce meaningful results and therefore requires collaboration between many institutions. The model results analysed for this report came from the collaboration between the DOST-PAGASA and Manila Observatory and the global community, particularly the Southeast Asia Regional Climate Downscaling/CORDEX-Southeast Asia (SEACLID/CORDEX-SEA) project [2]. The participating institutions and the models used to create the 25-km resolution data used in this report are listed in Table 1.

Three simulation experiments were conducted for each of the 12 models in the ensemble: HISTORICAL, RCP4.5 and RCP8.5. The HISTORICAL simulations spanned 1971–2005, while simulations of future projections using the two scenarios: RCP4.5 and RCP8.5, spanned 2006–2099 (Figure 3). Several time slices were taken from this long dataset to create the baseline period (1986–2005) and three future time periods: early-future (2020–2039), mid-future (2045–2065) and late-future (2080–2099).

Table 1. List of of contributing institutions, RCMs and forcing GCMs used to create the 12-member ensemble in this report

Institution	Country	RCM	GCM
CSIRO	Australia	CCAM	ACCESS1.0
CSIRO	Australia	CCAM	CCSM4
CSIRO	Australia	CCAM	CNRM-CM5
CSIRO	Australia	CCAM	GFDL-CM3
CSIRO	Australia	CCAM	MPI-ESM-LR
CSIRO	Australia	CCAM	NorESM1-M
DOST-PAGASA	Philippines	PRECIS	HadGEM2-ES
CORDEX-SEA	Vietnam	RegCM 4.3	CNRM-CMS
CORDEX-SEA	Indonesia	RegCM 4.3	CSIRO-Mk3.6
CORDEX-SEA	Thailand	RegCM 4.3	EC-EARTH
CORDEX-SEA	Philippines	RegCM 4.3	HadGEM2-ES
CORDEX-SEA	Thailand	RegCM 4.3	MPI-ESM-MR

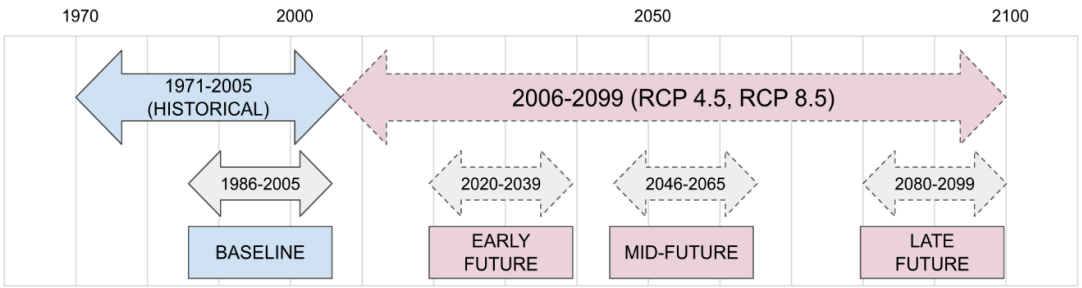


Figure 3. Data from 1971-2005 from the HISTORICAL simulations; and 2006-2099 from the RCP4.5 and RCP8.5 projections were used. The baseline period was set to 1986-2005 to coincide with the available observation data; the early-future (2020-2039), mid-future (2046-2065) and late-future (2080-2099) time periods were also chosen for analysis.

Daily minimum and maximum temperature and rainfall data over the Philippine domain were used in this analysis. Prior to data analysis, completeness and consistency checks were performed on the model data; missing and inconstent data were flagged as missing.

To evaluate model performance, the historical simulations were compared with the daily gridded surface temperature and precipitation dataset for southeast asia of the Southeast Asian Climate Assessment and Dataset (SACA&D) referred to simply as SA-OBS [3]. These set of model simulations have likewise been evaluated and used in several studies (i.e. [2, 4]). Model evaluation results show that, in general, the models have a large spatial variability in daily precipitation, and cold (warm) bias in the daily maximum (minimum) temperature. However, despite these biases, it is still possible to estimate projected changes in the future by using the change in climate variables between the future and historical simulations and adding them to the observed climate data [5, 6].

1.2 Climate Extremes

The IPCC's Special Report on "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" (SREX) defines a climate extreme as the occurrence of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values for the variable [7]. Quantitatively, this could both relate to the probability of occurrence as well to the specific threshold (possibly impact-related) being breached.

For example, Tropical Storm Ondoy (2009) is an extreme event because it was classified as an event with a 100-year return period (i.e. probability of occurrence is 0.1%). It is also an extreme event because the recorded accumulated rainfall over 24 hours on 26 September 2009 (368.8 mm) exceeded a threshold (e.g. the climatological monthly total rainfall for September in Metro Manila is about 320 mm).

For simplicity, the term "climate extremes" will be used to refer to both extreme weather events and extreme climate events. The distinction between "extreme weather events" and "extreme climate events" is not precise and is related mainly to their time scales. An extreme weather event occurs within time frames of less than a day to a few weeks, and is typically associated with changing weather patterns. An extreme climate event happens on longer time scales and can be the accumulation of several (extreme or non-extreme) events. For example, the accumulation of below-average rainfall days over a few months which can lead to below-average or drought conditions [7].

Extreme indices are used to describe the magnitude, frequency and duration of climate extremes. These are usually based on the probability of occurrence of given quantities or on threshold exceedances [7].

For this report, historical and projected changes in temperature and rainfall extremes are examined based on indices relevant to the local climate [4] including those defined by the Expert Team on Climate Change Detection and Indices (ETCCDI) [8]. These indices are described in detail in Section 2 and listed in Table 2.

For each model, the annual extremes of these indices were calculated using the ClimPACT2 software developed by the Expert Team on Sector-specific Climate Indices (ET-SCI) [9]. The thresholds used for calculating the indices are based on the historical simulation over the baseline period [1986–2005] for each model. The 20-year average for each time slice is then calculated, and the difference between the future time periods (early-future, mid-future and late-future) and baseline is also calculated to find the projected change in the future.

For each index, the median value among the 12-member model ensemble is then taken as the model ensemble value. This model ensemble value is then combined with the index value calculated from the observed dataset [6] to estimate the projected value of the index.

The resulting values are then presented as maps and tables. The maps presented in this report are national-scale to facilitate visualization of changes over the country as a whole. To help local governments with their planning process, the data is also presented in table format for each province.

The national-scale maps provide an overview of the historical and projected values of the climate extremes, and show how these values vary spatially over the Philippines, as well as temporally, between different 20-year time periods. Figure 4 shows how these maps are presented in this report.

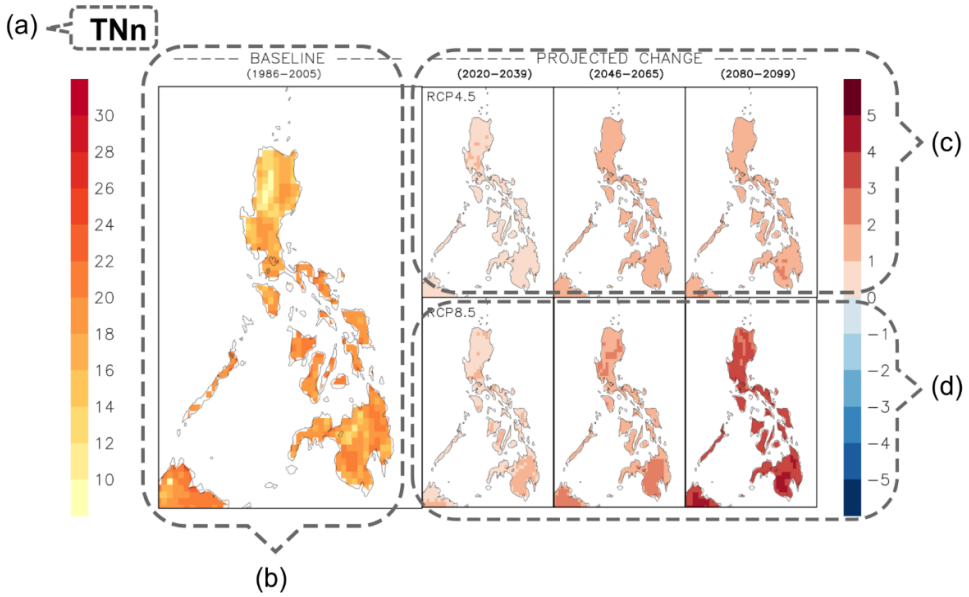


Figure 4. National-scale maps showing, (a) for each index, the (b) baseline value from observation data (1986-2005) and projected change for the (c) RCP4.5 and (d) RCP8.5 scenarios for the early-, mid-, and late-future time periods.

The national-scale maps has four main parts:

(a) the climate extremes index code;

(b) Baseline value calculated from the daily minimum and maximum temperature, and daily rainfall of the SA-OBS gridded observation dataset. The color scale on the left indicates the range of values for the period 1986–2005. For temperature indices, the color ranges from yellow to red; for rainfall indices, light yellow to green then blue. Darker colors signify higher values while lighter colors describe lower values.

(c) Projections for the moderate emission scenario (RCP4.5). The three panels on the upper right (from left to right) represent the changes for the early-future (2020–2039), mid-future (2046–2065) and late-future (2080–2099). The color scale on the right indicates the range of the projected changes. For temperature indices, shades of red signify warming, while shades of blue describe cooling. For rainfall indices, shades of green show wetter trends, while shades of brown show drier trends. Darker shades indicate a larger amount of change.

(d) Projections for the high emission scenario (RCP8.5). The three panels on the lower right represent the changes for the three projected periods as described in (c) but for the RCP8.5 scenario.

A note on color schemes:

For some temperature indices that indicate cooling instead of warming (i.e. fraction of cold days/ nights, TX10p/TN10p), the colors range from light yellow to blue, with blue indicating more occurrences of cold days/nights. Likewise, for rainfall indices that indicate dry days instead of wet days (i.e. consecutive dry days, CDD) the colors range from khaki to dark brown, to indicate the length of dry days.

To provide more local-scale information, provincial values were calculated from grid points from the national dataset (Figure 5a) which lie with the provincial boundaries (Figure 5b). These are then average to come up with a single value for the province (Figure 5c). The results of these calculations are provided as tables in Annex A, with the format shown in Figure 6.

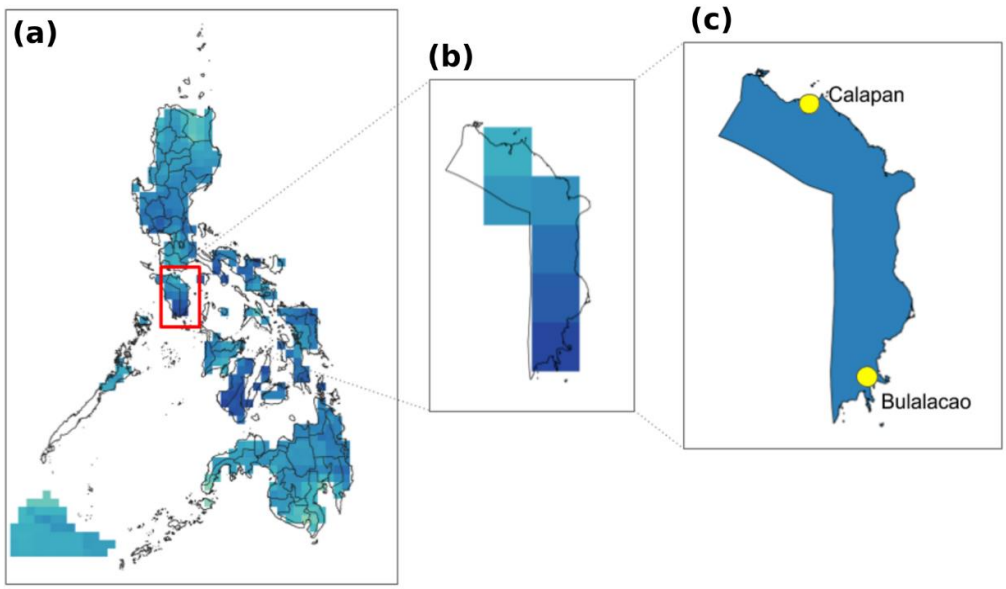


Figure 5. Provincial values are calculated from the (a) nation-wide data by (b) selecting grid-points that intersect with the provincial boundaries, then (c) calculating the average of these grid points

(a) (b) (c) (d)

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Magnitude										
	Tnn	Coldest night time temperature	°C	18.4	19.1 **(0.7)**	19.6 **(1.2)**	19.9 **(1.5)**	19.4 **(1.0)**	20.1 **(1.7)**	21.6 **(3.2)**

Figure 6. The provincial data tables contain the (a) climate extremes index information; (b) baseline value; and projected value and projected change for two scenarios (c) RCP4.5 and (d) RCP8.5.

Corresponding to the national scale maps, each table has four main parts:

(a) the climate extremes index code, description, and unit of measurement. The indices are grouped by type (Temperature and Rainfall) and by attribute (magnitude, duration, and frequency).

(b) Baseline value from the 1986–2005 SA-OBS observation data. This value is shown against a white background.

(c) Projections for the moderate emission scenario (RCP4.5). These are shown as three columns (from left to right) representing the early-future (2020–2039), mid-future (2046–2065) and late-future (2080–2099). For each column, there are two values presented:

(i) the projected value, shown in normal font; and

(ii) the amount of change, shown in bold font and enclosed by parenthesis

The projected value (c.i) is the sum of the baseline value (b) and the amount of change (c.ii).

(d) Projections for the high emission scenario (RCP8.5). These columns show similar values as in (c) but for the RCP8.5 scenario.

To facilitate the interpretation, the same color schemes are used for the maps and tables. Hence, for a province where the predominant temperature change is towards cooling, both map and table cells will be in shades of blue. If the change is towards warming, then both map and table cells will be in shades of red. For rainfall indices, wetter trends are shown in shades of green; drier trends in shades of brown. However, in cases where the changes are between +0.1 and -0.1, the table value is set to 0.0 and the cell background color is set to grey.

Aside from the tables shown in Annex A, the values in the provincial table are also provided in the spreadsheet format as part of the Climate Extremes Risk Assessment (CERAM), which will be discussed in Section 3.

1.3 Risk Management and Climate Change Adaptation

Climate-related hazards may be global and large-scale, but their impacts affect human society at the local level. Thus, to be able to improve disaster risk reduction and climate change adaptation, it is imperative that local knowledge be integrated with additional scientific and technological knowledge [7]. This includes improving knowledge of weather and climate events as well as the local community's vulnerabilities and exposure to hazards.

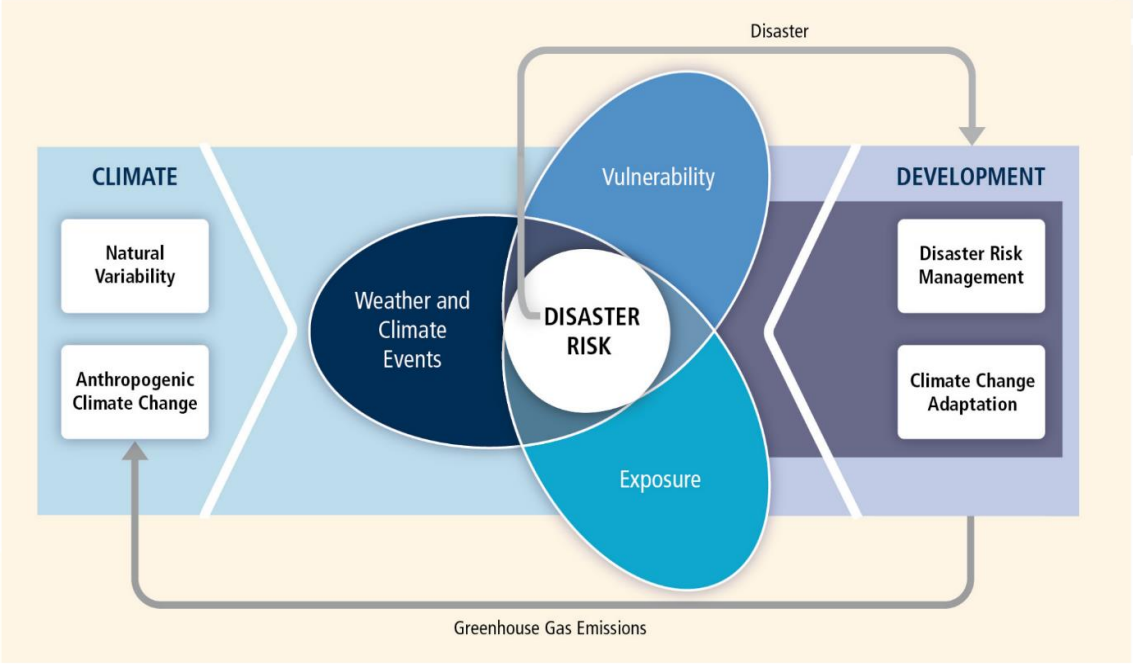


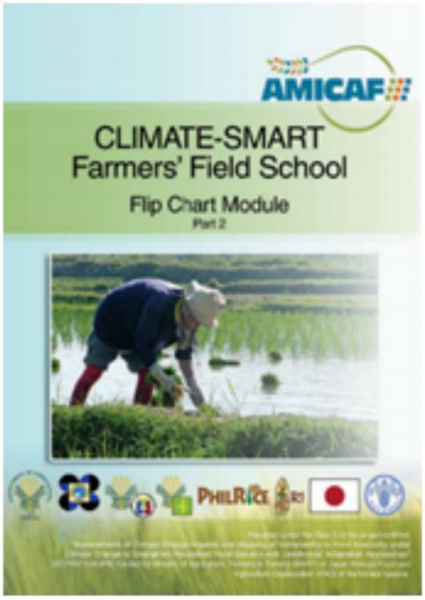
Figure 7. The key concepts involved in disaster risk management and climate change adaptation, and their interaction with sustainable development (Figure 1-1 of SREX, 2012)

This report offers information on the current climate and future projections of climate extremes to allow decision-makers to appropriate science-based risk management and climate change adaptation measures.

The integration of climate information is not a novel idea. Both DOST-PAGASA and Manila Observatory have already applied historical and projected climate data in several projects, some of which are listed below.

The WIBI Mindanao Project is an initiative of the United Nations Development Program (UNDP) in partnership with the Philippine Crop Insurance Corporation (PCIC) and with funding support from the Global Environment Facility (GEF). This project created a weather-based index that was correlated with the production of banana, sugarcane, coconut and cacao in major crop-growing areas [10].

Figure 8. The WIBI MIndanao project used historical and projected climate data to correlate weather-based indices with the production of major agricultural crops.



Climate projections were likewise used in the Food and Agriculture Organization (FAO)'s Assessment and Mapping of Impacts of Climate Change to Agriculture and Food Security (AMICAF) project for planning and policy-making strategies. The Flip Chart Module: Climate-Smart Farmers' Field Schools is part of this project [11].

Figure 9. The AMICAF project used CMIP3 projections to assess and map the impacts of climate change on agriculture and food security.

Figure 10. The CLIRAM tool was pilot tested in Salcedo, Eastern Samar.

The Climate Information Risk Analysis Matrix (CLIRAM) is one of the products of the "Building capacity to improve resilience to weather and climate extremes in the Philippines" project between the UK Met Office and DOST-PAGASA that was funded by the UK Department for International Development (DFID). CLIRAM is currently being utilized by Local Government Units (LGUs) as one of tools in the Climate and Disaster Risk Analysis (CDRA) process.

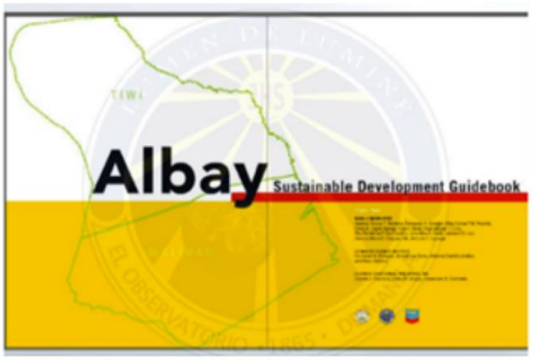
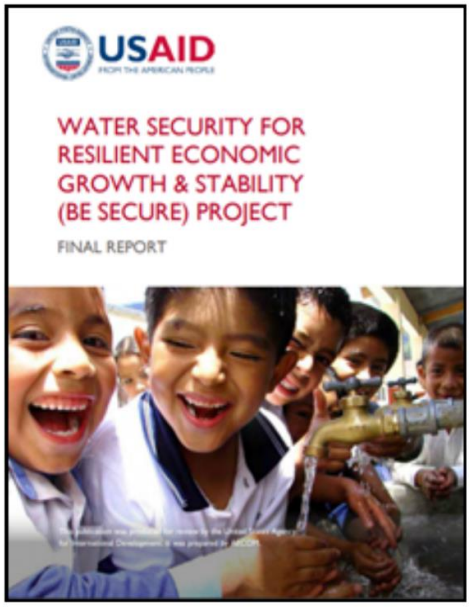


Figure 11. Climate change projections were overlayed with other hazard, exposure and vulnerability data to create the Albay Sustainable Development Guidebook.

In the Albay Sustainable Development Guidebook, land use and land use change, exposure and vulnerability information were combined with historical and projected climate information to calculate the risks to climate and geological hazards in the municipalities of Tiwi and Malinao in Albay. This book is a result of a collaboration between the Manila Observatory, Chevron Geothermal Philippines Holdings Inc. and the provincial government of Albay [13].



The Water Security for Resilient Economic Growth and Stability (Be Secure) project of the USAID applied climate projections for Tacloban, Iloilo, Cagayan de Oro and Zamboanga to identify climate-related risks, which then served as guide in assessing options for building climate resiliency through water security [14].

Figure 12. Climate change projections were also used in the risk assessment for Tacloban, Iloilo, Cagayan de Oro and Zamboanga, for the BeSecure Project.

Climate projections are also integral in the foundational modules for the Climate and Disaster Risk Assessment (CDRA) training for LGUs and academic partners. Both the Manila Observatory and DOST-PAGASA conduct these training through their respective partners, allowing for a broader reach towards stakeholders.

Figure 13. The Manila Observatory, together with its partners, conducts CDRA training for LGUs, including Naga City, Camarines Sur; Iloilo City, Iloilo; and Bataan province.

Figure 14. The 1st DOST-CORDEX Stakeholder's Workshop in 2019 involved participants from local government units, national government agencies, and local and international academic partners.

Figure 15. LGU partners provided recommendations on their preferred methods for receiving and communicating climate information.

During the DOST-CORDEX program's Stakeholder's Meeting in 2019, the LGU partners expressed the need for higher-resolution climate information as well as information on the climate extremes to help guide their planning process. This need for high-resolution climate extremes information was also echoed by partners from CORDEX-Southeast Asia during the 2019 meeting and as well as during the online 2020 CORDEX-Southeast Asia Outreach and Capacity Building Workshop. The modeling community, including international partners such as Asia-Pacific Network for Global Change Research (APN) and World Climate Research Program (WCRP)-Coordinated Regional Climate Downscaling Experiment (CORDEX), likewise expressed the need to provide relevant climate information to the vulnerability, impacts and adaptation (VIA) community so that decision-makers will be provided with the best information to allow for appropriate climate action. With the recent declaration of a climate emergency in the Philippines, the information in this report has certainly become more urgent and important.

Section 2 discusses climate extremes in the Philippines and presents national-scale maps of observed and projected climate extremes indices relevant for the Philippines. Section 3 describes the potential impacts and some adaptation options that could address these impacts. Section 4 presents the Climate Extremes Risk Assessment Matrix (CERAM) that can assist the LGUs in their CDRA process. Provincial-scale tables of observed and projected extremes are presented in Annex A.

Section 2: Observed and Projected Climate Extremes

Climate extreme indices provide additional information that can describe the magnitude, frequency and duration of extremes, which could help in the assessment of possible adaptation options. For example, the response to intense, rare but short-term extreme heat events would be much different from the response to moderately intense but frequent and sustained extreme heat events. The first case would probably require a declaration of a public health alert and an emergency advice for people to stay cool and hydrated and to avoid working outdoors during the peak of extreme heat; the second case might require moving work hours towards periods of cooler temperatures, installing cooling systems, designing better buildings, and even moving to cooler locations. Because the choice of adaptation options would require different levels of economic investments and changes in social behavior, it is important to have some estimates of how these climate extremes will change in the future so that the most appropriate adaptation options that match the needs and capacity of the community may be chosen.

A summary of the climate extreme indices used in this report is shown in Table 2. These indices are grouped by variable (temperature and rainfall) and by attribute (magnitude, frequency and duration).

The complex topography and geography of the Philippines make its climate extremely complex, with temperature and rainfall patterns varying greatly between coastal and mountain regions, between low-elevation and high-elevation areas, and between small and big islands. To make sure that the values presented here are specific to each location, the indices are calculated for each grid point and thresholds used are based on the data for that particular grid point. Threshold-based indices also use percentiles, rather than absolute values as an absolute value may not be a relevant threshold for all locations (e.g. 10 mm daily rainfall may be considered normal in some locations but way below normal for other locations).

For this report, we only calculate the annual extremes and do not include the seasonal or monthly extremes. These annual extremes are then averaged to get the extreme value representative of the 20-year period. These values are therefore not the extreme of the extremes (i.e. record-holder for the 20-year period) but are moderate extremes.

The relationships of these annual extremes to the baseline thresholds are illustrated in Figure 16, for the temperature extremes, and Figure 17, for the rainfall extremes.

Table 2. Summary of temperature and rainfall extremes indices used in this report

Name	Units	Definition	Description
Temperature Extremes Index			
Magnitude			
TNn	ºC	Minimum daily minimum temperature	Coldest nighttime temperature
TNm	ºC	Mean daily minimum temperature	Average nighttime temperature
TNx	ºC	Maximum daily minimum temperature	Warmest nighttime temperature
TXn	ºC	Minimum daily maximum temperature	Coldest daytime temperature
TXm	ºC	Mean daily maximum temperature	Average daytime temperature
TXx	ºC	Maximum daily maximum temperature	Warmest daytime temperature
DTR	ºC	Average range of daily minimum and maximum temperature	Daily Temperature Range
Frequency			
TN10p	%	Percentage of days when daily minimum temperature < 10^{th} percentile	Fraction of cold nights
TN90p	%	Percentage of days when daily minimum temperature > 90^{th} percentile	Fraction of warm nights
TX10p	%	Percentage of days when daily maximum temperature < 10^{th} percentile	Fraction of cool days
TX90p	%	Percentage of days when daily maximum temperature > 90^{th} percentile	Fraction of hot days
Duration			
WSDI	days	Warm Spell Duration Indicator; number of days contributing to events where 6 or more consecutive days have daily maximum temperature > 90^{th} percentile	Number of days contributing to a warm period
Rainfall Extremes Index			
Magnitude			
PRCPTOT	mm	Total precipitation on wet days	Total wet-day rainfall
SDII	mm/day	Simple Daily Intensity Index; Total rainfall divided by the number of wet days	Average daily rainfall intensity
Rx1day	mm	Maximum amount of rainfall that falls in one day	Maximum 1-day rainfall total
Rx5day	mm	Maximum amount of rainfall that falls in 5 consecutive days	Maximum 5-day rainfall total
P95	mm	95^{th} percentile of wet days	Rainfall on very wet days
P99	mm	99^{th} percentile of wet days	Rainfall on extremely wet days
R95p	mm	Total daily rainfall > 95^{th} percentile	Total rainfall from very wet days
R99p	mm	Total daily rainfall > 99^{th} percentile	Total rainfall from extremely wet days
Frequency			
P95d	days	Number of days when daily rainfall > 95^{th} percentile	Number of very wet days
P99d	days	Number of days when daily rainfall > 99^{th} percentile	Number of extremely wet days
Duration			
CWD	days	Consecutive Wet Days; Maximum number of consecutive days when daily rainfall >= 1 mm	Longest wet spell
CDD	days	Consecutive Dry Days; Maximum number of consecutive days when daily rainfall < 1 mm	Longest dry spell

In this example, the data considered is for a particular grid point (or observation station). The threshold is based on the 20-year historical baseline data for that particular grid point; the same threshold is used for calculating the climate extremes for the historical and future time periods.

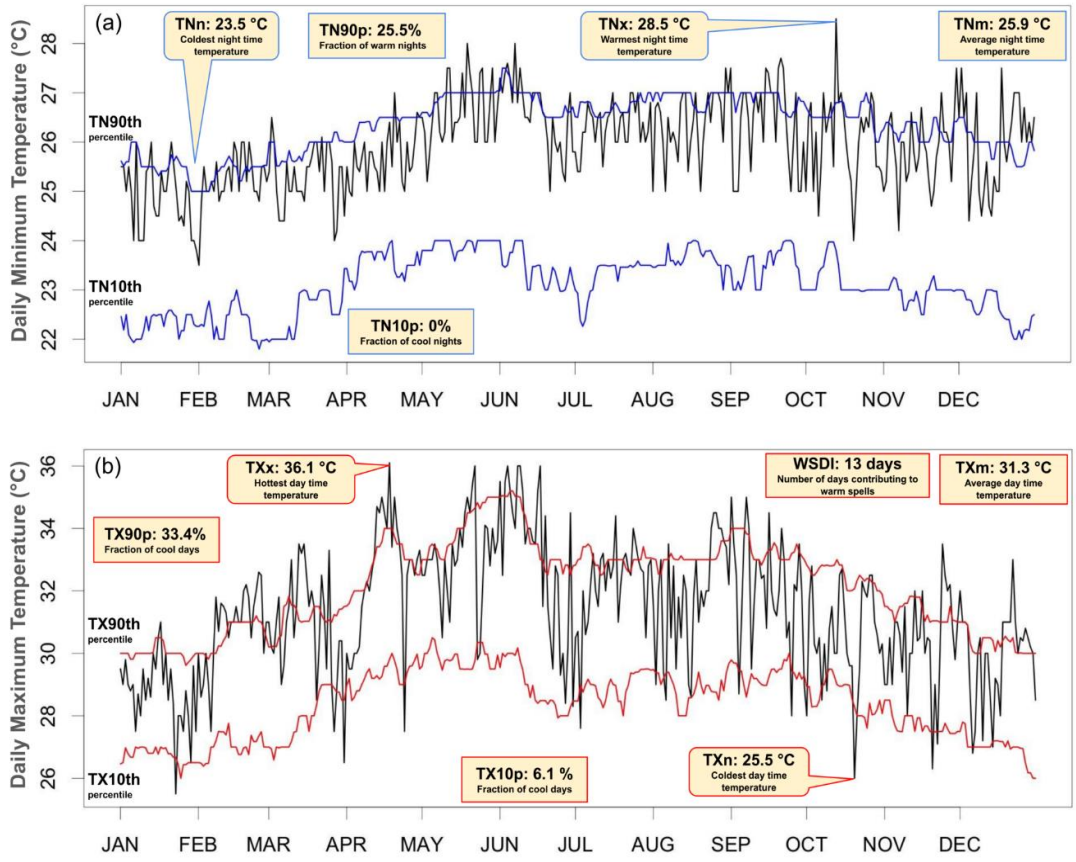


Figure 16. The annual temperature extremes indices relative to the baseline thresholds. The 10th and 90th percentile values of the baseline are indicated by (a) blue lines, for the daily minimum temperature; and (b) red lines, for the maximum daily temperature. The black lines indicate the daily (a) minimum and (b) maximum temperature values for the particular year.

Figure 16a shows the daily minimum temperature values (black line) for a particular year. The blue lines indicate the 10th (TN10th, lower line) and 90th (TN90th, upper line) percentile based on the 20-year daily data from 1986–2005. A similar plot for the daily maximum temperature is shown in Figure 16b, with the red lines indicating the 10th (TX10th, lower line) and 90th (TX90th, upper line) percentile thresholds.

The temperature thresholds vary throughout the year to consider the temperature variations due to the solar cycle. For this particular location, the variation is more pronounced in the maximum (daytime) temperatures than in minimum (nighttime) temperatures. For locations which are near the equator, the threshold values may be expected to vary less throughout the year.

The daily minimum temperature (TN) is an indicator of nighttime conditions; the daily maximum temperature (TX) is an indicator of daytime conditions.

In Figure 16a, the indices TNn and TNx thus describe the coldest and warmest nighttime temperatures during the year; TNm is the average of all the nighttime temperature values.

In the same manner, in Figure 16b, TXn and TXx describe the coldest and the warmest daytime temperatures during the year; TXm the average daytime temperature.

The Daily Temperature Range (DTR) is the difference between TNm and TXm. It is an important indicator of climate change, with decreasing DTR indicating a larger increase in the minimum temperature than in the maximum temperature resulting from overall heat storage in the atmosphere. Decreasing DTR has been found to affect the yield of different crops, including rice.

In terms of frequency, we take note of the number of days that exceed the thresholds. TN10p (TN90p) indicates the percentage of days when the nighttime temperature went below (above) the TN10th (TN90th) percentile threshold; TX10p (TX90p) indicates the number of days when daytime temperatures went below (above) the TX10p (TX90p) percentile thresholds.

For this particular example, the TN10th hovers around 22–24˚C while TN90th varies from 25–27˚C. None of the nighttime temperatures went below TN10th so the value for TN10p is 0%. However, around 93 days of the year had nighttime temperatures that exceeded the TN90th threshold, thus TN90p is 25.5%. In terms of daytime temperatures, there are 6.1% (around 22) days within the year that are colder than the TX10th percentile, and 33.4 % (around 122 days) that are warmer than the TX90th percentile.

The Warm Spell Duration Indicator (WSDI) is a measure of how many days within the year contributed to warm spells, or periods of at least six days when the daytime temperatures exceed the 90th percentile.

For this particular year, while there are around 122 days that exceeded the 90th percentile threshold, not all of these events lasted at least six days, thus the WSDI for this year is only 13 days. Whether or not this value is due to one event lasting 13 days or two events (each with at least six days), is not indicated by the index.

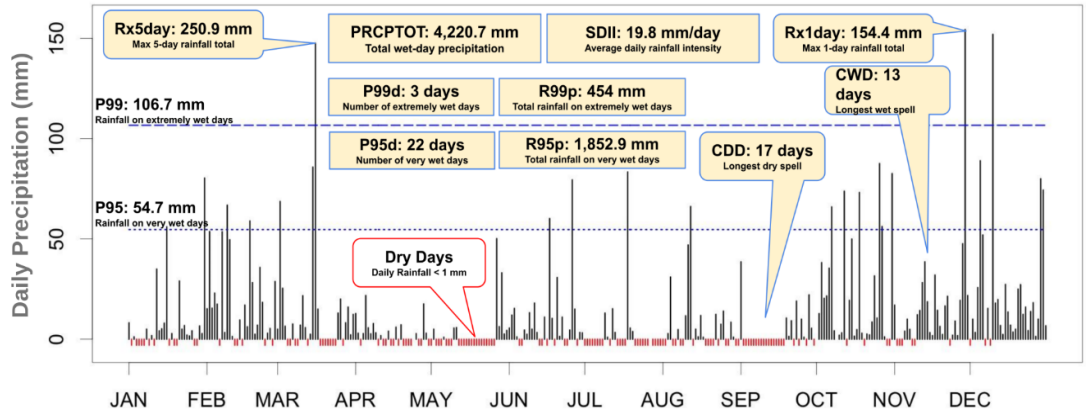


Figure 17. The annual rainfall extremes indices relative to the baseline thresholds. The blue lines indicate the 90th and 95th percentile of the wet day rainfall during the baseline period. The black bars indicate the rainfall on wet days; red bars mark the dry days, when the daily rainfall is less than 1 mm.

The annual rainfall extreme indices for a particular year at a particular grid point are shown in Figure 17. The black bars indicate the daily rainfall amounts in mm during wet days, while dry days (i.e. when the daily rainfall is less than 1 mm) are marked by red bars.

The indices Total Precipitation (PRCPTOT) and Simple Daily Intensity Index (SDII) are used to indicate the magnitude of rainfall for the year. PRCPTOT indicates the total rainfall while SDII indicates the typical amount of rainfall that falls on a rainy day. SDII is calculated by dividing the total amount of rainfall (PRCPTOT) by the number of rainy days (i.e. days when rainfall > 1mm) during the year.

Rx1day and Rx5day indicate the maximum accumulated rainfall within one and five days, respectively. They are important indicators for monitoring high-intensity rainfall events that could trigger flash floods or landslides (Rx1day), or long-duration moderate-intensity rainfall events that could cause large-scale flooding (Rx5day).

The 95th and 99th percentile values based on the 20-year baseline data (1986–2005) are marked by the dashed blue lines and marked P95 and P99, respectively.

P95, R95p and P95d are indices related to very wet days. P95 indicates the amount of rainfall at the 95th percentile of the distribution for the particular grid point. P95d indicates the number of days when the daily rainfall exceeds the P95 threshold while R95p is the total amount of rainfall from days when rainfall exceeds the P95 threshold value.

Thus, for this example, a very wet day is defined as having rainfall greater than 54 mm (P95). For this particular year, there are 22 very wet days (P95d). The total amount of rainfall from those 22 very wet days is 1,852.9 mm (R95p).

The indices CWD and CDD are used to determine the duration of consecutive wet and dry days, respectively. These indices are important since prolonged wet days can affect the saturation of the ground, which could eventually affect ground stability especially in regions with high slopes; flooding can also occur in water-logged and low-lying areas. Likewise, prolonged dry days can eventually develop into drought conditions and extreme heat events.

The following national-scale maps show the observed and projected changes of these climate extreme indices. The annual extremes are averaged over the 20-year time periods to come up with the climatological extreme. The observed data is based on the SA-OBS gridded data for 1986-2005; the projected changes are based on the ensemble median of the 12 models. The projections from two scenarios, RCP4.5 and RCP8.5, are provided for three time periods: early-future (2020–2039), mid-future (2046–2065) and late-future (2080–2099).

Provincial-scale tables corresponding to these maps are provided in Annex A.

2.1 Temperature Extremes

[TNn] Coldest nighttime temperature, °C

TNn refers to the lowest nighttime temperature of the year (Figure 18a). Averaged over a 20-year period, it indicates the temperature that may be expected on the coldest night of the year.

Historical observations show that, averaged over 1986-2005, the annual coldest nighttime temperature in the country ranges from 8°C to 21.5°C. At RCP4.5, TNn is projected to increase by about 0.7°C, 1.2°C and 1.5°C, by the early-, mid- and late-future. The gradual change is expected to be mainly uniform throughout the country. At RCP8.5, TNn shows a more rapid increase throughout the country, mostly by about 0.8°C, 1.7°C and 3.2°C in early-, mid- and late-future, with portions of Southern Mindanao increasing by as much as 4.5°C in the late-future.

[TNm] Average nighttime temperature, °C

TNm refers to the average nighttime temperature within the year (Figure 18b). Changes in night time temperature may have an effect on crop yield as minimum temperature thresholds for specific crops are breached.

Historical night time temperature ranges from 13.5°C to 24°C with cooler temperatures observed in high-elevation areas and warmer temperatures in the islands and coastal areas. Future projections show a uniform increase across the country. At RCP4.5, TNm increases by around 0.6°C in the early-future to about 1.4°C in the late-future; at RCP8.5, the increase may be as much as 3°C in the late-future.

[TNx] Warmest nighttime temperature, °C

TNx refers to the warmest night time temperature of the year (Figure 18c).

Historical observations show that the typical warmest nighttime temperature in most areas of the country fall within the range of 16.5°C to 27°C. Consistent with the projected general warming of nighttime temperatures, TNx is projected to increase in both RCP scenarios. At RCP4.5, TNx is projected to increase by 0.6°C, 1.1°C and up to 1.4°C, in the early-, mid- and late-future. A similar increase is projected in the RCP8.5 scenario for the early- and mid-future, but late-future projections show stronger warming of up to 3.3°C over eastern Luzon and a vast portion of Mindanao.

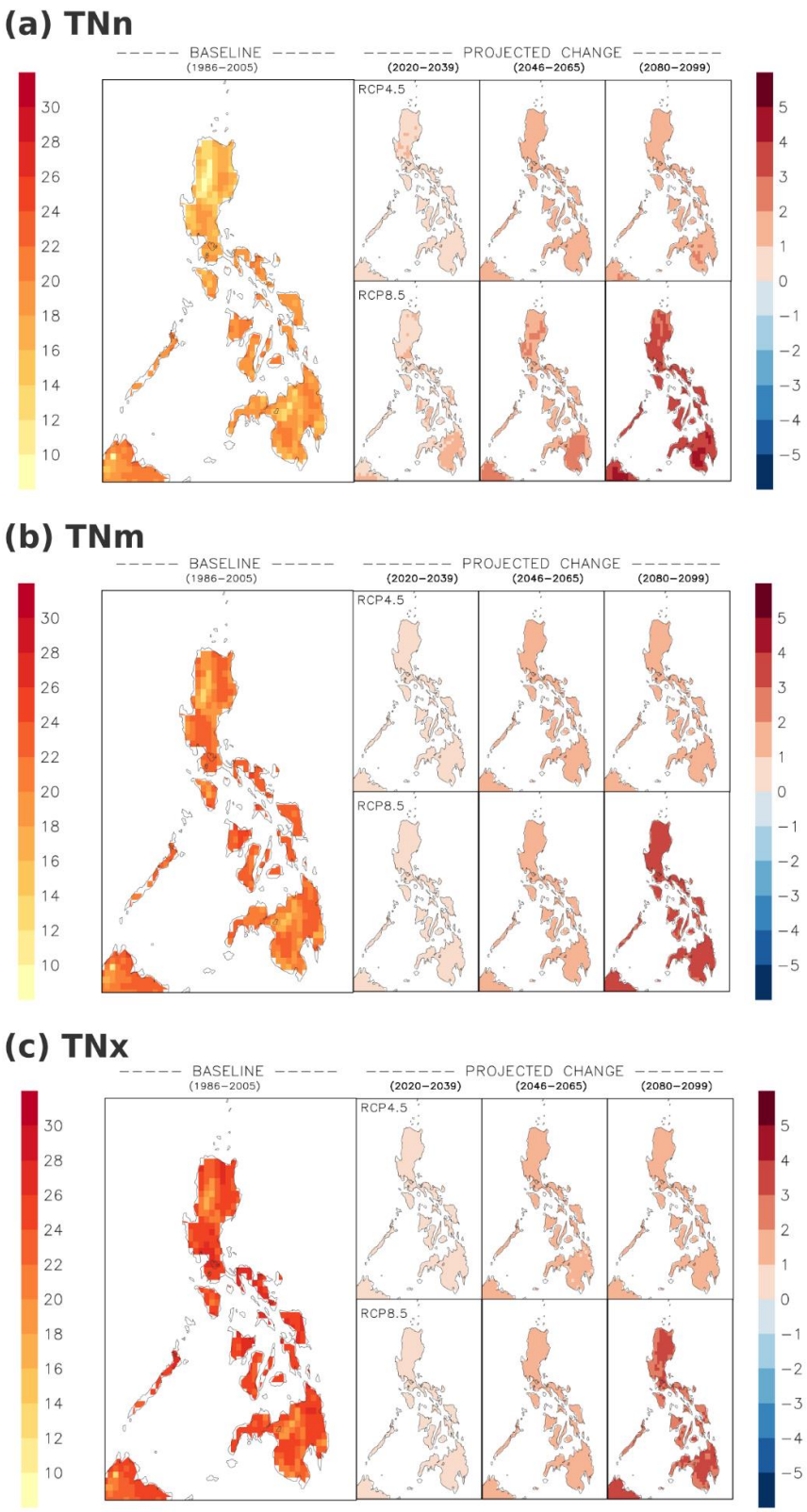


Figure 18. Spatial distribution of the extremes indices for the baseline period (1986-2005) and projected changes for two scenarios: RCP4.5 and RCP8.5 for the early-future (2020–2039), mid-future (2045–2065) and late-future (2080–2099). (a) TNn, (b) TNm and (c) TNx.

[TXn] Coldest daytime temperature, ˚C

TXn refers to the lowest daytime temperature for each year (Figure 19a).

The baseline data shows that the annual coldest daily maximum temperature in the country can be as low as 18˚C at high elevation areas; and as high as 28˚C. TXn is expected to increase in the future by as much as 0.7˚C in the early-future for both scenarios, to as much as 1.3˚C and 2.9˚C in the late-future in the RCP4.5 and RCP8.5 scenario, respectively. Greater warming of up to 3.5˚C during the late-future is expected over portions of Western Luzon, Western Visayas and Northern & Southern Mindanao.

[TXm] Average daytime temperature, ˚C

TXm refers to the average of daytime temperatures (Figure 19b).

Historical data shows that the average daytime temperature over the Philippines ranges from 23˚C to 32.5˚C. This is projected to increase in both RCP scenarios. In the RCP4.5 scenario, TXm is expected to increase by an average of 0.6˚C in the early-future and 1.4˚C in the late-future; in the RCP8.5 scenario, it is expected to increase by as much as 3.5˚C in the late-future.

[TXx] Warmest daytime temperature, ˚C

TXx refers to the temperature on the hottest day of the year (Figure 19c).

Baseline observations show that the hottest daytime temperature in the country ranges from 27˚C to 37˚C. It is also projected to increase in the future, by as much as 1.5˚C in the late-future for the RCP4.5 scenario and by as much as 3.3˚C in the RCP8.5 scenario. And while the temperature change is generally uniform throughout the country, some areas such as central Luzon are projected to have slightly greater warming compared to the rest of the country.

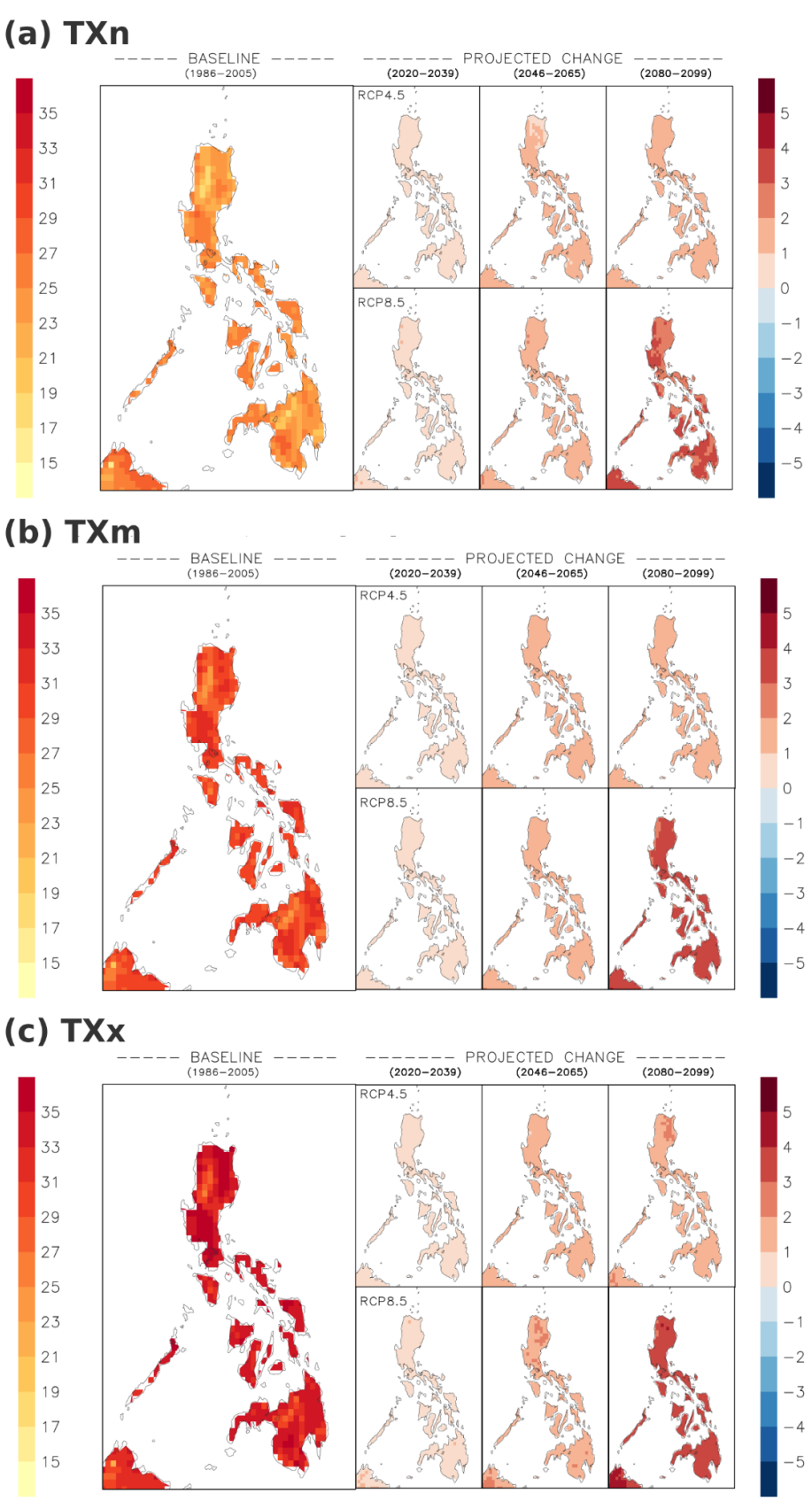


Figure 19. Same as Figure 18 but for (a) TXn, (b) TXm, and (c) TXx

[DTR] Daily Temperature Range, °C

DTR refers to the difference between the annual mean of the daily maximum and minimum temperature (Figure 20a). It is an important indicator of climate change. A decreasing DTR indicates a larger increase in the nighttime temperature than in the daytime temperature due to an overall heat storage in the atmosphere.

Historical data indicates that the daily temperature range over the country ranges from 6.5–10°C with larger DTR over the larger islands of Luzon and Mindanao, and smaller DTR over the smaller island of the Visayas, Palawan and the Bicol region. Projected changes in DTR vary spatially and temporally for each scenario. For the RCP4.5 scenario, there is a widespread decrease in DTR during the early-future and increases in the mid-, and late-future. In the RCP8.5 scenario, slight but widespread decreases in the DTR in the early- and mid-future become more intense but localized to smaller areas such as western Luzon, and the eastern and southern areas of Mindanao.

[TN10p] Fraction of cold nights, %

TN10p refers to the number of cold nights within the year (Figure 20b). A night is considered cold when the minimum temperature falls below the 10th percentile threshold of the baseline.

Expressed in terms of percentages, baseline observations indicate that on average, only 11.5% of the year (or 42 nights) are considered cold. Commensurate with the projected warming of nighttime temperatures, the number of cool nights are projected to decrease by as much as 10% (36 nights), 11% (40 nights), and 12% (44 nights) from both RCPs during the early-, mid-, and late-future, respectively. This means that the traditionally expected 42 cold nights within a year will get reduced to six, two and then none by the end of the century. The spatial pattern for the RCP4.5 scenario indicates some slight variations but overall, the change is generally widespread.

[TX10p] Fraction of cool days, %

TX10p keeps track of the number of cool days, when the maximum temperature goes below the 10th percentile threshold of the baseline (Figure 20c).

Historically, these cool days occur at about 11.5% of the year (or 42 days). However, projections suggest a decrease in the occurrences of cool days by at least 4.5% (16 days) and up to 12% (44 days) for both RCP scenarios, essentially eliminating the occurrence of a cool day within the year in some areas of the country at the end of the century. The projected reduction in cool days is almost uniform throughout the country but for small areas in eastern Luzon showing a slightly lower reduction in the mid- and far-future for both scenarios, and portions of Mindanao for the RCP4.5 scenario.

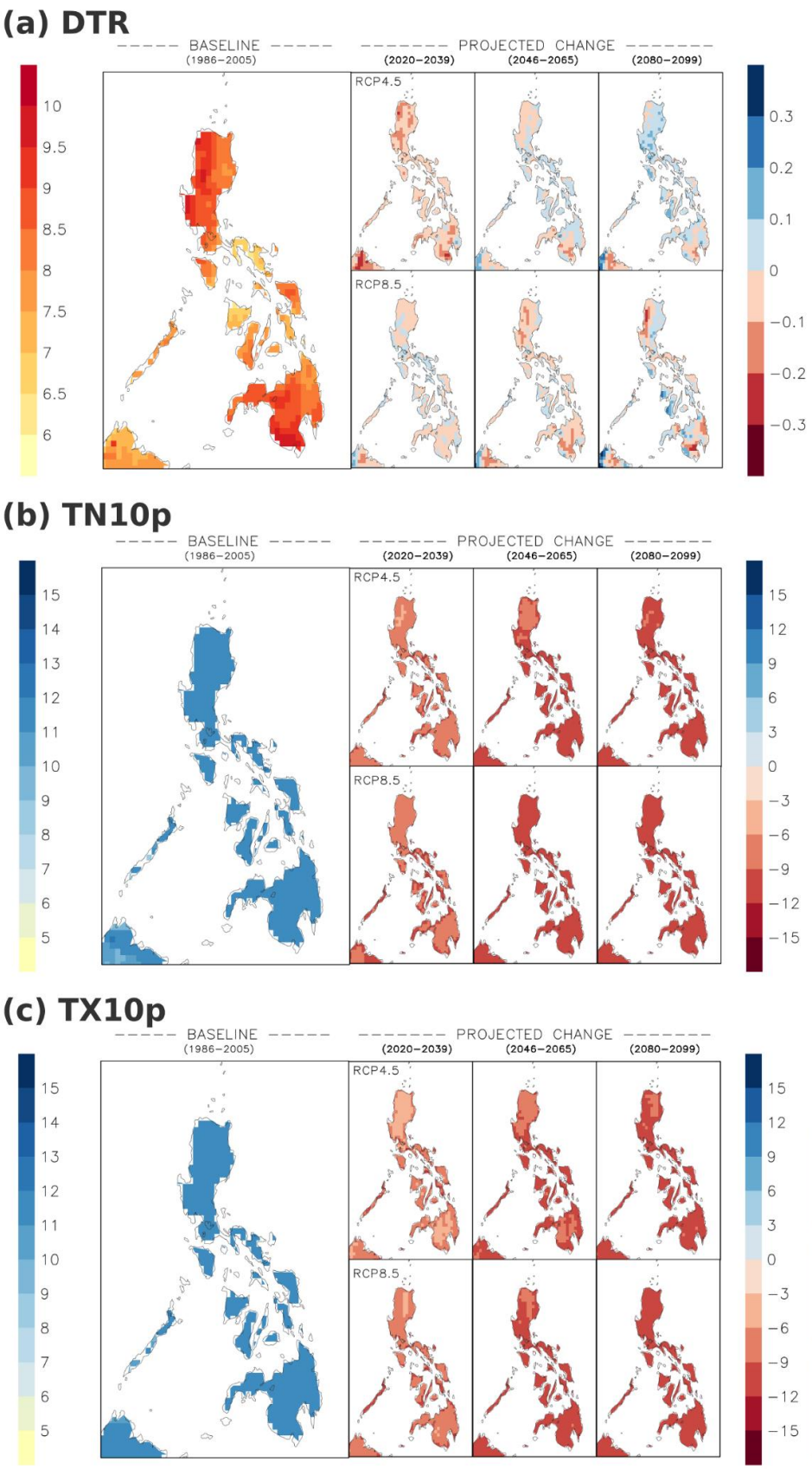


Figure 20. Same as Figure 18 but for (a) DTR, (b) TN10p, and (c) TX10p

[TN90p] Fraction of warm nights, %

TN90p indicates the frequency of occurrence of warm nights when the minimum temperature exceeds the 90th percentile threshold (Figure 21a).

Historical data pegs TN90p at an average of 11.5% (42 nights). However, projections indicate that this could increase by 50%, 75% and 83.5% during the early-, mid-, and late-future in the RCP4.5 scenario, and by as much as 53.4%, 85% and 89% in the RCP8.5 scenario. These correspond to at least 224 nights and as many as all nights of the year being considered warm.

[TX90p] Fraction of hot days, %

TX90p tracks the number of hot days, when the maximum temperature exceeds the 90th percentile threshold (Figure 21b).

Historically, the number of hot days occurs between 11–17% (40–62 days) of the year. This is projected to increase significantly in the future, with projections indicating an increase of at least 6% (21 days) in the early-future, and as much as 89% (324 days) in the late-future, essentially making every day of the year a hot day. Averaged over the country, the increase in hot days is around 23% (84 days) and 30% (109 days) in the early-future for the RCP4.5 and RCP8.5 scenarios, respectively. These increase to 47% (171 days) and 62% (226 days) by the mid-future, then by 59.5% (217 days) and 81.5% (297 days) in the late-future.

[WSDI] Warm Spell Duration Index, days

WSDI indicates the number of days contributing to warm periods (Figure 21c). A warm spell occurs when the daily maximum temperature for six or more consecutive days exceeds the 90th percentile threshold of the baseline. The WSDI accounts for the total number of days within the year that contribute to these warm spells. Successive occurrences of extremely hot maximum temperatures are detrimental to many sectors of the country, including human health, energy and agriculture.

Historically, there can be as many as 12 consecutive warm days over Palawan, western Luzon and the Visayas. However, consistent with the warming trend, the duration of these warm spells is projected to increase by at least seven days in the early-future and by as much as 332 days in the late-future at coastal areas in the RCP4.5 scenario. In the RCP8.5 scenario, the projected increase is much higher, with most of the country projected to experience warm spells which are at least 13 days longer in the early-future; the coastal regions of the Visayas are projected to have an additional 342 warm days in the mid-future; and most of the country is projected to experience the whole year as a very warm spell in the late-future.

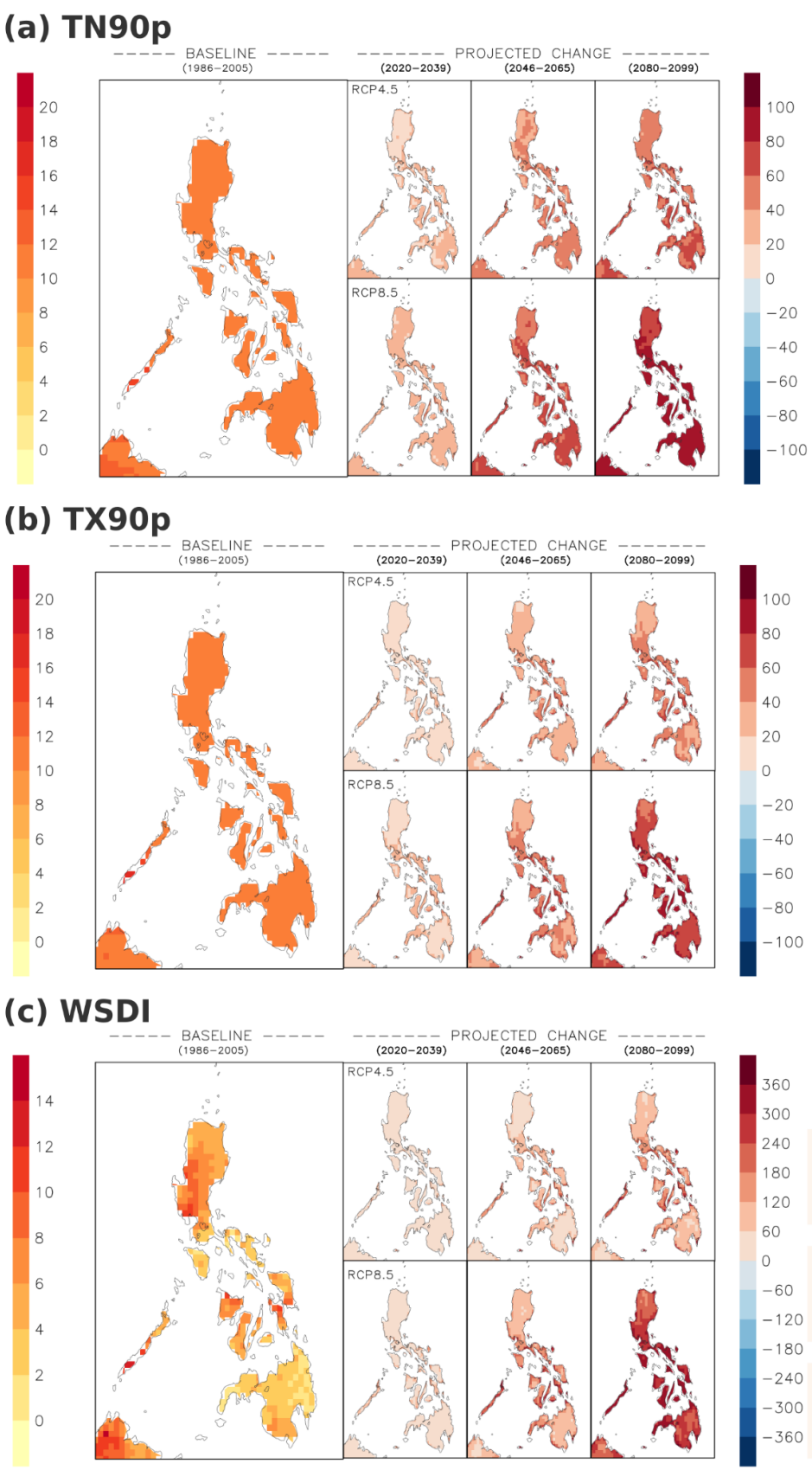


Figure 21. Same as Figure 18 but for (a) TN90p, (b) TX90p, and (c) WSDI

This is particularly alarming. While many systems can probably recover from short duration extremes (for example, a week-long warm spell), long-duration extremes (such as a whole year, or several consecutive years) would call for more radical measures of adaptation. While one can probably adapt to week-long warm spells by shifting the farming schedule and waiting for cooler weather, year-long warm spells might require shifts in working hours (such as farming during the night [15]) or using climate-controlled farming technologies. Energy providers would likewise have to allocate more energy for cooling systems, or advocate for more energy-efficient buildings. Medical and social services will have to provide better guidance on how people can survive in prolonged warm environments.

If there is anything that the current COVID-19 pandemic has shown us, imposing quarantine on communities for a long time has impacts on the physical and mental health, economy, and all other sectors of society. However, while there might be ways to live with the COVID-19 virus in the future by developing vaccines to enhance human immunity, and perhaps eventually eradicate the virus, the adverse impacts of climate change may not be readily reversible and humans will have to adapt more aggressively to survive the new climatic conditions.

2.2 Rainfall Extremes

[PRCPTOT] Total wet day rainfall, mm

PRCPTOT refers to the total amount of rainfall received during wet days, when at least 1 mm of daily rainfall is recorded within the year (Figure 22a). Averaged over a 20-year period, it provides a general pattern indicating how much rainfall each area receives in a typical year. While it does not indicate when the rainfall occurs, it does provide an estimate of the water resources available for the area. It is important to monitor this index as changes in this resource will directly affect the water supply and other sectors that depend on it.

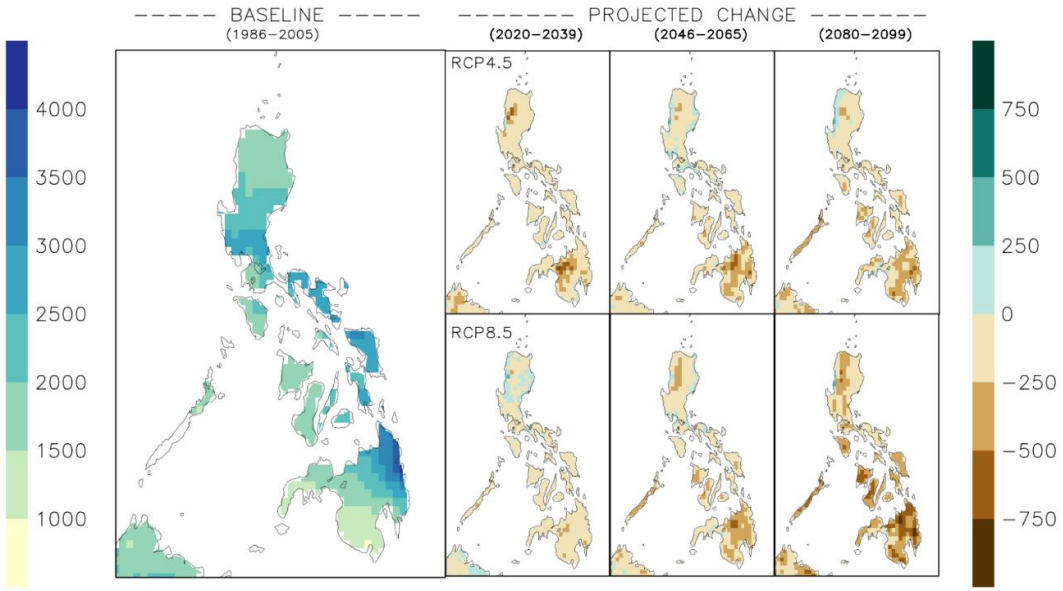
Baseline observations show that eastern sections of Visayas and Mindanao, central and southern Luzon, including the Bicol Region get an annual rainfall of up to 4000 mm. However, projections for both RCP scenarios show a decrease throughout the country. For RCP4.5, portions of north-western Mindanao and western Luzon are expected to have a 700 mm decrease in annual rainfall in the early-future and around 600 mm in the mid- and late-future. On the other hand some areas in the western coastal regions of Luzon are expected to experience approximately 300 mm more rain in the mid-, late-future. In the RCP8.5 scenario, the projected decrease in annual rainfall becomes larger and more widespread over time. While some areas in central Luzon are expected to receive as much as 300 mm of additional rainfall in the early-future, decreases of as much as 600–900 mm may be expected throughout the country in the mid- and late-future, respectively. Compared to Luzon, drier conditions are expected to be more severe across portions of Visayas and Mindanao in the late-future.

[SDII] Simple Daily Intensity Index, mm/day

SDII is the average daily rainfall intensity and indicates the typical amount of rainfall during wet days (Figure 22b). That is, if it rains, the amount of rainfall for the day will most probably be within this value.

Historically, the average amount of rainfall during rainy days ranges from 5 mm/day to 21 mm/day with the western section of Luzon and Northeastern section of Mindanao experiencing the largest amount. This is projected to decrease in the future. For RCP4.5, the largest decrease is expected in the early-future with approximately 2 mm/day decrease over western Luzon and north-western Mindanao. A slight increase of up to 1.5 mm/day is expected over coastal western Luzon in the mid- and late-future. For RCP8.5, the decrease in daily rainfall is expected to get worse further into the future, decreasing by as much as 2.5 mm/day over eastern Mindanao and Western Visayas.

(a) PRCPTOT



(b) SDII

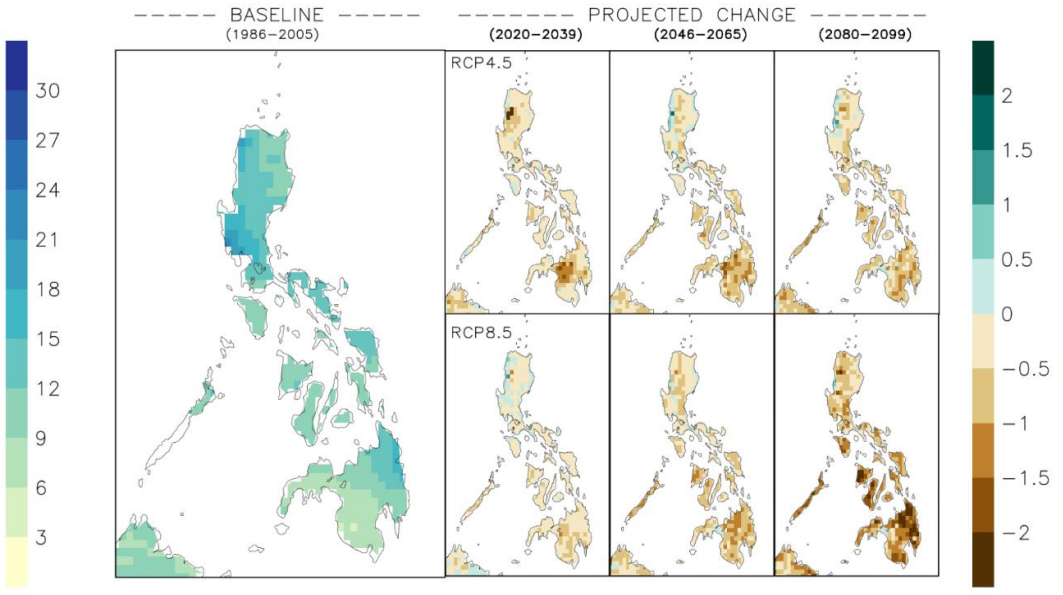


Figure 22. Same as Figure 18 but for (a) PRCPTOT and (b) SDII

[Rx1day] Maximum 1-day rainfall total, mm

Rx1day describes the maximum amount of rain that can fall in one day (Figure 23a). Such extreme rainfall is typically associated with local thunderstorms or large-scale systems such as monsoons or tropical cyclones, and may induce flash floods or landslides.

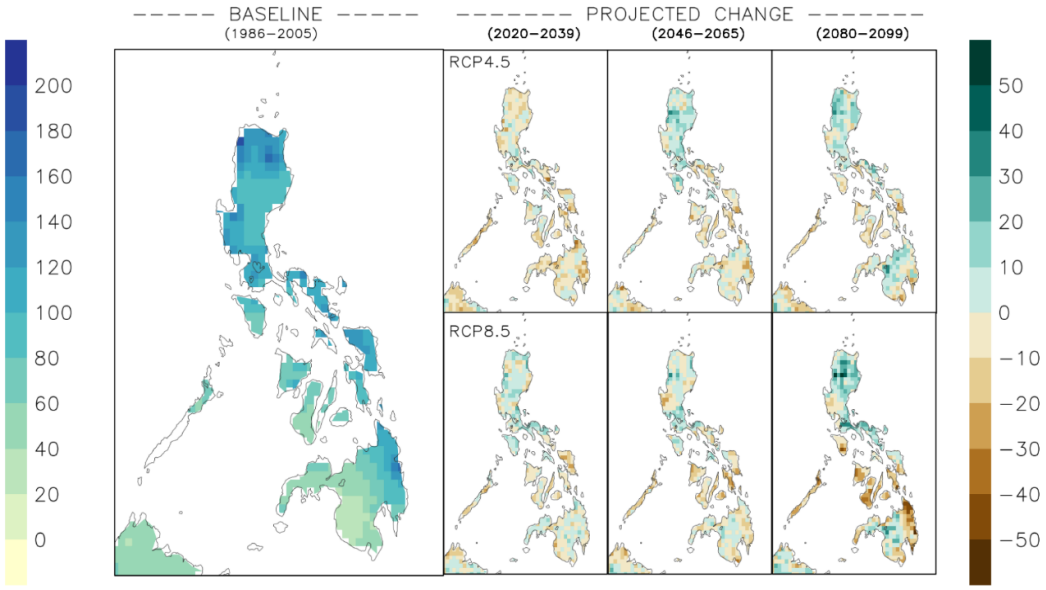
Baseline observations show that the northern, southern and southeastern sections of Luzon, as well as the eastern sections of Visayas and Mindanao experience a maximum 1-day rainfall total of up to 180 mm, while western Mindanao usually experiences maximum daily rainfall of around 30 mm. Future projections for both RCP scenarios predict large spatial variability across the Philippines. For RCP4.5, different areas can get as much as 15 mm additional rainfall while other areas receive 30 mm less rainfall in the early-future. The areas of increased daily rainfall expand to the rest of Luzon in the mid-future; and in the late-future, aside from Luzon, northern Mindanao is also projected to have increased maximum daily rainfall. The rest of the country is projected to have slightly less values for Rx1day. In the RCP8.5 scenario, Luzon and western Mindanao are projected to have an increasing Rx1day as time progresses, from approximately 40 mm in the early- and mid-future to around 60 mm in the late-future. The rest of the country is projected to have less rainfall, with the Visayas and eastern Mindanao expected to experience the largest decreases by as much as 25 mm in the early-future, to as much as 40 mm and 60 mm in the mid- and late-future, respectively.

[Rx5day] Maximum 5-day rainfall total, mm

As with Rx1day, Rx5day describes the maximum amount of rainfall that falls over a period of five consecutive days (Figure 23b). These typically occur during the wet season and are closely related with large-scale systems such as tropical cyclones, monsoons and the Intertropical Convergence Zone (ITCZ). Increased 5-day consecutive rainfall may lead to widespread flooding and swelling of waterways.

Historically, Rx5day can be as much as 380 mm over western and southern Luzon, eastern Visayas and north eastern Mindanao. Changes in Rx5day are projected to vary spatially with wetter trends of greater than 60 mm during the mid- and late-future over portions of Luzon and northern Mindanao, and drier conditions of up to 100 mm over Palawan, Visayas, and western and eastern Mindanao.

(a) Rx1day



(b) Rx5day

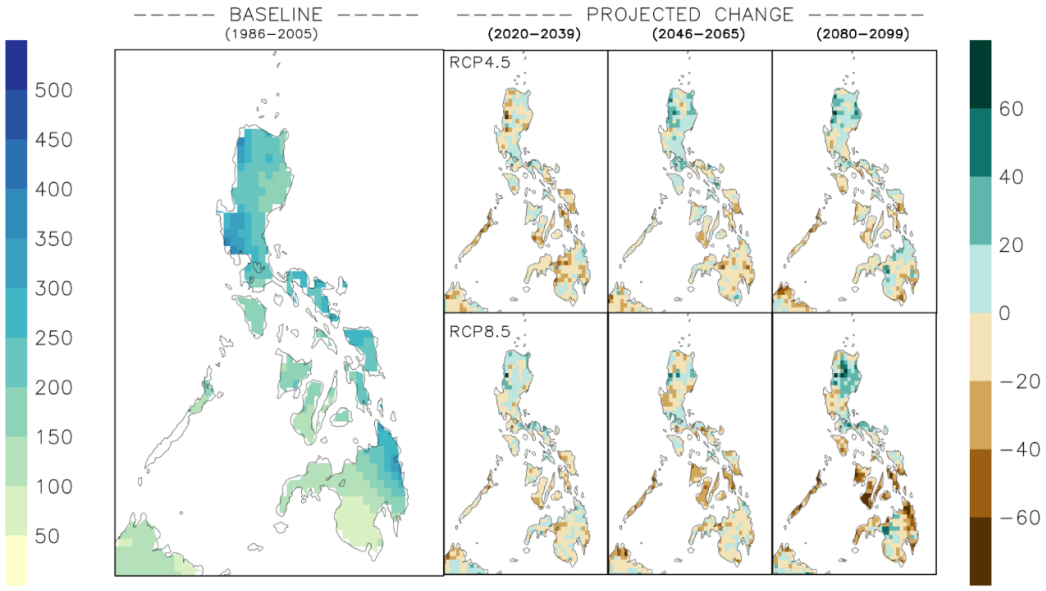


Figure 23. Same as Figure 18 but for (a) Rx1day and (b) Rx5day

[P95] Rainfall on very wet days, mm

P95 is the threshold for “very wet” days (Figure 24a). It is defined as the 95th percentile of the baseline daily rainfall during wet days. That is, 5% of wet days during the year are expected to be "very wet". Because the amount of rainfall varies spatially, this threshold is expected to have different values over the Philippines.

Historically, the P95 values over western, southern and southeastern Luzon and eastern Visayas and Mindanao are highest at about 60 mm while southwestern Mindanao only records about 15 mm. The projected change in P95 values indicate at least 4 mm decrease throughout the country for both scenarios. However, for RCP4.5 there are marked decreases over western Luzon and northern Mindanao. For the area in western Luzon, there is a projected decrease by as much as 10 mm in the early-future and a similar increase in the mid- and late-future; the marked decrease over Mindanao in the early-future slightly eases in the mid- and late-future. For the RCP8.5 scenario, the decrease in P95 is expected to worsen as it progresses into the future.

[P95d] Number of very wet days, days

P95d pertains to the number of very wet days when the daily rainfall is greater than the 95th percentile of the baseline daily rainfall (Figure 24b).

In the past, the number of very wet days ranged from five to 12 days across the country. In the future, the number of very wet days is projected to decrease in most parts of the country except for portions of La Union and Ilocos Sur. Other parts of the country would experience a gradual decrease of very wet days (up to seven days), especially over Palawan, Visayas, and northeastern Mindanao.

[R95p] Total rainfall from very wet days, mm

R95p indicates the total amount of rain that falls on “very wet days”, or when daily rainfall exceeds the 95th percentile threshold of the base period (Figure 24c).

Historically, the total rainfall on very wet days is greatest over southern Luzon, the Bicol region, eastern Visayas and eastern Mindanao while lowest values were recorded over south-western Mindanao. For the RCP4.5 scenario, a reduction of up to 400 mm is projected over western Mindanao in the early-future. This reduction eases to around 300 mm in the mid- and late-future. A similar projected reduction over western Luzon in the early-future likewise turns into an increase by the mid- and late-future. However, for the RCP8.5 scenario, the projected decrease of around 200 mm in the early-future eventually worsens to approximately 500 mm particularly over eastern Mindanao, Palawan and southern Visayas. Meanwhile, an increase in rainfall of up to 400 mm is projected over localized areas of western Luzon.

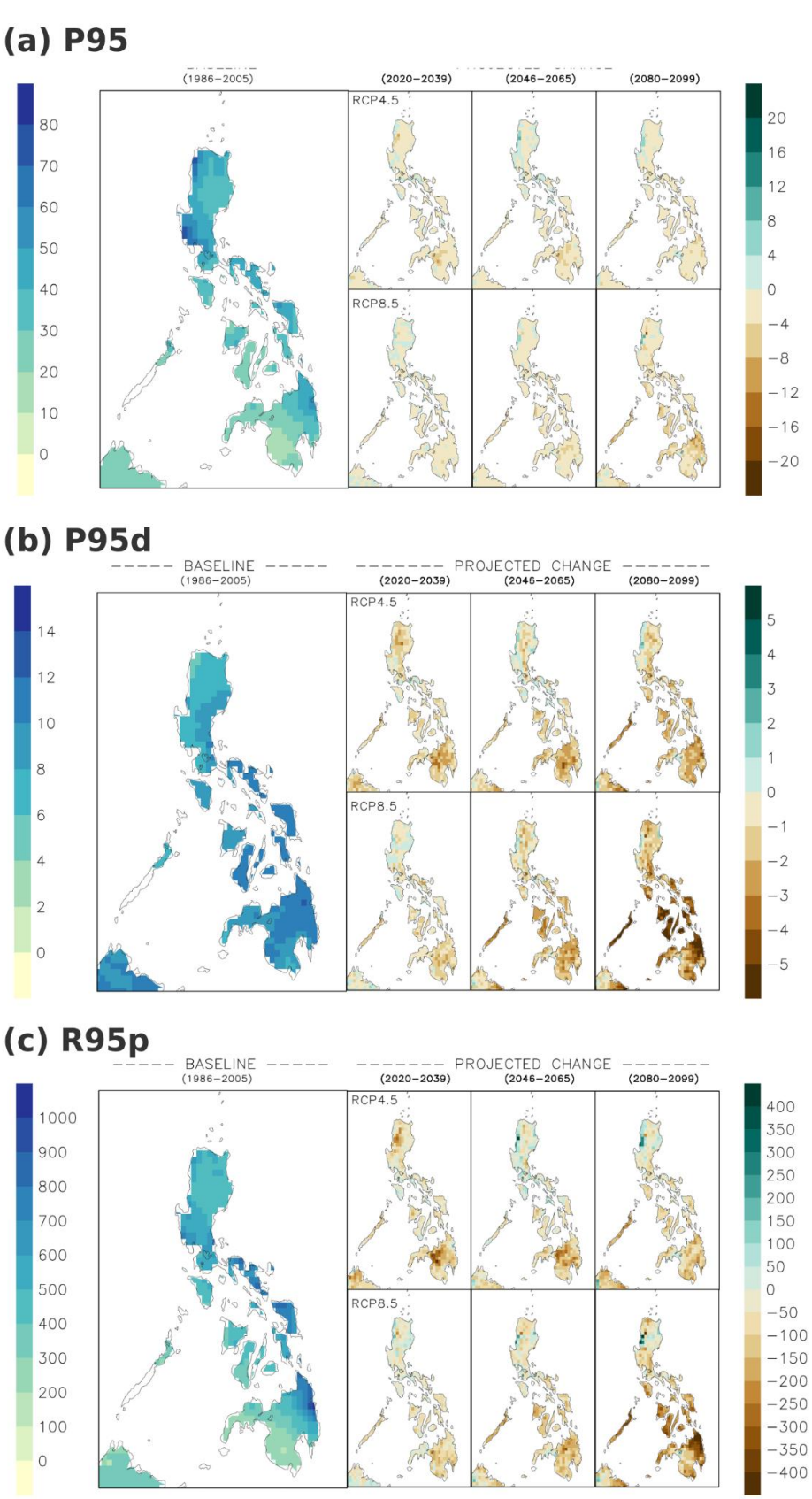


Figure 24. Same as Figure 18 but for (a) P95, (b) P95d, and (c) R95p

[P99] Rainfall on extremely wet days, mm

P99 indicates the amount of rainfall “extremely wet” days, defined as those exceeding 99th percentile threshold (Figure 25a).

Historically, the spatial distribution of rainfall on extremely wet days is similar to P95 with maxima over southern Luzon, eastern Visayas and north eastern Mindanao reaching up to 160 mm/day and minima over western Mindanao at around 20 mm/day. As with P95, projections indicate a general drying throughout the country except for localized areas in western Luzon and western Mindanao. In the RCP4.5 scenario, the P99 in these specific locations are projected to decrease in the early-future and increase in the mid- and late-future. In the RCP8.5 scenario, the changes are projected to become more intense as the future: over western Luzon, it increases from approximately 15 mm/day in the early-future to 25 mm/day in the late-future; and in Mindanao the decrease can be as much as 40 mm/day in the late-future and affecting Palawan, southern Visayas and eastern Mindanao.

[P99d] Number of extremely wet days, days

P99d counts the number of days when daily rainfall exceeds P99. As such, the spatial distribution of P99d closely follows the pattern of P99 (Figure 25b).

The number of extremely wet days in the past ranged from one to two days across the country. Projected future changes in P99d are relatively minimal. Both RCP scenarios agree that a reduction in frequency of extremely wet days is expected in the future across the Philippines. However, both scenarios also predict an increase in frequency of these events over portions of Northern and Central Luzon.

[R99p] Total rainfall extremely wet days, mm

R99p describes the total amount of rain that falls on "extremely wet" days, when rainfall exceeds the 99th percentile (Figure 25c). Similar to R95p, it is related to the rainfall events that occur during the wet season as well as during tropical cyclone events.

Historically, R99p can reach up to 300 mm and was concentrated over the Eastern section of the country. In the future, dryer conditions are projected over Visayas and Mindanao with maximum reduction of up to 250 mm over eastern Mindanao. Meanwhile, wetter trends of up to 350 mm are projected over Luzon for both RCP scenarios.

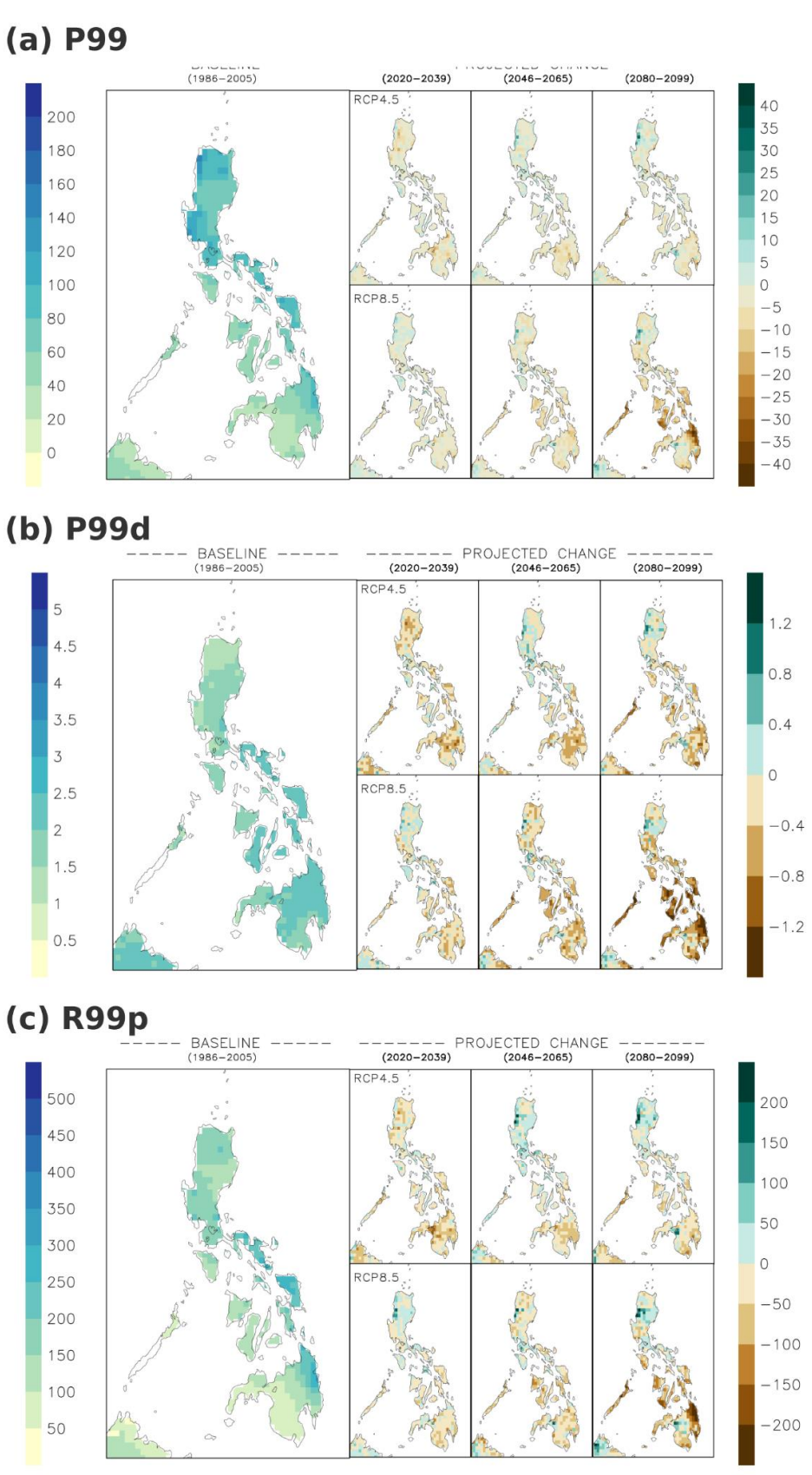


Figure 25. Same as Figure 18 but for (a) P99, (b) P99d, and (c) R99p

[CWD] Longest wet spell, days

CWD is the number of consecutive wet days, when daily rainfall is at least 1 mm (Figure 26a). It denotes the longest stretch of wet days within the year. CWD has implications on soil saturation, storage at water reservoirs and drainage of waterways. Increased CWD indicates not only increased water availability but also increased risk to flooding and landslide hazards. On the other hand, decreased CWD would also point towards less water availability and increased drying and heating.

Historically, most of the country experiences at least eight consecutive wet days with some areas such as southern Luzon and the Visayas experiencing as long as 28 consecutive days of rain. Model projections generally show spatially varying changes in CWD, mainly towards a shortening in duration. Maximum deductions of up to 19 days are projected over southern Luzon and the Bicol Region, with the larger decreases expected in the RCP4.5 scenario.

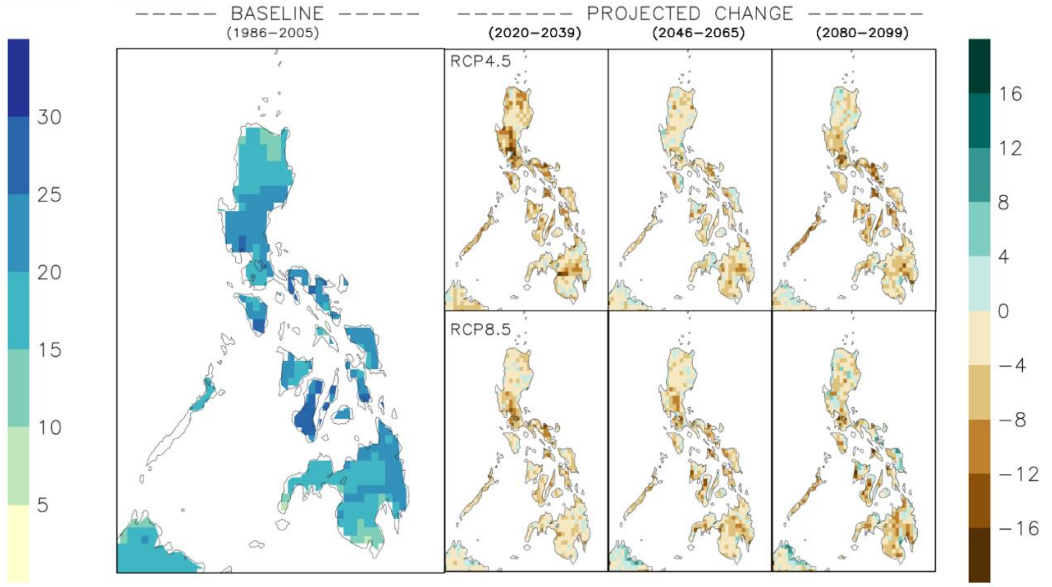
[CDD] Longest dry spell, days

CDD is the number of Consecutive Dry Days, when daily rainfall is less than 1 mm, denoting the longest stretch of dry days within the year (Figure 26b). Increasing CDD indicates more dry days and therefore less rainy days; conversely, decreasing CDD indicates fewer dry days and therefore more rainy days. This has implications on4 the recharge of surface and groundwater resources.

Historical observations show that most of the country experience at least ten consecutive dry days within the year with western Luzon and northern Palawan experiencing the longest dry spells at around 106 days. Projections show small (up to ±3 days) but highly spatially variable changes in future CDD. For both RCP4.5 and RCP8.5 scenarios, the changes are highly localized but tend to increase (in either direction) in the future.

It is interesting to note that in some regions such as Central Luzon, in the RCP4.5 scenario, the CDD decreases in the early- and mid-future but switches in the late-future, indicating an increase in CDD. In the RCP8.5 scenario, the same region shows progressive decrease in CDD as it goes further into the future.

(a) CWD



(b) CDD

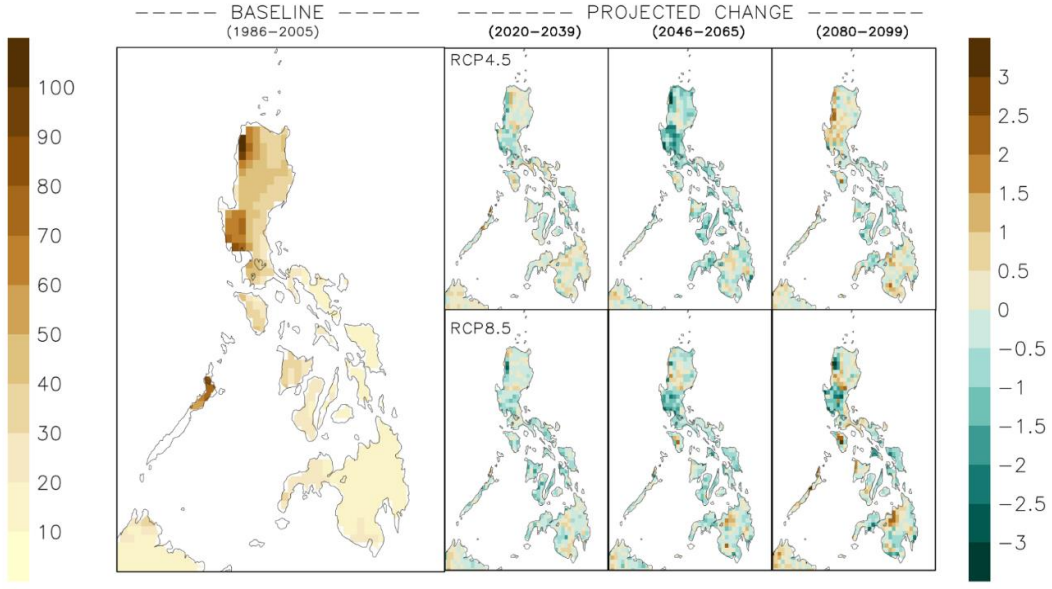


Figure 26. Same as Figure 18 but for (a) CWD and (b) CDD

In summary, the temperature extreme indices show spatial variability in the baseline; but projected changes indicate almost spatially uniform warming trends, with the magnitude, frequency and duration of warming increasing in the future. The change in DTR is particularly interesting as it indicates a slight cooling and greater spatial variability in the future. However, the magnitude of change is relatively small and warrants further investigation.

The precipitation extreme indices show distinct patterns of spatial variability in the baseline data, especially for the magnitude and frequency indices. The projected changes indicate a general drying trend but also the occurrence of extreme rainfall events in many areas. Prolonged wet events tend to decrease, but prolonged dry events also show localized decreases, indicating possibilities of increased frequency of wet events in the future which would interrupt the long-duration dry events.

The complexity of these projected changes thus invite further localized analysis. The provincial-scale data presented in Annex A is an attempt at capturing these local-scale changes so that it will be useful in the climate change adaptation and risk management planning process of the LGUs.

Section 3: Potential Impacts and Adaptation Options

This section deals with the use of climate extremes projections in climate impact assessment to help manage risks and select adaptation techniques. Although mean climate change has been used globally to describe observed present and projected future changes based on a set baseline period, natural variability recorded by extreme temperatures and rainfall would generate better conclusions on the evolution of such changes [16]. In comparison, mean climate change is smaller than climate extremes, thus it tends to exceed more often when used as thresholds in modelling applications [17]. In terms of adaptation analysis, impact response is more critical to sudden fluctuations in weather and climate, which is captured by the occurrence of climate extremes as opposed to climatic averages [18]. Possible impacts based on available literature are presented emphasizing future trends in climate extremes identified in Section 2.

Humans can adapt to climate change by reducing their exposure and vulnerability to its impacts, and one way to do this is through investments in new or enhanced research, technology, and infrastructure [19]. The aim is to reduce the vulnerabilities in the social and biological system and build resilience in societies against climate change [20]. Adaptations presented here are only illustrative. The final choice of appropriate options must undergo an assessment process. Adaptation measures need to be evaluated to assess its effectiveness, costs, co-benefits, implementation requirements, applicability, and potential financing in the context of the implementing institution (LGU) [21]. Here we present adaptation technologies and options that are found effective in addressing possible impacts of changes in climate for the agriculture, human health, water, environment and biodiversity, and infrastructure sectors. References to such technologies are also given to allow LGUs and users to assess its viability for local use.

3.1 Agriculture

Agriculture is a sector most sensitive to climate changes and variability [22, 23]. Climate change, along with other factors including population growth, land area decline, high cost of materials, and irrigation problems pose a major threat to rice production in the Philippines [24].

The observed and projected shifts in mean temperature and rainfall, in all regions of the world, would likewise bring changes in temperature and precipitation extremes, which significantly affect the cropping patterns, crop yields, and crop phenology [20]. The uncertainty in crop performance brought by extreme events, characterized by maximum or minimum temperature and sequences of dry or wet days [18], may lead to an increase in production risk and a decrease in profitability of the agriculture sector [16].

Potential Impacts

With its hot, humid climate and prolonged sunshine, the Philippines is well-suited for rice production, but increasing temperatures may lead to reduced rice growth [25]. Global studies on crop yield estimates a reduction of 5–7% in rice yield for every 1°C rise in mean daily temperature due to underlying conditions including heat stress, shortened growing period, and increased maintenance respiration [26]. Projected increases in TNx will definitely affect rice yields in the future following a 10% decrease per 1°C increase in minimum temperature during the dry season [26]. Likewise, a similar increase in nighttime temperature indices (TNx, TNm, and TNn) contributes largely to increased spikelet degeneration, thus rice yield decline [27]. Portions of the Philippines experiencing TXx of at least 35°C are already experiencing heat stress [28] and may lead to reduced growth when temperatures reach above 40°C [25]. Frequent instances of temperatures at 35°C, as suggested by TX90p, are found to be associated with increased spikelet sterility [26]. Furthermore, the longer duration of high temperatures given by WSDI, suggests rice paddy yield loss, as evidenced in China, where temperatures of 38°C for a duration of 10–20 days led to a yield reduction of 5.18 million tonnes [29].

In terms of rainfall, rice production is affected by erratic rainfall and drought periods (especially during growth phase) and by prolonged flooding in all phases of rice cultivation [25]. Successive heavy rains associated with Rx5day may cause severe drainage problems in rice paddies, which cascades to a reduction in rice yield and quality [24]. Heavy rainfall events described by Rx1day, occurring on periods before rice harvest cause severe yield reduction, while prolonged periods of heavy rainfall during initial crop development lead to crop growth abortion [18]. Other impacts on rice production include the delay of panicle initiation, extension of panicle development and reduction of grain number due to water stress. Drought impacts grain yield in all stages of rice growth and development, while its frequency, described by CDD, reduces water supply and increases plant transpiration water requirements [26]. Further studies on rainfall thresholds must be done in the provincial level to determine its impact on rice yield and production.

For upland farms, crop performance, productivity, and farm income are highly affected by changes in rainfall patterns as water sources rely heavily on rainfall [30]. Long dry conditions magnify these impacts as crops tend to dry up, planting is delayed, and planting period is shortened. Conversely, prolonged rain produces flooding and excessive soil erosion which also decreases crop yield due to damages, wash out, and pests and diseases [31]. In addition, high temperatures increase the risks of water stress and fires resulting in burning and/or damaging of the upland farms [32].

Adaptation Options

Risk management in agriculture follows a variety of options aimed to increase crop resilience, reduce crop water demand, strengthen adaptation to floods, and protect livestock. Table 3 summarizes technologies which are found effective in reducing risks and adapting to the changing climate extremes in rice production.

Table 3. Adaptation options for the agriculture sector.

Adaptation option	How does it work?	Source
1. Crop resiliency		
Crop breeding	Existing plant threshold is amplified to tolerate increases in average temperature extremes, heat events, and other factors.	[26, 33, 34]
Fungal symbionts	Host crops' tolerance to higher temperatures, droughts, and higher concentrations of CO_2 is increased compared to conventional crops.	[33]
Recommended rice varieties	Different varieties suitable for irrigated, rainfed, upland, flood-prone, and saline areas are planted based on projected changes.	[35, 18]
2. Reduce crop water demand and water waste		
Laser land leveling	Fields are brought to near flatness using laser technology to reduce runoff and improve water efficiency.	[21]
Pressurized irrigation	Drip systems deliver water directly to the plants' roots to provide an ideal moisture level for plants and reduce water demand.	[21, 22, 35]
Alternate wetting and drying (AWD)	Farm fields are repeatedly flooded, then dried out before being reflooded to reduce irrigation hours by 38%.	[20, 21, 36]
Dry direct and Direct Seeding	Irrigating and plowing are shortened saving as much as 30% of water; ideal for limited rainfall and supply shortage scenarios.	[35]
Carbonized rice hull	Rice hull serves as soil conditioner and increases soil water-holding capacity.	[35]
Conservation Tillage	Previous crop's residues are purposely left on the soil surface to decelerate water movement and reduce soil erosion.	[37, 38]
3. Improve adaptation to flooding and drought		
Floating agriculture or garden	Crops are planted on soilless floating rafts to adapt in flood-prone locations.	[21, 35]
Recommended rice varieties	Different varieties suitable for irrigated, rainfed, upland, flood-prone, and saline areas are planted based on projected changes.	[18, 26, 33, 35]
Cropping pattern and calendar changes	Staggered planting and shifting of planting schedules are performed to synchronize the start of the cropping period with the onset of the rainy season.	[22, 33]
Sorjan cropping system	A method of intercropping where dryland crops are grown on raised beds while wetland crops are grown on the sinks. The sinks are constructed to adapt to flooding and droughts by impounding water during the wet season and using the collected water for irrigation.	[35]
Sprinkler Irrigation	Water requirements of soil loss due to consumption of crops is supplied through pressurized irrigation using mechanical and hydraulic devices to simulate natural rainfall.	[37]
4. Crop loss reduction and safety nets		
Index-based Climate Insurance	Climate models are used to determine how climate extremes affect crop production using climate indices. Climate insurance is paid compensation based on substantial crop loss due to surpassing of climate thresholds.	[37, 38, 39]
Seed and Grain Storage	Good storage creates environmental conditions that protect the product and maintain its quality and its quantity to avoid losses.	[37]
Disaster-Resilient Communities	Fallback options (such as seaweed farming) for livelihood are adopted during environmental changes and after calamity to augment income of affected families.	[40]
Vermiculture	Organic fertilizer is produced and used instead of chemical-based fertilizers that may lead to land degradation and cause decreased crop yield.	[40]
5. Adaptation options for upland farming		
Use of non-chemical pest control traps	Dry coconut fronds, which serve as breeding site for pests are relocated and placed in nearby creeks to serve as breeding place for frogs which then prey on small insects	[41]
Sloping agricultural land technology (SALT)	Contour hedgerow systems and natural vegetative strips help minimize erosion and increase the availability of organic fertilizers.	[41, 40]
Vegetable-Agroforestry	Integration of vegetables in tree-based systems or vice versa creates crop and income diversification and conserves soil and water.	[41]
Conservation farming villages	Farming communities adopt technologies and approaches that increase land productivity and promote land conservation and rehabilitation to combat the effects of climate change, land degradation, and drought in the area.	[40]

3.2 Human Health

Another sector sensitive to changes in climate and climate extremes is Human Health. Impacts of changes in extreme temperature and rainfall patterns may include the proliferation of vector-borne diseases such as malaria and dengue, and exacerbation of health-related illnesses [42].

Similar to agriculture, indices of climate extremes are used to check present and future scenarios of heatwaves and vector-borne diseases. Climate extreme indices that look into the number of days, when daily maximum temperature and daily minimum temperature are above a certain threshold, have important implications to human health [23]. With the correlation established between the incidence of dengue fever and rainfall [22], more deaths and illnesses associated with mosquitoes are expected as the frequency and intensity of extreme precipitation are projected to continue to increase [43].

Potential Impacts

Human exposure to vector-borne diseases is influenced by changes in weather and climate conditions [43, 44]. Higher temperatures shorten the development time of disease-carrying mosquitoes, consequently increasing biting rates and disease transmission [42, 45]. Modeling suggests that for every 1°C increase in temperature there is a ten-fold increase in mosquito population [46]. In NCR alone, high occurrences of dengue fever are recorded at temperatures from 23–28°C [47]. Projected increase in nighttime temperatures will then make future conditions more suitable for dengue fever.

Changes in rainfall frequency and intensity may likewise increase occurrences of dengue fever. Although heavy rainfall events may help decrease the number of dengue cases, the projected decline in rainfall in most areas of the country, described by PRCPTOT, R95p and R99p, coupled with longer dry periods (CDD) events, may encourage people to store more water, a practice that increases possible breeding sites of Aedes mosquitoes [45].

Adaptation Options

Heat-related medical conditions are also exacerbated by increased intensity and frequency of high temperatures [43, 48, 49]. Heat-related mortality is highly associated with daytime (nighttime) threshold temperatures of 38.3°C (24.3°C) [50].

Exceeding projections in daytime (TXx, TXm, and TXn) and nighttime (TNx, TNn, and TNm) temperature indices in the future make the population at risk. especially children, the elderly and those with comorbidities. Even at temperatures close to 37°C, serious health risks may already occur [51]. Frequent concurrent warm nights (TN90p) are increasingly seen as a cause of heat risk and stress [49]. Extended duration of dry spells (WSDI) also increases one's vulnerability to heat waves [52].

Table 4. Adaptation options for the health sector.

Adaptation option	How does it work?	Source
1. Lessening the impact of changes in diseases		
Distribution of long-lasting insecticidal bed nets (LLINs)	LLIN-treated pyrethroid insecticides protect users using both the physical barrier and insecticidal action.	[21]
Rapid diagnostic tests	Quick diagnosis of illness is done through testing kits using strips that change color in the presence of a parasite	[21]
Immunization programs	Prioritizing new vaccination or immunization programs for high-risk groups.	[53, 54]
Biological vector control with parasites, predators, pathogens	Transmission of vector-borne diseases are minimized by using biocontrol agents that suppress the vector population or saturate treatment of pathogens.	[54]
Chemotherapy	Targeting of pathogens with drugs to reduce transmission and symptoms.	[54]
Management of environment or housing	Housing, water supplies, and sanitation are improved while livestocks are infused in the community to provide alternative hosts for vector-borne diseases.	[54]
Integration of vector and disease management	Preventative measures including design of water reservoirs, maintenance of dam spillways, and irrigation canals to avoid areas of shallow water that are suitable for breeding of mosquitoes.	[54]
2. Lessening the impact of occurrences of heat waves		
Temperature regulation	Incorporating cooling techniques (e.g. mandatory tree planting requirements, effective management of green space, and mandated passive heat management techniques) to new buildings.	[49]
Incorporating thermal comfort in design	Public transport, flexible energy grids, water distribution and green infrastructure (e.g. permeable pavements, wetlands, water bodies) are designed, planned and built to withstand, as well as minimize, chronic heat exposure.	[49]
Cool roofs	Building of roofs that are prepared, covered or coated with materials that reflect sunlight and reduce heat emitting solar radiation in urban areas.	[55]
3. Incorporating advanced information technology		
Disease surveillance systems	Collection, processing, interpretation, and dissemination of data are done through advanced information and communication devices to efficiently support infectious disease monitoring and response.	[21, 45, 40]
eHealth	Healthcare can be accessed through advanced computing by health-care providers, the use of distance-spanning communication technologies, use of mobile devices, and comprehensive, digitally-enabled, and rapidly deployable mobile eHealth centers.	[21]
4. Improve Health system and sanitation		
Strengthening primary health care and public health system	Developing health promotion and preventive programs to increase government and community participation on health issues.	[53]
Improve sanitary conditions	Developing responses for communal, drinking water, garbage, sewage, food, etc. demand and improve national contingency plans.	[53]
International information exchange	Participate in international meetings and develop projects with other countries on health issues on climate change.	[53]
Rapid Assessment Tools	Patient management that can rapidly design appropriate intervention is assessed through user-friendly and comprehensible assessment tools. This allows ease in data collection and results within 24 hours.	[40]

Various adaptation methods can be utilized to lessen the impact of changes in vector-borne diseases and heatwaves. A variety of options, with the help of advanced information technology, can be adapted to manage risks of extreme climate events in the health sector [31]. A summary of such options is found in Table 4.

3.3 Water Resources

Changes in weather and climate patterns also have an impact in the water supply and hydropower generation. Variations in rainfall extremes may lead to adverse impacts at both ends of the spectrum, from degrading water quality and flooding to energy insufficiency and water scarcity [56].

Projecting climate extremes is vital in estimating future water supply and demand since it emphasizes on the severity and frequency of extreme events better than historical averages. Incorporating the new climate extreme projections on dam design would lead to greater holding capacities during high floods and better probability of drought projections for hydropower projects [56]. A plan based on multiple future climate scenarios using new thresholds, created by coordinating engineers, economists and conservationists, will result in a more robust long-term strategy [57].

Potential Impacts

Impacts on water supply are greatly affected by both positive and negative extreme rainfall events. Drier conditions suggested by rainfall indices describing magnitude (e.g. PRCPTOT and SDII) will lead to lower streamflow, diminished water quality, and higher water turbidity. According to the World Bank, the Philippines' water availability per capita is already under the water stress level [58]. Lower PRCPTOT may place the country below the water scarcity threshold of 1,000 cubic meters per year in the future. The decline in precipitation and longer dry spells (CDD) can potentially lead to water service disruptions. On the other hand, locations with projected increase in intense precipitation events (P95 and P99) that occur more frequently (P95d and P99d) pose a challenge to current water management and flood control infrastructures [59]. In addition, increase in temperature can lead to algal blooms, which can compromise water quality and may require more advanced treatment [59].

Dams supply fresh water for households use, irrigation, and power generation. Water resources of major reservoirs (e.g. Pantabangan and Carranglan) are vulnerable to very high temperatures (TXx) especially during the summer season [32]. Extreme changes in magnitude and frequency of extreme precipitation events (rainfall extreme magnitude indicators) pose a severe threat on the safety and structural integrity of dams, since designs are mostly based on assumption of historical rainfall events. Increased rainfall magnitude may trigger dam releases which may lead to flooding in downstream areas. Extreme rainfall events (Rx1day and Rx5day) will increase dam siltation and reduce its useful lifetime [56]. An increase of 10% (20%) precipitation may induce an 8% (18%) increase in runoff [60] leading to flash floods events [61] when existing spillways can no longer evacuate excess runoff in the future. Conversely, drier conditions projected by magnitude rainfall indicators may lead to decrease in runoff, low water level, and decreased water quality.

In the Philippines, most dams also double as hydroelectric power stations providing around 18% of the country's total electricity supply (as of June 2016) [62]. Projected increase in temperatures will cause a surge in energy demand while longer dry periods (WSDI) will reduce the efficiency of power plants [63]. In drier conditions many hydropower projects will be uneconomical due to lower water levels which decrease electric production capacity [57] and lead to power generation losses.

Adaptation Options

Lessening the impact of changes in water supply and quality is tantamount to our future survival. A variety of options can be adapted to manage risks of extreme climate events in the water sector [64] as shown in Table 5.

Table 5. Adaptation options for the water sector.

Adaptation option	How does it work?	Source
1. Improving water supply		
Rainwater harvesting	Techniques like nanoalumina, photodisinfection, and water electrolysis are used to collect and store precipitation in wells, cisterns, or reservoirs.	[21, 65, 40]
Surface water storage	Water is collected from reservoirs, cisterns, tanks, or ponds when plentiful and then retained for future-use.	[21]
Inter-basin water transfer	Water from one water basin or catchment area is transferred to another via canals, tunnels, bridges, or rerouted stream flow.	[21]
Water loss reduction technologies	The use of techniques for reducing losses from reservoirs (e.g., with chemical water evaporation retardants), reducing water losses during distribution (e.g., by installing pressure control equipment to reduce pressure at night, thus reducing losses from leaks), and reducing losses during irrigation (e.g., by addressing leaks and wall breaks).	[21]
Water demand reduction technologies	Water efficient technologies (e.g., no- or low-flow toilets, low-flow showerheads, reformulated manufacturing techniques) in households and commercial entities that reduce water demand are installed.	[21]
Desalination	Transforms saltwater or brackish water through membrane technology and energy management to suitable applications like human consumption and irrigation.	[21]
Seasonal water rationing	Water rates are controlled through restrictions based on seasonal availability of water and socioeconomic priorities.	[66]
Fog harvesting	Water is retrieved from wind-driven fog especially in coastal and mountainous regions. A mesh net system, stabilized between two posts that are spread out at an angle perpendicular to the prevailing wind carrying the fog is usually constructed for this method.	[66, 37]
2. Improving water quality		
Wastewater treatment	Non-usable water is turned into potable water or water suitable for other targeted uses.	[21]
Accommodation to flooding	Designing structures (e.g. elevated buildings and infrastructure, structures that move with water level, flood bypasses) that can withstand impacts of faster water flow and downstream flooding.	[21, 65, 40]
Safeguarding water quality	Use of information technology to predict water quality changes for different scenarios used to plan appropriate and prompt interventions [e.g. robotic SWANs (Smart Water Assessment Network)].	[58]
Riparian buffers	Riparian buffers to maintain water quality in streams and rivers by protecting aquatic environments from the impacts of surrounding land use.	[65]
Solar water distillation	The energy from sunlight is used to separate freshwater from salts or other contaminants using solar water distillers.	[66, 40]
3. Flood control		
Nonstructural (soft) barriers to flooding	Restoring the natural protective functions of coastal ecosystems and landforms (e.g. wetlands, reforestation, afforestation, and conservation) reduces coastal flooding and erosion.	[21, 65]
Green spaces	Deal with stormwater runoff in the presence of large areas of impervious surfaces (e.g. rain gardens and bioswales).	[65]
Permeable pavements	Permeable pavement is made of materials that allow for the water to infiltrate, be filtered and recharge groundwater.	[65]
Eco-efficient water infrastructure	Climate change-resilient design be incorporated into master plans to be developed under a reformed water sector including disaster resilient water infrastructure.	[65, 40]
Natural wetlands	Restore the original hydrology and topography of the wetland so that natural processes and ecosystem services delivering water storage and regulation benefits can be maintained.	[66, 38, 21, 65]
Bioswales	A long, linear strip of vegetation in an urban setting used to collect runoff water from large impermeable surfaces such as roads and parking lots to filter stormwater.	[66, 65]
Community hydrological information network	Communities engage in regular hydrological monitoring on built early warning systems to support community disaster information and awareness.	[40]

3.4 Environment and Biodiversity

Climate change has also been attributed to the decline and failure of both forests and marine ecosystems. The high dependence of Asian economies on the environment puts it in a vulnerable situation from adverse impacts of climate change [67]. In the Philippines, the forest ecosystem is directly affected by such adverse impacts that even environmental services such as biodiversity is affected [68]. As one of the 18 mega-biodiversity countries of the world, further exacerbation of climate change stresses and impacts may lead to the extinction of endemic fauna and flora in the country.

A comparative analysis of climate extreme indices and threshold values of endemic plants and animals would allow decision makers to determine critical hot spots of immediate concern. The identification of such temperature and rainfall thresholds is important since any long-term change in the temperature and rainfall extreme patterns in an ecosystem can change the distribution of plants and animals in the area.

Potential Impacts

The impacts of the projected warming temperatures to ecosystems and biodiversity show a wide range of possibilities. For instance, a 1°C increase in the minimum temperature during the dry cropping season may lead to a 3–32% habitat loss and 59–736 meters migration rate per year as species look for ample food supply [69]. Warmer temperatures may also limit cold-adapted animal species, increase the spread of invasive alien species of plants, and change the reproduction timings and lengths of growing seasons of plants [70, 71]. Specifically, an increase in temperature of at least 1°C can totally eliminate dry forests [64], while a 2–3°C increase in temperature in the tropics would have detrimental effects to plant tissues especially during extended exposures to 35–40°C of temperature [68]. Tree species like the teak tree has a threshold minimum (maximum) temperature of 13–17°C (30–43°C) [72]. An increase even in the seasonal extreme temperatures may alter the flowering, fruiting, shoot growth, and leaf fall of forest trees and other plants which may affect their interactions with other species like pollinators and migratory species that depend on forest trees.

Forest ecosystems are also vulnerable to changes in rainfall patterns. An increase in rainfall amounts may cause nest inundation and fungal pathogen loads [73]. The dry forest, for instance, could totally disappear with a 25% increase in rainfall [68]. Moreover, heavier rainfall is detrimental to amphibian and reptile species that breed in slow flowing waters as faster water flow may cause their larvae to get washed off. In Southeast Asia, shifting rainfall patterns have already caused endemic fauna and flora to disappear [22]. On the other hand, a decrease in rainfall may result in forests drying up and becoming more vulnerable to destructive fires. This makes reforestation efforts less successful, increasing incidents of species migration, and changing the landscapes of wetlands and mangrove systems [70].

Marine and coastal ecosystems are likewise affected by changes in temperature as some species are already near their thermal limits. An increase of at least 2–3°C above the current average have been shown to decrease the survival of marine animals while a 4-week successive increase of more than 1°C in warm season maximum temperature may lead to coral bleaching [74]. Increased rainfall will induce upland erosion which reduces water quality as sediment settles on shallow coastal areas. Salinity fluctuations caused by extreme rainfall may likewise shift marine species farther offshore [75, 76].

Adaptation Options

The Philippines, being a biodiversity hotspot, is among the regions of the world with the greatest need for adaptation. Reducing the climate impact of changes already locked into ecosystems and biodiversity is critical. Table 6 summarizes these adaptation options.

Table 6. Adaptation options for the biodiversity and environment sector.

Adaptation option	How does it work?	Source
1. Reducing impacts on ecosystems		
Riparian reforestation	Reforestation of native riparian tree species along river and stream banks to provide shade and maintain normal water temperatures during summer months.	[77, 78, 79]
Managing for habitat type	Identification and conservation of functional groups (e.g., perennial grasses in a grassland ecosystem) or habitat types (e.g., tropical rainforest) instead of specific species to effectively conserve more species than dedicating scarce resources to the conservation of a few individual endangered species.	[77, 78, 80, 81]
Monitoring ecosystem-level indicators	Ecosystem level indicators such as species richness, biomass, and densities of plants and animals are used to track impacts of climate change, ecosystem function, and the effectiveness of adaptation measures.	[77, 80, 40]
Alter stand structure and composition	Direct manipulation of stand structure and composition to increase water for on-site forest use.	[80, 82]
Expand or create new protected areas	Expansion or creation of new reserves to increase the number of functionally connected units, which may increase resilience to climate change for migratory species and protect more species for longer periods of time in a changing climate.	[79, 80, 83, 81]
Restore floodplains	Increased infiltration (stormwater infrastructure) and water storage in wetlands and floodplains will minimize floods and conserve water for future use. Intact floodplains will allow overbank flows that are critical to biota and biogeochemical processes and that enhance groundwater recharge.	[81, 83, 84]
Re-establish ecosystem engineers	Re-introduction or management of organisms that have the capacity to significantly modify an ecosystem or habitat.	[83, 85]
Communication climate change to communities	Community-based adaptation options and activities including film showing (game shows), community theater play, and local videos are introduced to increase the level of acceptance of communities to interventions and heighten their involvement in the adaptation options.	[40]
2. Lessening impacts on biodiversity		
Natural regeneration and enrichment planting of adapted plant species	Native species with characteristics adapted to projected climate conditions are identified and protected through natural regeneration or enriched by planting new seedlings where the existing density of the species is sparse.	[77, 80, 83]
Food propagation	Planting of food plants in areas phenology of animals and their food plants are decoupled to help early arriving migratory birds find food plants in such areas.	[77]
Managed relocation	The intentional movement of populations or species from current areas of occupancy to locations where the probability of future persistence of an adequate environment is projected to be higher.	[77, 86]
Establishment and maintenance of corridors	Species dispersal and migration as climate change shifts the location of habitats over time is facilitated instead of habitat fragmentation which will impair the ability of species to adapt to climate change.	[77, 78, 80, 83, 84, 85, 87, 88]
3. Reducing incidents of forest fires		
Prescribed burning	The planned use and introduction of fire to simulate natural fire in an ecosystem to reduce the amount of litter and woody debris.	[77, 80, 82, 85, 87]
Forest thinning	Reducing fire severity, as well as increasing productivity and long-term forest resistance to drought-related dieback and disturbance across various projected climate scenarios, through thinning strategies is done for both highly managed forests and as an adaptation strategy in natural reserves.	[80, 82, 83, 89]
Modify post-fire reforestation practices	Species and genetic stock drawn from a wider geographic range and with broader climate tolerances can be used to enable reforested areas to better survive under future climatic conditions.	[83]
4. Adaptation measures against erosion and floods in coastal environments		
Wetland conservation	Mangroves have been planted and protected natural wetland habitats have proven their ability to protect and buffer communities against storm surge, erosion and floods.	[90, 40]
Payment for Ecosystem Services	Financial instruments that provide long-term funding for environmental management policies and actions by strengthening existing conservation programs and policies to minimize damages from different climate change hazards.	[90, 91]
Coastal development setbacks	Setbacks create a buffer between shoreline development and the sea. Such buffers may accommodate long-term fluctuations in changes in shoreline profile.	[90]
Living shorelines	Vegetated shoreline habitats are restored and enhanced to help control erosion in estuaries, lagoons and riverine areas.	[90]

3.5 Infrastructure

The infrastructure sector includes a wide selection of social services including ciritcal lifeline facitlies such as hospitals, food and water services, transportation, communication, energy, public and private buildings of all types and many other sectors. Damages to such infrastructures caused by natural hazards exacerbated by climate change have been widely documented. For instance, recent intense typhoons in the Philippines have brought extreme amounts of rainfall resulting in flooding, landslides, accelerated erosion, and sedimentation. Such events have caused key infrastructures to fail and to be less efficient [92]. Increases in temperature may even lead to structural fatigue and materials failure of roads and bridges [92].

Information on the effects of climate extremes would allow climate-proofing measures to extend the lives of these structures [93]. Identifying the impacts of extreme temperature and rainfall will likewise guide urban planners in selecting future project sites and methods that incorporate

Potential Impacts

Roads are susceptible to both extreme temperatures and rainfall. Pavements exposed to high temperatures, especially for consecutive days may result in softening and surface tearing [94]. The operations of electrical equipment such as traffic and street lights may also be affected. Intense rains may likewise weaken pavements and road surfaces [94]. Cascading impacts including floods and landslides may lead to road closures or rehabilitation. Changes in drainage system capacity should be reconsidered.

The projected changes in temperature and rainfall extremes has an effect on bridges and steel infrastructure. A 2˚C increase in temperature is found to increase the corrosion rate of steel by up to 15% [95]. Higher temperatures and increased precipitation may contribute to an increased risk of deterioration of bridges. Studies suggest that in the next 30 years, floods that currently has a 50-year return period will only have a 20-year return period due to changes in extreme rainfall [96]. Bridges designed using lower return period may lead to deterioration or total submersion in the future way before its intended lifespan.

Adaptation Options

The aim of adaptation measures is to minimize climate change-related risks on infrastructure, including damage to assets. This, in turn, decreases long-term operational and maintenance costs and protects its revenues and socioeconomic benefits. Key infrastructures must be made more resilient so that these impacts can be reduced. Details of these adaptation options are shown in Table 7.

Table 7. Adaptation options for the infrastructure sector.

Adaptation option	How does it work?	Source
1. Improving durability of roads		
Warm-mix asphalt (WMA)	WMA has increased durability to reduce cracking, rutting, and other damages caused by extreme temperatures and precipitation.	[21, 97]
Use of alternative bitumen products	Polymer modified binders help decelerate road surfaces from becoming brittle due to oxidation caused by higher temperatures thus improve its whole life effectiveness	[94]
Walkable and bicycle-friendly cities	Constructing bicycle and walkable paths along existing roadways allows for recovery of waterway easements and general improvement of sidewalks and roadways.	[40]
2. Community-based adaptation to flood and other hazards		
Cloud-based Flood Prevention and Monitoring System	"Floud" technology or use of Geographic Information Systems (GIS) employs ultra-low-cost environmental monitoring devices designed to enable, through a cloud-based data collection mechanism, extensive and real-time monitoring of the status of floods in urban areas.	[97, 40]
Green Corridors	Existing riparian galleries are rehabilitated and connected to parks and gardens to make green infrastructures that reduce vulnerabilities to floods and heat waves.	[97]
Community-based hazard mapping	Early warning systems and contingency plans are institutionalized for community-identified natural hazards.	[98, 99, 40]
Creation of all-weather Schools	Learning and Public Use School (LAPUS) buildings designed to be hazard-resilient, all concrete school structure may alternate as evacuation centers during extreme events.	[100, 40]
Green building designs	Sustainable housing and environmentally-safe villages are made accessible to the poor and most vulnerable through disaster-resilient housing communities.	[40]
3. Lessening heat-stress to buildings and infrastructures		
Living Buildings	Urban transport hubs such as train stations and bus stations incorporate plant life into building design to increase evapotranspiration rates and help regulate temperature, providing a cooling effect on warm days.	[97]
Increasing design cover	Thickening the design cover of concrete increases the rate of carbonation and chloride ingress which reinforces it to delay carbonation and chloride-induced corrosion aggregated by extreme temperatures.	[95, 96]
Increasing strength grade	Cement with a high cement/water ratio slows down carbon dioxide and chloride penetration thus extending corrosion initiation rates and reducing corrosion damage.	[95, 96]
Protective surface coating	Application of acrylic-based surface coatings can reduce carbonation depths by 10–65% and reduce concrete deterioration by creating a barrier to retard chloride penetration.	[95, 96]
4. Redesigning drainage systems for extreme floods		
Sustainable drainage systems	Sustainable drainage systems (SuDS) such as soakaways, swales and ponds are incorporated in urban planning.	[97]
Building revetment structures	A sloping structure designed to protect an area and absorb the energy from incoming water.	[94]
Replacement or redesign of drainage systems	Existing undersized drainage are redesigned considering future needs based on potential for more intense rainfall events.	[94]

Section 4: The Climate Extremes Risk Analysis Matrix (CERAM)

The Philippine climate extremes information presented as national-scale maps (Section 2) and provincial-scale tables (Annex A) are designed to aid policy-makers in making robust decisions on disaster risk reduction and climate adaptation. To facilitate the integration of climate extremes in the decision-making process, the Climate Extremes Risk Analysis Matrix (CERAM) is hereby introduced. The CERAM, together with the Climate Information Risk Analysis Matrix (CLIRAM) [1], are tools to help assess the current and projected climate-related risks and identify potential options for climate risk management and adaptation. These tools are designed to work with existing policy-making frameworks, such as the Climate and Disaster Risk Assessment (CDRA) process currently in use by local government units in crafting their Local Climate Change Action Plans (LCCAP) [101], Comprehensive Land Use Plans (CLUP) [102] and Zoning Ordinances (ZO) [103]. A detailed description of the CERAM and a demonstration of how it is used are discussed in this section.

4.1 The CERAM worksheets

The CERAM for each province includes 6 worksheets: one worksheet for each projected time period (early-, mid-, and late-future) and climate variable (i.e. temperature and rainfall).

It is recommended that the worksheets be accomplished initially for each sector (e.g. agriculture, human health, water resources, environment and biodiversity, and infrastructure) to allow a finer analysis of the potential impacts of climate extremes and adaptation options. After accomplishing the worksheets, the results can then be integrated to determine the impacts and options that are common among or unique to the sectors.

Table 8 shows the two major parts of each worksheet. The first part, composed of columns 1–6, contains values corresponding to the selected time period and scenario, derived from the provincial-scale tables. Thus in Table 8, columns 1 and 2 list the climate extremes index code, description and unit; column 3 shows the baseline value; and column 4 splits the data for the two scenarios, RCP4.5 (upper row) and RCP8.5 (lower row). Columns 5 and 6 then show the corresponding projected value and projected change for each scenario.

Table 8. Climate Extreme Risk Analysis Matrix (CERAM) completion guide.

part 1 part 2

RAINFALL Climate Extreme Indices				MID-FUTURE Projections					
CODE	Description (unit)	Baseline	Scenario	Projected Value	Projected Change	Historical Impacts	Projected Changes in Extremes	Potential Impacts of Changes in Extremes	Adaptation Options
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10
Rx1day	Maximum 1-day rainfall total (mm)	81.8	RCP4.5	85.6	3.8	• What climate variable is the information about? • What climate extreme indicator is shown? Does this describe magnitude, frequency or duration? • What is its baseline value? • What climate-related events are associated with this indicator? • What high-impact historical events may be related to these index values? • Did the identified event cascade to other hazards? • What impacts did these events/hazards cause? • What sectors were affected and to what extent?	• What RCP scenario is being shown? • What RCP scenario is relevant to my planning needs? • Are the numbers referring to changes from the baseline, or to the new future values? • How big is the change from the baseline? • What is the direction of the change?	• Is the projected change significant to my locality? • What will this mean for my city/municipality? • What sectors will be impacted? • What will be the scope of its impact? • Will there be any changes to the current impacts I am experiencing? • Are actions to these impacts highly needed?	• What are the risks involved from the impacts? • What can I do to lessen these risks? • Is my current adaptation plan sufficient in addressing such risks? • Who are the relevant actors and stakeholders for these adaptation options? • To what extent can this adaptation option reduce my vulnerabilities? • Is it cost-efficient? • Is it feasible in my locality? • Are there any co-benefits? • What adaptation option can best address the current and future risks based on local capacities?
			RCP8.5	84.0	2.2				

The second part, composed of columns 7–10, requires input from the users based on their local experience and historical records. To facilitate filling-out these columns, guide questions are also provided in Table 8.

Column 7 requires information on historical impacts of the particular index. Users are asked to assess the baseline values shown in Column 3 and to identify associated historical climate-related impacts that the locality has observed and experienced. In some cases, these impacts could be induced by non-extreme meteorological events that may be compounded by other hazards as well as local exposure and social vulnerabilities. If so, users should take note of the other hazards as well as the community exposure and vulnerabilities which contributed to the impacts.

Column 8 is a summary of the projected change in the extremes index (columns 5 and 6) and sets the formulation of the statement required in column 9 on the potential impacts of the projected climate. Since the different RCP scenarios would most probably result in different outcomes, columns 8–10 should be analysed separately for each scenario.

Column 9 requires the users to assess the potential impacts of the changes on extremes. Starting with the historical impacts listed in column 7, evaluate how the projected changes will change future impacts. If there are no recorded historical impacts, will the projected changes introduce new impacts in the locality? Will other hazards, existing and projected exposure and vulnerabilities result in new or enhanced risks in the future?

It should be noted that even when the projected change in the extremes is negligible, there might be existing risks that could continue (or even worsen) future impacts. These past and/or present impacts should likewise be noted.

For example, there is no projected change in extreme rainfall in the future. However, at present, flooding already occurs regularly in the community. Will these flooding episodes stop or continue in the future despite the projections?

To aid users with their analysis, some sectoral impacts related to climate extreme indices are provided in Section 3.

Lastly, column 10 allows users to identify possible adaptation options to minimize the effects of climate extremes. To trigger interest and creative ideas, some adaptation options are listed in the tables in Section 3. Users should take note that the list contains only a very small sample of the many different options that local communities can take. Creative solutions that take into consideration a systems-thinking approach; solutions that consider the interrelation of each component, how the systems work over time and within the context of larger systems, should be considered.

4.2 Using the CERAM Tool

To demonstrate how the CERAM is used, a sample CERAM for the Agriculture sector, assessing the mid-future projections for temperature and rainfall are shown in Tables 9 and 10, respectively.

The responses for columns 7–10 in these tables are based on the answers by farmers and agricultural experts in Calapan City, Oriental Mindoro during the Australian Centre for International Agricultural Research (ACIAR) project "Action-ready climate knowledge to improve disaster risk management for small-holder farmers in the Philippines" [104].

The CERAM worksheets as well as the electronic copy of this report and related documentation will be made available through the DOST-PAGASA and the Manila Observatory web sites.

Table 9. Sample completed CERAM for the temperature extremes indices for the Agriculture sector of the province of Oriental Mindoro. The projections shown are for the mid-future (2045-2065) for both RCP4.5 amd RCP8.5

	TEMPERATURE Climate Extreme Indices				MID-FUTURE Projected Change						
	CODE	Description (*unit*)	Baseline	Scenario	Amount of Change	Projected Value	Historical Impacts	Projected Changes in Extremes	Potential Impacts of Changes in Extremes	Adaptation Option
	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10
MAGNITUDE	TNn	Coldest nighttime temperature (˚C)	14.8	RCP4.5	1.2	19.6	Coldest nighttime temperature is at 14.8˚C.	**Coldest projected annual night time temperature** will increase to 19.6˚C	• Decrease in yield • Increased spikelet degeneration	• Adopting crop breeding varieties • Fungal symbionts technology • Adjust planting calendar • Continue with the farm management • Delay crop planting • SMAW H2O Irrigation System • Shallow tube well • Pump irrigation system from open source • Increased application of ferti;izer • Crop Diversification
				RCP8.5	1.7	20.1		Coldest annual Tmin will increase to 20.1˚C		
	TNm	Average nighttime temperature (˚C)	21.8	RCP4.5	1.1	22.9	Average nighttime temperature is at 21.8˚C.	Mean annual Tmin will increase to 22.9˚C		
				RCP8.5	1.6	23.4		Mean annual Tmin will increase to 23.4˚C		
	TNx	Warmest nighttime temperature (˚C)	24.2	RCP4.5	1.2	25.4	Warmest nighttime temperature is at 24.2˚C.	Hottest annual Tmin will increase to 25.8˚C		
				RCP8.5	1.6	25.8		Hottest annual Tmin will increase to 25.8˚C		
	TXn	Coldest daytime temperature (˚C)	24.6	RCP4.5	1.2	25.8	Coldest daytime temperature is at 24.6˚C.	Coolest annual Tmax will increase to 25.8˚C	• Hardening of soil due to inadequate water • Wilting of crops • Decrease in yield • Presence of pests and fungal infection • Poor crop quality • Stunted crop growth	
				RCP8.5	1.6	26.2		Coolest annual Tmax will increase to 25.8˚C		
	TXm	Average daytime temperature (˚C)	29.7	RCP4.5	1.1	30.8	Average daytime temperature is at 29.7˚C.	Mean annual Tmax will increase to 30.8˚C		
				RCP8.5	1.6	31.3		Mean annual Tmax will increase to 31.3˚C		
	TXx	Hottest daytime temperature (˚C)	33.1	RCP4.5	1.2	34.3	Hottest daytime temperature is at 33.1˚C. Hotter temperatures have previously caused hardening of soil and crop wilting.	Hottest annual Tmax will increase to 34.3˚C		
				RCP8.5	1.7	34.8		**Hottest projected annual daytime temperature** will increase to 34.8˚C		
	DTR	Daily Temperature Range (˚C)	7.8	RCP4.5	0.1	7.9	Daily temperature range is at 7.8˚C.	Minimal to no change in mid-century	Same vulnerability to the present may continue in the future.	
				RCP8.5	0	7.8		Minimal to no change in mid-century		
FREQUENCY	TN10p	Fraction of cold nights (*days*)	11.7	RCP4.5	-9.8	1.9	Cold nights occur from 11-12 days in a year.	Cold nights will diminish to only 2 nights in the mid-century. Expect nights to be warmer.	• Reduced crop yields • Increased spikelet degeneration • Impaired grain growth	
				RCP8.5	-10.4	1.3		Cold nights will diminish to only 1 night in the mid-century. Expect nights to be warmer.		
	TX10p	Fraction of cool days (*days*)	11.4	RCP4.5	-9.9	1.5	Cool days occur from 11-12 days in a year.	Cool days will diminish to only 2 days in the mid-century. Expect days to be warmer.		
				RCP8.5	-10.2	1.2		Cool days will diminish to only 1 day in the mid-century. Expect days to be warmer.		
	TN90p	Fraction of warm nights (*days*)	11.5	RCP4.5	42.6	54.1	Warm nights occur from 11-12 days in a year	Occurrences of warm nights will increase to 54 days. Nights will become warmer.	• Reduced crop yields • Increased spikelet degeneration • Impaired grain growth	
				RCP8.5	61.9	73.4		Occurrences of warm nights will increase to 73 days. Night temperatures will become warme		
	TX90p	Fraction of hot days (*days*)	11.4	RCP4.5	43.1	54.5	Hot days occur from 11-12 days in a year. Only 4 barangays were categorized as very high vulnerability to drought.	Occurrences of hot days will increase to 55 days. Day temperatures will become hotter.		
				RCP8.5	56.9	68.3		Occurrences of hot days will increase to 63 days. Day temperatures will become hotter.		
DURATION	WSDI	Number of days contributing to a warm period (*days*)	2.7	RCP4.5	122.3	125	The number of days contributing to warm periods is only 2-3 days. Only 4 barangays were categorized as very high vulnerability to drought.	Duration of days contributing to a warm period will become 125 days. Substantially longer warm period ahead.	• Possible yield loss • Dryness of soil • Soil nutrient loss	
				RCP8.5	191.5	194.2		Duration of days contributing to a warm period will become 125 days. Substantially longer warm period ahead.		

Table 10. Sample completed CERAM for the rainfall extremes indices for the Agriculture sector of the province of Oriental Mindoro. The projections shown are for the mid-future (2045-2065) for both RCP4.5 amd RCP8.5

	RAINFALL Climate Extreme Indices		Baseline	Scenario	MID-FUTURE Projected Change		Historical Impacts	Projected Changes in Extremes	Potential Impacts of Changes in Extremes	Adaptation Options
	CODE	Description (*unit*)			Change	Value				
	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10
MAGNITUDE	PRCPTOT	Total wet-day rainfal (*mm*)	1992.7	RCP4.5	-22	1970.7	Total annual wet-day rainfall of 1992.7 mm is moslty due to occurences of thunderstorms, Asian monsoon, ITCZ, LPA, and tropical cyclones events. These events have triggered incidences of flooding in the past.	Minimal decrease to total annual wet-day rainfall of 22 mm (-1.1%). Past extremes events may continue in the future.	Same vulnerability to the present may continue in the future.	• Alternate wetting and drying (AWD) • Dry direct and Direct Seeding
				RCP8.5	-50.2	1942.5		Minimal decrease to total annual wet-day rainfall of 50.2 mm (-2.5%). Past extremes events may continue in the future.		
	SDII	Average daily rainfall intensity (*mm/day*)	10.7	RCP4.5	-0.1	10.6	Baseline SDII is 10.7 mm/day. Rainfall over short durations (1 hour) pose flood hazards on low-lying areas near river channels.	Minimal to no change.	Same vulnerability to the present may continue in the future.	
				RCP8.5	-0.4	10.3		Minimal to no change.		
	Rx1day	Maximum 1-day rainfall total (*mm*)	81.8	RCP4.5	3.8	85.6	Maximum 1-day rainfall is at 81.8 mm. Previous extreme events due to TCs have exceeded the baseline average and caused flashfloods occurrence as large number of barangays are susceptible to flooding. Agricultural loses have been recorded due to flashfloods.	Maximum 1-day total rainfall will increase by 3.8 mm. Extreme events like TCs may induce more rain in the future	• Greater risk of flooding • Immersion of seeds • Submergence of plants • Seeds washout • Decrease in yield • Presence of insects and fungal infection	• Ensure working irrigation systems • Establish drainage canals • Invest on EWS • Planting recommended rice varieties against flooding • Laser land leveling • Floating agriculture or garden • Sorjan cropping system • Index-based Climate Insurance
				RCP8.5	2.2	84		Maximum 1-day total rainfall will increase by 2.2 mm. Extreme events like TCs may induce more rain in the future		
	Rx5day	Maximum 5-day rainfall total (*mm*)	172.4	RCP4.5	9.1	181.5	Maximum 5-day total rainfall is 172.4 mm. Widespread flooding was experienced in the past. Heavy rains resulted to swelling of river. Breaching of dike. Floodwater washed away newly harvested crops	Total 5-day total rainfall will increase by 9.1 mm. Increase in rainfall amount on consecutive days may worsen flooding and related hazards.		
				RCP8.5	4.7	177.1		Total 5-day total rainfall will increase by 4.7 mm. Increase in rainfall amount on consecutive days may worsen flooding and related hazards.		
	P95	Rainfall on very wet days (*mm*)	33.4	RCP4.5	0.3	33.7	Rainfall on very wet days is at 33.4 mm. Flooding in low lying areas have been experienced	Minimal to no change.	Same vulnerability to the present may continue in the future.	
				RCP8.5	-0.7	32.7		Minimal to no change.		
	P99	Rainfall on extremely we days (*mm*)	60.5	RCP4.5	1.9	62.4	Rainfall on extremely wet days is 60.5 mm. Events of such magnitude have previously brought flashflood events.	Minimal to no change.		
				RCP8.5	0.6	61.1		Minimal to no change.		
	R95p	Total rainfall from very wet days (*mm*)	462.8	RCP4.5	26.4	489.2	Total rainfall from very wet days is at 462.8 mm This amount of rainfall are mostly due to TCs and monsoon events that have caused widespread flooding and losses in agriculture.	Total rainfall during very wet days will increase up to 26.4 mm. Intense rainfall events due to TCs and monsoons may bring more rain.	• Threaten wet season crop harvest • Risk of flooding • Submergence of plants • Immersion of seeds • Seeds washout • Poor to zero germination • Delayed planting	• Ensure working irrigation systems • Establish drainage canals • Planting recommended rice varieties against flooding • Laser land leveling • Floating agriculture or garden • Sorjan cropping system • Index-based Climate Insurance
				RCP8.5	-10	452.8		Total rainfall during very wet days may decrease by 10 mm.		
	R99p	Total rainfall from extremely wet days (*mm*)	147.8	RCP4.5	15.7	163.5	Total rainfall from extreme wet days is at 147.8 mm. These are mostly due to TCs and enhancement of monsoon rains.	Total rainfall during extremely wet days will increase by 15.7 mm. TCs and enhanced monsoon rains may be more intense.		
				RCP8.5	10.7	158.5		Total rainfall during extremely wet days will increase by 10.7 mm. TCs and enhanced monsoon rains may be more intense.		
FREQUENCY	P95d	Number of very wet days (*days*)	9.2	RCP4.5	0	9.2	Number of very wet days is at 9 days. Can be attributed to frequent flooding especially in low lying and riverbank areas.	Minimal to no change.	Same vulnerability to the present may continue in the future.	
				RCP8.5	-0.5	8.7		Minimal to no change.		
	P99d	Number of extremely wet days (*days*)	1.9	RCP4.5	0.1	2	There are 2 days of number of extremely wet days. These events have caused flashfloods	Minimal to no change.		
				RCP8.5	0	1.9		Minimal to no change.		
DURATION	CWD	Longest wet spell (*days*)	22.1	RCP4.5	0.2	22.3	Long periods of rain cause flooding. Overflow of major tributaries	Minimal to no change.	Same vulnerability to the present may continue in the future.	
				RCP8.5	0.4	22.5		Minimal to no change.		
	CDD	Longest dry spell (*days*)	27.5	RCP4.5	0	27.5	Water supply is highly susceptible to drought conditions.	Minimal to no change.		
				RCP8.5	-0.3	27.2		Minimal to no change.		

Annex A: Provincial-scale Observed and Projected Annual Climate Extremes

To facilitate local-scale planning, the following tables containing provincial-scale climate extremes data are provided. These provincial values were calculated by taking the average value of the grid points which fall within the provincial boundaries. Each grid point measures approximately 25-km by 25-km wide. Unfortunately, this means that some provinces with relatively small land areas are not represented by any grid point and thus will not be included in this list. These provinces include: Basilan, Batanes, Biliran, Camiguin, Dinagat Islands, Siquijor, Sulu, and Tawi-Tawi. To determine the projections for these provinces, an even higher-resolution dynamical or statistical model will have to be employed.

To interpret the following tables, kindly refer to this guide.

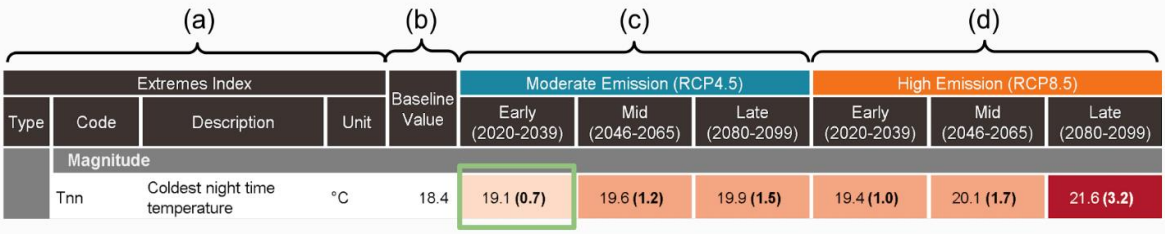


Figure A.1. The provincial data tables contain the (a) climate extremes index information; (b) baseline value; and projected value and projected change for two scenarios (c) RCP4.5 and (d) RCP8.5.

Corresponding to the national scale maps, each table has four main parts:

(a) the climate extremes index code, description, and unit of measurement. The indices are grouped by type (Temperature and Rainfall) and by attribute (magnitude, duration, and frequency).

(b) Baseline value from the 1986–2005 SA-OBS observation data. This value is shown against a white background.

(c) Projections for the moderate emission scenario (RCP4.5). These are shown as three columns (from left to right) representing the early-future (2020–2039), mid-future (2046–2065) and late-future (2080–2099). For each column, there are two values presented:

(i) the projected value, shown in normal font; and

(ii) amount of change, shown in bold font and enclosed by parenthesis

The projected value (c.i) is the sum of the baseline value (b) and the amount of change (c.ii).

(d) Projections for the high emission scenario (RCP8.5). These columns show similar values as in (c) but for the RCP8.5 scenario.

To facilitate the interpretation, the same color schemes are used for the maps and tables. Hence, for a province where the predominant temperature change is towards cooling, both map and table cells will be in shades of blue. If the change is towards warming, then both map and table cells will be in shades of red. For rainfall indices, wetter trends are shown in shades of green; drier trends in shades of brown. However, in cases where the changes are between +0.1 and -0.1, the table value is set to 0.0 and the cell background color is set to grey.

Aside from the tables shown in Annex A, the values in the provincial table are also provided in the spreadsheet format as part of the Climate Extremes Risk Assessment (CERAM), which will be discussed in Section 3.

National Capital Region (NCR)

Metropolitan Manila

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.0	19.0 **(1.0)**	19.3 **(1.3)**	19.6 **(1.6)**	19.0 **(1.0)**	19.8 **(1.8)**	21.5 **(3.5)**
	TNm	Average night time temperature	°C	23.1	23.8 **(0.7)**	24.3 **(1.2)**	24.6 **(1.5)**	23.9 **(0.8)**	24.8 **(1.7)**	26.3 **(3.2)**
	TNx	Warmest night time temperature	°C	26.6	27.3 **(0.7)**	27.8 **(1.2)**	28.2 **(1.6)**	27.4 **(0.8)**	28.3 **(1.7)**	29.7 **(3.1)**
	TXn	Coldest day time temperature	°C	25.7	26.4 **(0.7)**	26.8 **(1.1)**	27.1 **(1.4)**	26.4 **(0.7)**	27.3 **(1.6)**	28.6 **(2.9)**
	TXm	Average day time temperature	°C	31.8	32.4 **(0.6)**	33.0 **(1.2)**	33.3 **(1.5)**	32.6 **(0.8)**	33.4 **(1.6)**	35.0 **(3.2)**
	TXx	Warmest day time temperature	°C	36.4	37.1 **(0.7)**	37.7 **(1.3)**	38.2 **(1.8)**	37.3 **(0.9)**	38.2 **(1.8)**	40.1 **(3.7)**
	DTR	Daily temperature range	°C	8.7	8.6 **(-0.1)**	8.7 **(0.0)**	8.8 **(0.1)**	8.7 **(0.0)**	8.7 **(0.0)**	8.7 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.3 **(-8.1)**	1.7 **(-9.7)**	1.3 **(-10.1)**	2.6 **(-8.8)**	1.0 **(-10.4)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	35.9 **(24.5)**	59.3 **(47.9)**	70.7 **(59.3)**	43.2 **(31.8)**	78.3 **(66.9)**	96.5 **(85.1)**
	TX10p	Fraction of cool days	%	11.5	5.0 **(-6.5)**	2.4 **(-9.1)**	1.7 **(-9.8)**	4.1 **(-7.4)**	1.6 **(-9.9)**	0.9 **(-10.6)**
	TX90p	Fraction of hot days	%	11.6	26.3 **(14.7)**	49.7 **(38.1)**	61.9 **(50.3)**	35.4 **(23.8)**	63.2 **(51.6)**	90.6 **(79.0)**
	Duration									
	WSDI	Warm Spell Duration Index	days	7.2	73.6 **(66.4)**	226.2 **(219.0)**	364.3 **(357.1)**	129.1 **(121.9)**	365.0 **(357.8)**	365.0 **(357.8)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2259.8	2204.6 **(-55.2)**	2214.8 **(-45.0)**	2147.0 **(-112.8)**	2255.6 **(-4.2)**	2198.9 **(-60.9)**	2029.1 **(-230.7)**
	SDII	Average daily rainfall intensity	mm/day	15.4	15.3 **(-0.1)**	15.1 **(-0.3)**	14.6 **(-0.8)**	15.3 **(-0.1)**	14.9 **(-0.5)**	14.2 **(-1.2)**
	Rx1day	Maximum 1-day rainfall total	mm	121.4	126.9 **(5.5)**	132.3 **(10.9)**	124.7 **(3.3)**	135.7 **(14.3)**	131.3 **(9.9)**	128.2 **(6.8)**
	Rx5day	Maximum 5-day rainfall total	mm	268.8	289.3 **(20.5)**	290.5 **(21.7)**	261.9 **(-6.9)**	277.6 **(8.8)**	289.0 **(20.2)**	279.0 **(10.2)**
	P95	Rainfall on very wet days	mm	52.4	50.6 **(-1.8)**	51.3 **(-1.1)**	48.5 **(-3.9)**	51.1 **(-1.3)**	50.4 **(-2.0)**	48.4 **(-4.0)**
	P99	Rainfall on extremely wet days	mm	101.0	100.0 **(-1.0)**	106.1 **(5.1)**	98.8 **(-2.2)**	98.9 **(-2.1)**	103.5 **(2.5)**	103.3 **(2.3)**
	R95p	Total rainfall from very wet days	mm	585.8	564.2 **(-21.6)**	632.0 **(46.2)**	552.4 **(-33.4)**	590.6 **(4.8)**	579.6 **(-6.2)**	543.2 **(-42.6)**
	R99p	Total rainfall from extremely wet days	mm	189.7	175.9 **(-13.8)**	216.2 **(26.5)**	198.6 **(8.9)**	200.3 **(10.6)**	215.4 **(25.7)**	198.3 **(8.6)**
	Frequency									
	P95d	Number of very wet days	days	7.2	6.7 **(-0.5)**	7.1 **(-0.1)**	6.4 **(-0.8)**	6.9 **(-0.3)**	6.8 **(-0.4)**	6.3 **(-0.9)**
	P99d	Number of extremely wet days	days	1.5	1.5 **(0.0)**	1.7 **(0.2)**	1.5 **(0.0)**	1.5 **(0.0)**	1.6 **(0.1)**	1.5 **(0.0)**
	Duration									
	CWD	Longest wet spelll	days	17.0	14.4 **(-2.6)**	17.0 **(0.0)**	15.7 **(-1.3)**	15.5 **(-1.5)**	17.2 **(0.2)**	15.3 **(-1.7)**
	CDD	Longest dry spell	days	39.8	37.4 **(-2.4)**	37.0 **(-2.8)**	41.8 **(2.0)**	37.1 **(-2.7)**	36.7 **(-3.1)**	37.2 **(-2.6)**

Cordillera Administrative Region(CAR)

Abra

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	14.4	15.2 **(0.8)**	15.6 **(1.2)**	15.8 **(1.4)**	15.3 **(0.9)**	16.3 **(1.9)**	17.6 **(3.2)**
	TNm	Average night time temperature	°C	20.2	20.8 **(0.6)**	21.4 **(1.2)**	21.7 **(1.5)**	21.1 **(0.9)**	22.0 **(1.8)**	23.5 **(3.3)**
	TNx	Warmest night time temperature	°C	23.6	24.3 **(0.7)**	24.8 **(1.2)**	25.3 **(1.7)**	24.4 **(0.8)**	25.3 **(1.7)**	26.8 **(3.2)**
	TXn	Coldest day time temperature	°C	23.4	24.0 **(0.6)**	24.4 **(1.0)**	24.9 **(1.5)**	24.2 **(0.8)**	25.0 **(1.6)**	26.4 **(3.0)**
	TXm	Average day time temperature	°C	29.2	29.8 **(0.6)**	30.4 **(1.2)**	30.7 **(1.5)**	29.9 **(0.7)**	30.8 **(1.6)**	32.3 **(3.1)**
	TXx	Warmest day time temperature	°C	33.3	34.0 **(0.7)**	34.5 **(1.2)**	34.9 **(1.6)**	34.2 **(0.9)**	35.2 **(1.9)**	36.6 **(3.3)**
	DTR	Daily temperature range	°C	9.0	8.9 **(-0.1)**	9.0 **(0.0)**	9.0 **(0.0)**	9.0 **(0.0)**	8.9 **(-0.1)**	8.8 **(-0.2)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	5.6 **(-6.0)**	3.0 **(-8.6)**	2.4 **(-9.2)**	4.3 **(-7.3)**	2.0 **(-9.6)**	0.8 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.6	26.2 **(14.6)**	43.1 **(31.5)**	54.9 **(43.3)**	31.6 **(20.0)**	61.4 **(49.8)**	88.2 **(76.6)**
	TX10p	Fraction of cool days	%	11.5	6.8 **(-4.7)**	3.5 **(-8.0)**	2.4 **(-9.1)**	5.0 **(-6.5)**	2.6 **(-8.9)**	1.2 **(-10.3)**
	TX90p	Fraction of hot days	%	11.5	21.8 **(10.3)**	33.3 **(21.8)**	40.2 **(28.7)**	25.3 **(13.8)**	43.2 **(31.7)**	70.6 **(59.1)**
	Duration									
	WSDI	Warm Spell Duration Index	days	5.3	36.4 **(31.1)**	110.4 **(105.1)**	161.8 **(156.5)**	57.2 **(51.9)**	192.1 **(186.8)**	365.0 **(359.7)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1874.3	1775.9 **(-98.4)**	1871.0 **(-3.3)**	1839.6 **(-34.7)**	1895.4 **(21.1)**	1775.6 **(-98.7)**	1738.5 **(-135.8)**
	SDII	Average daily rainfall intensity	mm/day	15.2	14.8 **(-0.4)**	15.3 **(0.1)**	14.9 **(-0.3)**	14.9 **(-0.3)**	14.8 **(-0.4)**	14.4 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	127.2	126.4 **(-0.8)**	131.2 **(4.0)**	138.2 **(11.0)**	124.6 **(-2.6)**	124.5 **(-2.7)**	140.7 **(13.5)**
	Rx5day	Maximum 5-day rainfall total	mm	276.9	274.6 **(-2.3)**	286.8 **(9.9)**	297.7 **(20.8)**	272.5 **(-4.4)**	266.8 **(-10.1)**	278.2 **(1.3)**
	P95	Rainfall on very wet days	mm	50.6	48.3 **(-2.3)**	52.2 **(1.6)**	50.6 **(0.0)**	49.0 **(-1.6)**	51.9 **(1.3)**	50.0 **(-0.6)**
	P99	Rainfall on extremely wet days	mm	103.4	102.2 **(-1.2)**	106.9 **(3.5)**	109.9 **(6.5)**	103.3 **(-0.1)**	101.0 **(-2.4)**	104.8 **(1.4)**
	R95p	Total rainfall from very wet days	mm	517.8	491.3 **(-26.5)**	530.3 **(12.5)**	525.6 **(7.8)**	491.8 **(-26.0)**	492.9 **(-24.9)**	487.8 **(-30.0)**
	R99p	Total rainfall from extremely wet days	mm	173.6	173.3 **(-0.3)**	196.1 **(22.5)**	212.8 **(39.2)**	176.5 **(2.9)**	170.1 **(-3.5)**	188.2 **(14.6)**
	Frequency									
	P95d	Number of very wet days	days	6.3	5.7 **(-0.6)**	6.6 **(0.3)**	5.9 **(-0.4)**	6.1 **(-0.2)**	6.3 **(0.0)**	5.8 **(-0.5)**
	P99d	Number of extremely wet days	days	1.3	1.2 **(-0.1)**	1.4 **(0.1)**	1.4 **(0.1)**	1.3 **(0.0)**	1.2 **(-0.1)**	1.2 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	18.1	15.8 **(-2.3)**	17.1 **(-1.0)**	17.1 **(-1.0)**	17.7 **(-0.4)**	16.9 **(-1.2)**	17.3 **(-0.8)**
	CDD	Longest dry spell	days	73.5	76.3 **(2.8)**	67.9 **(-5.6)**	78.9 **(5.4)**	72.4 **(-1.1)**	70.3 **(-3.2)**	67.4 **(-6.1)**

Cooler — Warmer

Drier — Wetter

Cordillera Administrative Region(CAR)

Apayao

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	14.2	15.0 **(0.8)**	15.5 **(1.3)**	15.7 **(1.5)**	15.2 **(1.0)**	15.9 **(1.7)**	17.3 **(3.1)**
	TNm	Average night time temperature	°C	20.0	20.7 **(0.7)**	21.2 **(1.2)**	21.5 **(1.5)**	20.8 **(0.8)**	21.8 **(1.8)**	23.2 **(3.2)**
	TNx	Warmest night time temperature	°C	23.6	24.3 **(0.7)**	24.8 **(1.2)**	25.2 **(1.6)**	24.4 **(0.8)**	25.3 **(1.7)**	26.8 **(3.2)**
	TXn	Coldest day time temperature	°C	22.5	23.0 **(0.5)**	23.5 **(1.0)**	23.8 **(1.3)**	23.2 **(0.7)**	24.1 **(1.6)**	25.3 **(2.8)**
	TXm	Average day time temperature	°C	29.0	29.6 **(0.6)**	30.2 **(1.2)**	30.5 **(1.5)**	29.8 **(0.8)**	30.6 **(1.6)**	32.2 **(3.2)**
	TXx	Warmest day time temperature	°C	33.7	34.3 **(0.6)**	35.1 **(1.4)**	35.7 **(2.0)**	34.6 **(0.9)**	35.8 **(2.1)**	37.7 **(4.0)**
	DTR	Daily temperature range	°C	8.9	8.8 **(-0.1)**	8.9 **(0.0)**	8.9 **(0.0)**	8.9 **(0.0)**	8.9 **(0.0)**	8.9 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	5.5 **(-6.0)**	2.9 **(-8.6)**	2.3 **(-9.2)**	4.5 **(-7.0)**	1.9 **(-9.6)**	0.6 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.4	27.7 **(16.3)**	50.3 **(38.9)**	60.8 **(49.4)**	36.3 **(24.9)**	67.8 **(56.4)**	88.4 **(77.0)**
	TX10p	Fraction of cool days	%	11.6	6.5 **(-5.1)**	4.1 **(-7.5)**	2.8 **(-8.8)**	5.4 **(-6.2)**	3.1 **(-8.5)**	1.5 **(-10.1)**
	TX90p	Fraction of hot days	%	11.5	19.3 **(7.8)**	31.3 **(19.8)**	38.9 **(27.4)**	22.5 **(11.0)**	42.8 **(31.3)**	69.5 **(58.0)**
	Duration									
	WSDI	Warm Spell Duration Index	days	5.2	29.6 **(24.4)**	75.7 **(70.5)**	121.0 **(115.8)**	42.6 **(37.4)**	133.5 **(128.3)**	365.0 **(359.8)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1645.8	1586.2 **(-59.6)**	1598.3 **(-47.5)**	1643.9 **(-1.9)**	1634.8 **(-11.0)**	1568.4 **(-77.4)**	1507.7 **(-138.1)**
	SDII	Average daily rainfall intensity	mm/day	12.3	12.1 **(-0.2)**	11.9 **(-0.4)**	12.0 **(-0.3)**	12.3 **(0.0)**	11.8 **(-0.5)**	11.5 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	122.6	123.6 **(1.0)**	123.5 **(0.9)**	129.9 **(7.3)**	126.8 **(4.2)**	121.6 **(-1.0)**	133.7 **(11.1)**
	Rx5day	Maximum 5-day rainfall total	mm	236.4	240.5 **(4.1)**	237.4 **(1.0)**	244.5 **(8.1)**	246.2 **(9.8)**	230.8 **(-5.6)**	252.2 **(15.8)**
	P95	Rainfall on very wet days	mm	41.2	39.7 **(-1.5)**	39.8 **(-1.4)**	39.6 **(-1.6)**	41.2 **(0.0)**	39.6 **(-1.6)**	38.7 **(-2.5)**
	P99	Rainfall on extremely wet days	mm	93.3	90.4 **(-2.9)**	90.0 **(-3.3)**	94.4 **(1.1)**	93.2 **(-0.1)**	90.1 **(-3.2)**	94.5 **(1.2)**
	R95p	Total rainfall from very wet days	mm	484.3	448.4 **(-35.9)**	440.3 **(-44.0)**	479.0 **(-5.3)**	474.7 **(-9.6)**	438.7 **(-45.6)**	431.8 **(-52.5)**
	R99p	Total rainfall from extremely wet days	mm	168.6	162.9 **(-5.7)**	159.7 **(-8.9)**	187.0 **(18.4)**	173.2 **(4.6)**	151.2 **(-17.4)**	183.0 **(14.4)**
	Frequency									
	P95d	Number of very wet days	days	6.7	6.0 **(-0.7)**	6.2 **(-0.5)**	6.3 **(-0.4)**	6.6 **(-0.1)**	6.1 **(-0.6)**	5.7 **(-1.0)**
	P99d	Number of extremely wet days	days	1.3	1.2 **(-0.1)**	1.3 **(0.0)**	1.4 **(0.1)**	1.3 **(0.0)**	1.2 **(-0.1)**	1.4 **(0.1)**
	Duration									
	CWD	Longest wet spelll	days	17.4	16.2 **(-1.2)**	17.4 **(0.0)**	18.6 **(1.2)**	16.9 **(-0.5)**	17.3 **(-0.1)**	17.9 **(0.5)**
	CDD	Longest dry spell	days	48.8	52.9 **(4.1)**	48.8 **(0.0)**	50.7 **(1.9)**	49.9 **(1.1)**	49.2 **(0.4)**	50.9 **(2.1)**

Cooler — Warmer

Drier — Wetter

Cordillera Administrative Region(CAR)

Benguet

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	11.0	12.0 **(1.0)**	12.5 **(1.5)**	12.5 **(1.5)**	12.0 **(1.0)**	13.1 **(2.1)**	14.8 **(3.8)**
	TNm	Average night time temperature	°C	16.3	16.9 **(0.6)**	17.5 **(1.2)**	17.8 **(1.5)**	17.1 **(0.8)**	18.1 **(1.8)**	19.7 **(3.4)**
	TNx	Warmest night time temperature	°C	19.5	20.2 **(0.7)**	20.8 **(1.3)**	21.1 **(1.6)**	20.3 **(0.8)**	21.3 **(1.8)**	22.8 **(3.3)**
	TXn	Coldest day time temperature	°C	20.5	21.4 **(0.9)**	21.8 **(1.3)**	22.3 **(1.8)**	21.4 **(0.9)**	22.4 **(1.9)**	23.8 **(3.3)**
	TXm	Average day time temperature	°C	25.7	26.3 **(0.6)**	26.9 **(1.2)**	27.3 **(1.6)**	26.5 **(0.8)**	27.4 **(1.7)**	28.9 **(3.2)**
	TXx	Warmest day time temperature	°C	29.7	30.3 **(0.6)**	31.0 **(1.3)**	31.4 **(1.7)**	30.6 **(0.9)**	31.5 **(1.8)**	33.1 **(3.4)**
	DTR	Daily temperature range	°C	9.4	9.3 **(-0.1)**	9.4 **(0.0)**	9.5 **(0.1)**	9.4 **(0.0)**	9.4 **(0.0)**	9.4 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.7	5.8 **(-5.9)**	3.4 **(-8.3)**	2.9 **(-8.8)**	4.9 **(-6.8)**	2.3 **(-9.4)**	1.0 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.5	27.4 **(15.9)**	47.2 **(35.7)**	57.2 **(45.7)**	34.2 **(22.7)**	63.6 **(52.1)**	87.6 **(76.1)**
	TX10p	Fraction of cool days	%	11.4	5.7 **(-5.7)**	2.6 **(-8.8)**	1.8 **(-9.6)**	4.0 **(-7.4)**	1.9 **(-9.5)**	1.0 **(-10.4)**
	TX90p	Fraction of hot days	%	11.3	21.5 **(10.2)**	38.4 **(27.1)**	47.9 **(36.6)**	26.1 **(14.8)**	49.7 **(38.4)**	80.1 **(68.8)**
	Duration									
	WSDI	Warm Spell Duration Index	days	8.5	46.0 **(37.5)**	178.1 **(169.6)**	298.2 **(289.7)**	83.4 **(74.9)**	365.0 **(356.5)**	365.0 **(356.5)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2089.7	2016.8 **(-72.9)**	2050.1 **(-39.6)**	2080.7 **(-9.0)**	2108.9 **(19.2)**	1993.8 **(-95.9)**	2002.2 **(-87.5)**
	SDII	Average daily rainfall intensity	mm/day	13.7	13.1 **(-0.6)**	13.5 **(-0.2)**	14.1 **(0.4)**	13.6 **(-0.1)**	13.8 **(0.1)**	13.6 **(-0.1)**
	Rx1day	Maximum 1-day rainfall total	mm	93.7	98.4 **(4.7)**	99.0 **(5.3)**	101.7 **(8.0)**	100.3 **(6.6)**	94.2 **(0.5)**	96.6 **(2.9)**
	Rx5day	Maximum 5-day rainfall total	mm	216.9	217.3 **(0.4)**	225.9 **(9.0)**	228.6 **(11.7)**	233.8 **(16.9)**	213.8 **(-3.1)**	239.9 **(23.0)**
	P95	Rainfall on very wet days	mm	40.8	38.9 **(-1.9)**	40.1 **(-0.7)**	41.8 **(1.0)**	40.5 **(-0.3)**	41.6 **(0.8)**	40.7 **(-0.1)**
	P99	Rainfall on extremely wet days	mm	74.8	72.9 **(-1.9)**	76.5 **(1.7)**	78.5 **(3.7)**	76.4 **(1.6)**	73.8 **(-1.0)**	83.4 **(8.6)**
	R95p	Total rainfall from very wet days	mm	474.6	433.3 **(-41.3)**	477.7 **(3.1)**	528.2 **(53.6)**	487.9 **(13.3)**	485.9 **(11.3)**	538.7 **(64.1)**
	R99p	Total rainfall from extremely wet days	mm	149.8	149.7 **(-0.1)**	170.2 **(20.4)**	179.2 **(29.4)**	179.7 **(29.9)**	141.5 **(-8.3)**	202.8 **(53.0)**
	Frequency									
	P95d	Number of very wet days	days	7.7	7.1 **(-0.6)**	7.3 **(-0.4)**	8.0 **(0.3)**	7.6 **(-0.1)**	7.8 **(0.1)**	7.5 **(-0.2)**
	P99d	Number of extremely wet days	days	1.6	1.4 **(-0.2)**	1.7 **(0.1)**	1.8 **(0.2)**	1.7 **(0.1)**	1.5 **(-0.1)**	1.8 **(0.2)**
	Duration									
	CWD	Longest wet spelll	days	19.1	18.2 **(-0.9)**	18.0 **(-1.1)**	18.1 **(-1.0)**	18.4 **(-0.7)**	17.8 **(-1.3)**	16.4 **(-2.7)**
	CDD	Longest dry spell	days	42.6	43.7 **(1.1)**	43.2 **(0.6)**	46.0 **(3.4)**	43.1 **(0.5)**	44.3 **(1.7)**	45.3 **(2.7)**

Cordillera Administrative Region(CAR)

Ifugao

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	13.9	14.8 **(0.9)**	15.2 **(1.3)**	15.4 **(1.5)**	14.9 **(1.0)**	15.9 **(2.0)**	17.0 **(3.1)**
	TNm	Average night time temperature	°C	18.9	19.5 **(0.6)**	20.2 **(1.3)**	20.4 **(1.5)**	19.8 **(0.9)**	20.7 **(1.8)**	22.2 **(3.3)**
	TNx	Warmest night time temperature	°C	22.0	22.6 **(0.6)**	23.3 **(1.3)**	23.7 **(1.7)**	22.9 **(0.9)**	23.9 **(1.9)**	25.3 **(3.3)**
	TXn	Coldest day time temperature	°C	22.5	23.0 **(0.5)**	23.5 **(1.0)**	23.8 **(1.3)**	23.0 **(0.5)**	24.0 **(1.5)**	25.4 **(2.9)**
	TXm	Average day time temperature	°C	27.7	28.4 **(0.7)**	29.0 **(1.3)**	29.4 **(1.7)**	28.6 **(0.9)**	29.5 **(1.8)**	31.1 **(3.4)**
	TXx	Warmest day time temperature	°C	32.0	32.6 **(0.6)**	33.4 **(1.4)**	33.9 **(1.9)**	32.8 **(0.8)**	34.1 **(2.1)**	35.9 **(3.9)**
	DTR	Daily temperature range	°C	8.8	8.8 **(0.0)**	8.8 **(0.0)**	8.9 **(0.1)**	8.8 **(0.0)**	8.7 **(-0.1)**	8.9 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	5.5 **(-6.1)**	3.2 **(-8.4)**	2.6 **(-9.0)**	4.5 **(-7.1)**	2.0 **(-9.6)**	0.8 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.5	29.2 **(17.7)**	55.4 **(43.9)**	64.9 **(53.4)**	39.0 **(27.5)**	68.5 **(57.0)**	89.3 **(77.8)**
	TX10p	Fraction of cool days	%	11.6	6.6 **(-5.0)**	3.6 **(-8.0)**	2.5 **(-9.1)**	5.5 **(-6.1)**	2.6 **(-9.0)**	1.3 **(-10.3)**
	TX90p	Fraction of hot days	%	11.6	19.6 **(8.0)**	34.5 **(22.9)**	45.2 **(33.6)**	23.6 **(12.0)**	46.5 **(34.9)**	73.9 **(62.3)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.8	35.7 **(28.9)**	146.9 **(140.1)**	262.7 **(255.9)**	84.6 **(77.8)**	297.3 **(290.5)**	365.0 **(358.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1947.1	1853.2 **(-93.9)**	1895.4 **(-51.7)**	1872.2 **(-74.9)**	1948.1 **(1.0)**	1850.8 **(-96.3)**	1811.0 **(-136.1)**
	SDII	Average daily rainfall intensity	mm/day	13.1	12.6 **(-0.5)**	12.7 **(-0.4)**	12.5 **(-0.6)**	13.0 **(-0.1)**	12.5 **(-0.6)**	12.5 **(-0.6)**
	Rx1day	Maximum 1-day rainfall total	mm	92.9	92.5 **(-0.4)**	101.6 **(8.7)**	97.7 **(4.8)**	94.8 **(1.9)**	98.0 **(5.1)**	109.1 **(16.2)**
	Rx5day	Maximum 5-day rainfall total	mm	202.3	207.4 **(5.1)**	211.1 **(8.8)**	214.7 **(12.4)**	207.3 **(5.0)**	197.4 **(-4.9)**	230.9 **(28.6)**
	P95	Rainfall on very wet days	mm	37.9	35.9 **(-2.0)**	36.9 **(-1.0)**	36.8 **(-1.1)**	37.3 **(-0.6)**	37.0 **(-0.9)**	36.8 **(-1.1)**
	P99	Rainfall on extremely wet days	mm	72.2	68.9 **(-3.3)**	73.5 **(1.3)**	74.9 **(2.7)**	73.9 **(1.7)**	70.6 **(-1.6)**	76.7 **(4.5)**
	R95p	Total rainfall from very wet days	mm	438.8	381.8 **(-57.0)**	430.5 **(-8.3)**	427.8 **(-11.0)**	431.5 **(-7.3)**	429.6 **(-9.2)**	460.3 **(21.5)**
	R99p	Total rainfall from extremely wet days	mm	145.7	129.8 **(-15.9)**	156.1 **(10.4)**	170.5 **(24.8)**	154.5 **(8.8)**	147.7 **(2.0)**	185.2 **(39.5)**
	Frequency									
	P95d	Number of very wet days	days	7.5	6.6 **(-0.9)**	7.0 **(-0.5)**	6.8 **(-0.7)**	7.2 **(-0.3)**	6.8 **(-0.7)**	7.0 **(-0.5)**
	P99d	Number of extremely wet days	days	1.5	1.4 **(-0.1)**	1.6 **(0.1)**	1.7 **(0.2)**	1.7 **(0.2)**	1.5 **(0.0)**	1.7 **(0.2)**
	Duration									
	CWD	Longest wet spelll	days	19.1	17.7 **(-1.4)**	18.3 **(-0.8)**	19.2 **(0.1)**	18.7 **(-0.4)**	18.1 **(-1.0)**	18.6 **(-0.5)**
	CDD	Longest dry spell	days	46.4	47.1 **(0.7)**	46.8 **(0.4)**	51.2 **(4.8)**	46.5 **(0.1)**	49.5 **(3.1)**	48.4 **(2.0)**

Cordillera Administrative Region(CAR)

Kalinga

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	13.3	14.2 **(0.9)**	14.7 **(1.4)**	14.7 **(1.4)**	14.2 **(0.9)**	15.2 **(1.9)**	16.3 **(3.0)**
	TNm	Average night time temperature	°C	18.7	19.3 **(0.6)**	19.9 **(1.2)**	20.2 **(1.5)**	19.5 **(0.8)**	20.5 **(1.8)**	21.9 **(3.2)**
	TNx	Warmest night time temperature	°C	22.0	22.7 **(0.7)**	23.3 **(1.3)**	23.6 **(1.6)**	22.8 **(0.8)**	23.8 **(1.8)**	25.3 **(3.3)**
	TXn	Coldest day time temperature	°C	21.6	22.2 **(0.6)**	22.6 **(1.0)**	22.9 **(1.3)**	22.2 **(0.6)**	23.3 **(1.7)**	24.4 **(2.8)**
	TXm	Average day time temperature	°C	27.6	28.2 **(0.6)**	28.8 **(1.2)**	29.1 **(1.5)**	28.4 **(0.8)**	29.3 **(1.7)**	30.9 **(3.3)**
	TXx	Warmest day time temperature	°C	32.1	32.7 **(0.6)**	33.6 **(1.5)**	34.1 **(2.0)**	33.0 **(0.9)**	34.2 **(2.1)**	36.1 **(4.0)**
	DTR	Daily temperature range	°C	8.9	8.8 **(-0.1)**	8.9 **(0.0)**	8.9 **(0.0)**	8.9 **(0.0)**	8.8 **(-0.1)**	8.9 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	5.7 **(-5.9)**	3.2 **(-8.4)**	2.7 **(-8.9)**	4.6 **(-7.0)**	2.2 **(-9.4)**	0.9 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.6	27.1 **(15.5)**	53.1 **(41.5)**	62.4 **(50.8)**	36.1 **(24.5)**	69.1 **(57.5)**	88.7 **(77.1)**
	TX10p	Fraction of cool days	%	11.5	6.6 **(-4.9)**	3.8 **(-7.7)**	2.7 **(-8.8)**	5.6 **(-5.9)**	3.0 **(-8.5)**	1.4 **(-10.1)**
	TX90p	Fraction of hot days	%	11.5	19.7 **(8.2)**	34.4 **(22.9)**	43.7 **(32.2)**	23.2 **(11.7)**	45.8 **(34.3)**	70.8 **(59.3)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.4	42.2 **(35.8)**	117.0 **(110.6)**	201.8 **(195.4)**	66.4 **(60.0)**	256.7 **(250.3)**	365.0 **(358.6)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1738.9	1658.8 **(-80.1)**	1648.3 **(-90.6)**	1664.8 **(-74.1)**	1721.4 **(-17.5)**	1635.8 **(-103.1)**	1633.6 **(-105.3)**
	SDII	Average daily rainfall intensity	mm/day	12.3	12.0 **(-0.3)**	11.8 **(-0.5)**	11.7 **(-0.6)**	12.2 **(-0.1)**	11.8 **(-0.5)**	11.6 **(-0.7)**
	Rx1day	Maximum 1-day rainfall total	mm	122.1	120.7 **(-1.4)**	121.5 **(-0.6)**	126.2 **(4.1)**	122.9 **(0.8)**	123.7 **(1.6)**	146.9 **(24.8)**
	Rx5day	Maximum 5-day rainfall total	mm	219.2	218.0 **(-1.2)**	216.1 **(-3.1)**	223.4 **(4.2)**	221.6 **(2.4)**	219.4 **(0.2)**	250.4 **(31.2)**
	P95	Rainfall on very wet days	mm	38.6	37.0 **(-1.6)**	37.8 **(-0.8)**	36.4 **(-2.2)**	37.8 **(-0.8)**	37.2 **(-1.4)**	38.1 **(-0.5)**
	P99	Rainfall on extremely wet days	mm	89.1	84.7 **(-4.4)**	86.5 **(-2.6)**	86.5 **(-2.6)**	88.2 **(-0.9)**	87.4 **(-1.7)**	89.4 **(0.3)**
	R95p	Total rainfall from very wet days	mm	472.9	443.3 **(-29.6)**	447.4 **(-25.5)**	439.9 **(-33.0)**	461.4 **(-11.5)**	440.1 **(-32.8)**	483.0 **(10.1)**
	R99p	Total rainfall from extremely wet days	mm	170.2	149.3 **(-20.9)**	168.9 **(-1.3)**	174.1 **(3.9)**	168.0 **(-2.2)**	164.4 **(-5.8)**	187.8 **(17.6)**
	Frequency									
	P95d	Number of very wet days	days	7.1	6.4 **(-0.7)**	6.7 **(-0.4)**	6.4 **(-0.7)**	7.0 **(-0.1)**	6.7 **(-0.4)**	6.5 **(-0.6)**
	P99d	Number of extremely wet days	days	1.4	1.2 **(-0.2)**	1.4 **(0.0)**	1.4 **(0.0)**	1.4 **(0.0)**	1.3 **(-0.1)**	1.4 **(0.0)**
	Duration									
	CWD	Longest wet spelll	days	17.6	16.2 **(-1.4)**	17.3 **(-0.3)**	17.5 **(-0.1)**	17.6 **(0.0)**	17.2 **(-0.4)**	19.4 **(1.8)**
	CDD	Longest dry spell	days	43.9	45.0 **(1.1)**	42.8 **(-1.1)**	46.9 **(3.0)**	44.6 **(0.7)**	45.6 **(1.7)**	46.7 **(2.8)**

Cooler — Warmer

Drier — Wetter

Cordillera Administrative Region(CAR)

Mountain Province

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	10.9	11.8 **(0.9)**	12.2 **(1.3)**	12.4 **(1.5)**	11.8 **(0.9)**	12.9 **(2.0)**	14.1 **(3.2)**
	TNm	Average night time temperature	°C	16.2	16.9 **(0.7)**	17.5 **(1.3)**	17.8 **(1.6)**	17.1 **(0.9)**	18.1 **(1.9)**	19.6 **(3.4)**
	TNx	Warmest night time temperature	°C	19.4	20.1 **(0.7)**	20.8 **(1.4)**	21.1 **(1.7)**	20.3 **(0.9)**	21.3 **(1.9)**	22.8 **(3.4)**
	TXn	Coldest day time temperature	°C	20.0	20.6 **(0.6)**	21.1 **(1.1)**	21.3 **(1.3)**	20.6 **(0.6)**	21.6 **(1.6)**	23.0 **(3.0)**
	TXm	Average day time temperature	°C	25.5	26.1 **(0.6)**	26.8 **(1.3)**	27.1 **(1.6)**	26.3 **(0.8)**	27.2 **(1.7)**	28.8 **(3.3)**
	TXx	Warmest day time temperature	°C	29.7	30.3 **(0.6)**	30.9 **(1.2)**	31.5 **(1.8)**	30.6 **(0.9)**	31.7 **(2.0)**	33.5 **(3.8)**
	DTR	Daily temperature range	°C	9.2	9.2 **(0.0)**	9.2 **(0.0)**	9.3 **(0.1)**	9.3 **(0.1)**	9.2 **(0.0)**	9.2 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.7	5.7 **(-6.0)**	3.5 **(-8.2)**	2.9 **(-8.8)**	5.0 **(-6.7)**	2.3 **(-9.4)**	1.0 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.6	28.9 **(17.3)**	51.6 **(40.0)**	59.5 **(47.9)**	36.4 **(24.8)**	65.8 **(54.2)**	87.0 **(75.4)**
	TX10p	Fraction of cool days	%	11.5	6.2 **(-5.3)**	3.2 **(-8.3)**	2.4 **(-9.1)**	4.9 **(-6.6)**	2.4 **(-9.1)**	1.3 **(-10.2)**
	TX90p	Fraction of hot days	%	11.5	20.8 **(9.3)**	37.8 **(26.3)**	47.8 **(36.3)**	25.3 **(13.8)**	48.0 **(36.5)**	75.0 **(63.5)**
	Duration									
	WSDI	Warm Spell Duration Index	days	7.1	47.9 **(40.8)**	162.6 **(155.5)**	285.9 **(278.8)**	104.3 **(97.2)**	339.8 **(332.7)**	365.0 **(357.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1865.9	1803.8 **(-62.1)**	1798.3 **(-67.6)**	1789.9 **(-76.0)**	1868.2 **(2.3)**	1766.8 **(-99.1)**	1717.8 **(-148.1)**
	SDII	Average daily rainfall intensity	mm/day	12.8	12.2 **(-0.6)**	12.6 **(-0.2)**	12.7 **(-0.1)**	12.8 **(0.0)**	12.6 **(-0.2)**	12.5 **(-0.3)**
	Rx1day	Maximum 1-day rainfall total	mm	99.5	97.7 **(-1.8)**	109.0 **(9.5)**	108.9 **(9.4)**	103.5 **(4.0)**	109.1 **(9.6)**	124.3 **(24.8)**
	Rx5day	Maximum 5-day rainfall total	mm	203.9	198.4 **(-5.5)**	219.6 **(15.7)**	214.7 **(10.8)**	209.1 **(5.2)**	214.1 **(10.2)**	240.8 **(36.9)**
	P95	Rainfall on very wet days	mm	38.0	35.6 **(-2.4)**	37.2 **(-0.8)**	37.3 **(-0.7)**	37.5 **(-0.5)**	37.2 **(-0.8)**	36.9 **(-1.1)**
	P99	Rainfall on extremely wet days	mm	75.8	72.5 **(-3.3)**	77.0 **(1.2)**	79.5 **(3.7)**	77.4 **(1.6)**	76.8 **(1.0)**	83.9 **(8.1)**
	R95p	Total rainfall from very wet days	mm	444.2	383.8 **(-60.4)**	439.7 **(-4.5)**	456.6 **(12.4)**	439.7 **(-4.5)**	443.0 **(-1.2)**	461.3 **(17.1)**
	R99p	Total rainfall from extremely wet days	mm	150.7	132.6 **(-18.1)**	170.3 **(19.6)**	173.5 **(22.8)**	161.2 **(10.5)**	167.7 **(17.0)**	202.0 **(51.3)**
	Frequency									
	P95d	Number of very wet days	days	7.3	6.2 **(-1.1)**	6.9 **(-0.4)**	7.1 **(-0.2)**	7.0 **(-0.3)**	7.1 **(-0.2)**	7.1 **(-0.2)**
	P99d	Number of extremely wet days	days	1.5	1.3 **(-0.2)**	1.5 **(0.0)**	1.7 **(0.2)**	1.6 **(0.1)**	1.5 **(0.0)**	1.7 **(0.2)**
	Duration									
	CWD	Longest wet spelll	days	18.7	18.0 **(-0.7)**	18.7 **(0.0)**	19.1 **(0.4)**	18.2 **(-0.5)**	17.9 **(-0.8)**	19.8 **(1.1)**
	CDD	Longest dry spell	days	46.9	47.9 **(1.0)**	47.2 **(0.3)**	50.7 **(3.8)**	47.3 **(0.4)**	49.3 **(2.4)**	51.0 **(4.1)**

Region I (Ilocos Region)

Ilocos Norte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	14.3	15.1 (0.8)	15.6 (1.3)	15.7 (1.4)	15.2 (0.9)	16.2 (1.9)	17.2 (2.9)
	TNm	Average night time temperature	°C	20.6	21.3 (0.7)	21.8 (1.2)	22.1 (1.5)	21.5 (0.9)	22.4 (1.8)	23.9 (3.3)
	TNx	Warmest night time temperature	°C	24.4	25.0 (0.6)	25.6 (1.2)	26.0 (1.6)	25.2 (0.8)	26.1 (1.7)	27.5 (3.1)
	TXn	Coldest day time temperature	°C	23.7	24.3 (0.6)	24.7 (1.0)	25.2 (1.5)	24.5 (0.8)	25.2 (1.5)	26.8 (3.1)
	TXm	Average day time temperature	°C	30.0	30.6 (0.6)	31.2 (1.2)	31.5 (1.5)	30.8 (0.8)	31.7 (1.7)	33.1 (3.1)
	TXx	Warmest day time temperature	°C	34.3	35.0 (0.7)	35.5 (1.2)	35.9 (1.6)	35.2 (0.9)	36.1 (1.8)	37.7 (3.4)
	DTR	Daily temperature range	°C	9.4	9.3 (-0.1)	9.4 (0.0)	9.4 (0.0)	9.4 (0.0)	9.4 (0.0)	9.3 (-0.1)
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	5.3 (-6.2)	2.8 (-8.7)	2.2 (-9.3)	4.2 (-7.3)	1.8 (-9.7)	0.6 (-10.9)
	TN90p	Fraction of warm nights	%	11.5	27.0 (15.5)	43.3 (31.8)	55.4 (43.9)	33.2 (21.7)	61.7 (50.2)	88.1 (76.6)
	TX10p	Fraction of cool days	%	11.6	6.4 (-5.2)	3.6 (-8.0)	2.4 (-9.2)	4.8 (-6.8)	2.7 (-8.9)	1.3 (-10.3)
	TX90p	Fraction of hot days	%	11.5	21.4 (9.9)	32.3 (20.8)	39.2 (27.7)	25.0 (13.5)	42.8 (31.3)	73.1 (61.6)
	Duration									
	WSDI	Warm Spell Duration Index	days	5.0	32.2 (27.2)	97.4 (92.4)	155.9 (150.9)	50.9 (45.9)	194.2 (189.2)	365.0 (360.0)
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1826.6	1771.3 (-55.3)	1835.1 (8.5)	1905.5 (78.9)	1840.0 (13.4)	1797.5 (-29.1)	1682.2 (-144.4)
	SDII	Average daily rainfall intensity	mm/day	16.8	17.0 (0.2)	16.9 (0.1)	17.4 (0.6)	17.0 (0.2)	16.3 (-0.5)	16.4 (-0.4)
	Rx1day	Maximum 1-day rainfall total	mm	153.6	154.1 (0.5)	160.2 (6.6)	170.5 (16.9)	157.2 (3.6)	155.5 (1.9)	154.1 (0.5)
	Rx5day	Maximum 5-day rainfall total	mm	311.8	304.8 (-7.0)	327.8 (16.0)	354.5 (42.7)	341.9 (30.1)	317.9 (6.1)	310.7 (-1.1)
	P95	Rainfall on very wet days	mm	62.6	64.9 (2.3)	65.7 (3.1)	64.3 (1.7)	64.8 (2.2)	62.5 (-0.1)	62.9 (0.3)
	P99	Rainfall on extremely wet days	mm	123.6	124.2 (0.6)	125.4 (1.8)	138.1 (14.5)	130.2 (6.6)	117.6 (-6.0)	124.5 (0.9)
	R95p	Total rainfall from very wet days	mm	556.4	550.8 (-5.6)	605.4 (49.0)	634.5 (78.1)	589.3 (32.9)	552.9 (-3.5)	536.7 (-19.7)
	R99p	Total rainfall from extremely wet days	mm	179.7	186.6 (6.9)	191.8 (12.1)	239.5 (59.8)	199.9 (20.2)	175.6 (-4.1)	201.2 (21.5)
	Frequency									
	P95d	Number of very wet days	days	5.5	5.6 (0.1)	6.0 (0.5)	5.7 (0.2)	5.6 (0.1)	5.4 (-0.1)	5.4 (-0.1)
	P99d	Number of extremely wet days	days	1.1	1.1 (0.0)	1.2 (0.1)	1.4 (0.3)	1.3 (0.2)	1.1 (0.0)	1.2 (0.1)
	Duration									
	CWD	Longest wet spelll	days	17.0	15.3 (-1.7)	16.3 (-0.7)	17.4 (0.4)	16.6 (-0.4)	17.6 (0.6)	16.9 (-0.1)
	CDD	Longest dry spell	days	84.5	84.2 (-0.3)	78.6 (-5.9)	90.0 (5.5)	85.9 (1.4)	84.7 (0.2)	85.1 (0.6)

Region I (Ilocos Region)

Ilocos Sur

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	14.3	15.1 **(0.8)**	15.7 **(1.4)**	15.6 **(1.3)**	15.1 **(0.8)**	16.3 **(2.0)**	17.8 **(3.5)**
	TNm	Average night time temperature	°C	19.9	20.5 **(0.6)**	21.0 **(1.1)**	21.3 **(1.4)**	20.7 **(0.8)**	21.6 **(1.7)**	23.1 **(3.2)**
	TNx	Warmest night time temperature	°C	23.2	23.8 **(0.6)**	24.3 **(1.1)**	24.7 **(1.5)**	23.9 **(0.7)**	24.8 **(1.6)**	26.3 **(3.1)**
	TXn	Coldest day time temperature	°C	23.4	24.2 **(0.8)**	24.7 **(1.3)**	25.2 **(1.8)**	24.5 **(1.1)**	25.5 **(2.1)**	26.6 **(3.2)**
	TXm	Average day time temperature	°C	28.8	29.4 **(0.6)**	30.0 **(1.2)**	30.2 **(1.4)**	29.6 **(0.8)**	30.4 **(1.6)**	31.9 **(3.1)**
	TXx	Warmest day time temperature	°C	32.9	33.5 **(0.6)**	34.0 **(1.1)**	34.5 **(1.6)**	33.7 **(0.8)**	34.4 **(1.5)**	35.9 **(3.0)**
	DTR	Daily temperature range	°C	8.9	8.8 **(-0.1)**	8.9 **(0.0)**	8.9 **(0.0)**	9.0 **(0.1)**	8.9 **(0.0)**	8.7 **(-0.2)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	5.6 **(-6.0)**	2.9 **(-8.7)**	2.5 **(-9.1)**	4.5 **(-7.1)**	2.0 **(-9.6)**	0.9 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.4	25.4 **(14.0)**	45.7 **(34.3)**	58.1 **(46.7)**	33.1 **(21.7)**	63.3 **(51.9)**	90.2 **(78.8)**
	TX10p	Fraction of cool days	%	11.4	6.1 **(-5.3)**	2.7 **(-8.7)**	2.2 **(-9.2)**	4.4 **(-7.0)**	2.1 **(-9.3)**	1.1 **(-10.3)**
	TX90p	Fraction of hot days	%	11.4	22.8 **(11.4)**	35.1 **(23.7)**	43.1 **(31.7)**	26.8 **(15.4)**	45.7 **(34.3)**	76.4 **(65.0)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.7	46.9 **(40.2)**	154.7 **(148.0)**	259.6 **(252.9)**	76.6 **(69.9)**	340.2 **(333.5)**	365.0 **(358.3)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2035.0	1927.3 **(-107.7)**	2113.2 **(78.2)**	2109.9 **(74.9)**	2147.8 **(112.8)**	2029.9 **(-5.1)**	2021.6 **(-13.4)**
	SDII	Average daily rainfall intensity	mm/day	14.5	14.0 **(-0.5)**	15.6 **(1.1)**	15.0 **(0.5)**	15.0 **(0.5)**	14.4 **(-0.1)**	15.1 **(0.6)**
	Rx1day	Maximum 1-day rainfall total	mm	108.5	108.0 **(-0.5)**	115.9 **(7.4)**	120.1 **(11.6)**	114.2 **(5.7)**	119.3 **(10.8)**	123.3 **(14.8)**
	Rx5day	Maximum 5-day rainfall total	mm	242.1	233.6 **(-8.5)**	257.7 **(15.6)**	265.3 **(23.2)**	260.2 **(18.1)**	263.1 **(21.0)**	260.0 **(17.9)**
	P95	Rainfall on very wet days	mm	45.7	44.1 **(-1.6)**	49.1 **(3.4)**	48.6 **(2.9)**	48.7 **(3.0)**	51.6 **(5.9)**	50.8 **(5.1)**
	P99	Rainfall on extremely wet days	mm	85.1	86.6 **(1.5)**	91.6 **(6.5)**	95.2 **(10.1)**	88.6 **(3.5)**	92.9 **(7.8)**	95.4 **(10.3)**
	R95p	Total rainfall from very wet days	mm	497.2	480.2 **(-17.0)**	575.3 **(78.1)**	578.8 **(81.6)**	546.5 **(49.3)**	584.5 **(87.3)**	635.5 **(138.3)**
	R99p	Total rainfall from extremely wet days	mm	159.7	156.9 **(-2.8)**	211.4 **(51.7)**	239.5 **(79.8)**	188.2 **(28.5)**	230.4 **(70.7)**	229.6 **(69.9)**
	Frequency									
	P95d	Number of very wet days	days	7.1	6.4 **(-0.7)**	7.9 **(0.8)**	8.0 **(0.9)**	7.8 **(0.7)**	8.0 **(0.9)**	7.5 **(0.4)**
	P99d	Number of extremely wet days	days	1.5	1.4 **(-0.1)**	2.0 **(0.5)**	2.0 **(0.5)**	1.8 **(0.3)**	2.0 **(0.5)**	2.0 **(0.5)**
	Duration									
	CWD	Longest wet spelll	days	19.0	17.6 **(-1.4)**	18.1 **(-0.9)**	18.7 **(-0.3)**	19.1 **(0.1)**	17.5 **(-1.5)**	18.2 **(-0.8)**
	CDD	Longest dry spell	days	56.1	53.7 **(-2.4)**	54.7 **(-1.4)**	62.8 **(6.7)**	52.6 **(-3.5)**	58.3 **(2.2)**	58.5 **(2.4)**

Cooler — Warmer

Drier — Wetter

Region I (Ilocos Region)

La Union

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	16.7	17.5 **(0.8)**	18.0 **(1.3)**	18.2 **(1.5)**	17.6 **(0.9)**	18.6 **(1.9)**	20.1 **(3.4)**
	TNm	Average night time temperature	°C	21.9	22.5 **(0.6)**	23.0 **(1.1)**	23.2 **(1.3)**	22.7 **(0.8)**	23.5 **(1.6)**	25.0 **(3.1)**
	TNx	Warmest night time temperature	°C	25.1	25.7 **(0.6)**	26.2 **(1.1)**	26.5 **(1.4)**	25.8 **(0.7)**	26.7 **(1.6)**	28.1 **(3.0)**
	TXn	Coldest day time temperature	°C	25.4	26.1 **(0.7)**	26.7 **(1.3)**	26.8 **(1.4)**	26.3 **(0.9)**	27.1 **(1.7)**	28.7 **(3.3)**
	TXm	Average day time temperature	°C	30.6	31.2 **(0.6)**	31.7 **(1.1)**	32.0 **(1.4)**	31.4 **(0.8)**	32.1 **(1.5)**	33.5 **(2.9)**
	TXx	Warmest day time temperature	°C	34.9	35.4 **(0.5)**	36.0 **(1.1)**	36.3 **(1.4)**	35.6 **(0.7)**	36.6 **(1.7)**	38.0 **(3.1)**
	DTR	Daily temperature range	°C	8.7	8.7 **(0.0)**	8.7 **(0.0)**	8.7 **(0.0)**	8.7 **(0.0)**	8.7 **(0.0)**	8.6 **(-0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.7	4.1 **(-7.6)**	2.2 **(-9.5)**	1.9 **(-9.8)**	3.4 **(-8.3)**	1.6 **(-10.1)**	0.7 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	32.8 **(21.4)**	54.6 **(43.2)**	64.9 **(53.5)**	37.8 **(26.4)**	70.6 **(59.2)**	96.5 **(85.1)**
	TX10p	Fraction of cool days	%	11.4	3.9 **(-7.5)**	1.9 **(-9.5)**	1.2 **(-10.2)**	3.1 **(-8.3)**	1.3 **(-10.1)**	0.5 **(-10.9)**
	TX90p	Fraction of hot days	%	11.5	26.9 **(15.4)**	44.3 **(32.8)**	57.4 **(45.9)**	33.0 **(21.5)**	60.6 **(49.1)**	95.0 **(83.5)**
	Duration									
	WSDI	Warm Spell Duration Index	days	9.6	104.2 **(94.6)**	365.0 **(355.4)**	365.0 **(355.4)**	154.3 **(144.7)**	365.0 **(355.4)**	365.0 **(355.4)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2465.2	2527.1 **(61.9)**	2618.7 **(153.5)**	2597.4 **(132.2)**	2552.4 **(87.2)**	2519.0 **(53.8)**	2711.7 **(246.5)**
	SDII	Average daily rainfall intensity	mm/day	14.5	14.1 **(-0.4)**	15.3 **(0.8)**	15.2 **(0.7)**	14.7 **(0.2)**	14.7 **(0.2)**	15.7 **(1.2)**
	Rx1day	Maximum 1-day rainfall total	mm	107.0	103.4 **(-3.6)**	115.7 **(8.7)**	112.0 **(5.0)**	118.1 **(11.1)**	109.4 **(2.4)**	114.5 **(7.5)**
	Rx5day	Maximum 5-day rainfall total	mm	231.5	235.6 **(4.1)**	249.2 **(17.7)**	245.9 **(14.4)**	245.3 **(13.8)**	246.0 **(14.5)**	249.1 **(17.6)**
	P95	Rainfall on very wet days	mm	46.2	45.1 **(-1.1)**	49.9 **(3.7)**	49.3 **(3.1)**	47.2 **(1.0)**	52.2 **(6.0)**	50.4 **(4.2)**
	P99	Rainfall on extremely wet days	mm	86.1	88.2 **(2.1)**	95.2 **(9.1)**	96.1 **(10.0)**	89.4 **(3.3)**	91.7 **(5.6)**	95.9 **(9.8)**
	R95p	Total rainfall from very wet days	mm	596.3	584.3 **(-12.0)**	685.8 **(89.5)**	702.6 **(106.3)**	646.8 **(50.5)**	684.8 **(88.5)**	778.1 **(181.8)**
	R99p	Total rainfall from extremely wet days	mm	183.9	195.2 **(11.3)**	254.4 **(70.5)**	252.1 **(68.2)**	213.8 **(29.9)**	226.0 **(42.1)**	278.8 **(94.9)**
	Frequency									
	P95d	Number of very wet days	days	8.4	8.6 **(0.2)**	9.2 **(0.8)**	9.3 **(0.9)**	8.8 **(0.4)**	9.4 **(1.0)**	10.0 **(1.6)**
	P99d	Number of extremely wet days	days	1.7	1.8 **(0.1)**	2.3 **(0.6)**	2.4 **(0.7)**	1.9 **(0.2)**	2.1 **(0.4)**	2.6 **(0.9)**
	Duration									
	CWD	Longest wet spelll	days	19.0	18.3 **(-0.7)**	18.4 **(-0.6)**	18.1 **(-0.9)**	19.2 **(0.2)**	19.0 **(0.0)**	19.0 **(0.0)**
	CDD	Longest dry spell	days	27.2	26.3 **(-0.9)**	27.9 **(0.7)**	29.9 **(2.7)**	27.3 **(0.1)**	28.5 **(1.3)**	29.2 **(2.0)**

Region I (Ilocos Region)

Pangasinan

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	16.9	17.8 **(0.9)**	18.1 **(1.2)**	18.2 **(1.3)**	17.8 **(0.9)**	19.0 **(2.1)**	20.4 **(3.5)**
	TNm	Average night time temperature	°C	22.0	22.7 **(0.7)**	23.2 **(1.2)**	23.5 **(1.5)**	22.9 **(0.9)**	23.8 **(1.8)**	25.3 **(3.3)**
	TNx	Warmest night time temperature	°C	25.1	25.8 **(0.7)**	26.4 **(1.3)**	26.7 **(1.6)**	25.9 **(0.8)**	26.8 **(1.7)**	28.3 **(3.2)**
	TXn	Coldest day time temperature	°C	25.8	26.6 **(0.8)**	27.3 **(1.5)**	27.4 **(1.6)**	26.8 **(1.0)**	27.5 **(1.7)**	28.9 **(3.1)**
	TXm	Average day time temperature	°C	31.1	31.7 **(0.6)**	32.3 **(1.2)**	32.6 **(1.5)**	31.9 **(0.8)**	32.7 **(1.6)**	34.3 **(3.2)**
	TXx	Warmest day time temperature	°C	35.4	36.0 **(0.6)**	36.6 **(1.2)**	37.0 **(1.6)**	36.1 **(0.7)**	37.1 **(1.7)**	38.8 **(3.4)**
	DTR	Daily temperature range	°C	9.1	9.0 **(-0.1)**	9.1 **(0.0)**	9.1 **(0.0)**	9.1 **(0.0)**	9.0 **(-0.1)**	9.0 **(-0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	4.4 **(-7.2)**	2.5 **(-9.1)**	2.0 **(-9.6)**	3.5 **(-8.1)**	1.6 **(-10.0)**	0.8 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.4	28.5 **(17.1)**	52.2 **(40.8)**	62.9 **(51.5)**	36.8 **(25.4)**	71.0 **(59.6)**	92.9 **(81.5)**
	TX10p	Fraction of cool days	%	11.4	6.4 **(-5.0)**	2.8 **(-8.6)**	2.1 **(-9.3)**	4.7 **(-6.7)**	2.0 **(-9.4)**	1.0 **(-10.4)**
	TX90p	Fraction of hot days	%	11.5	22.4 **(10.9)**	40.2 **(28.7)**	50.7 **(39.2)**	27.9 **(16.4)**	53.7 **(42.2)**	84.4 **(72.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	8.0	69.9 **(61.9)**	233.9 **(225.9)**	365.0 **(357.0)**	101.2 **(93.2)**	365.0 **(357.0)**	365.0 **(357.0)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2351.7	2201.4 **(-150.3)**	2332.3 **(-19.4)**	2356.9 **(5.2)**	2376.3 **(24.6)**	2300.4 **(-51.3)**	2238.9 **(-112.8)**
	SDII	Average daily rainfall intensity	mm/day	15.7	15.0 **(-0.7)**	15.5 **(-0.2)**	15.9 **(0.2)**	15.9 **(0.2)**	15.7 **(0.0)**	15.1 **(-0.6)**
	Rx1day	Maximum 1-day rainfall total	mm	121.2	121.6 **(0.4)**	124.1 **(2.9)**	126.1 **(4.9)**	123.9 **(2.7)**	115.3 **(-5.9)**	129.7 **(8.5)**
	Rx5day	Maximum 5-day rainfall total	mm	292.5	285.1 **(-7.4)**	293.7 **(1.2)**	292.2 **(-0.3)**	282.8 **(-9.7)**	281.6 **(-10.9)**	277.5 **(-15.0)**
	P95	Rainfall on very wet days	mm	50.9	49.7 **(-1.2)**	50.9 **(0.0)**	51.3 **(0.4)**	50.8 **(-0.1)**	50.5 **(-0.4)**	48.7 **(-2.2)**
	P99	Rainfall on extremely wet days	mm	99.0	92.9 **(-6.1)**	96.5 **(-2.5)**	98.8 **(-0.2)**	95.8 **(-3.2)**	96.7 **(-2.3)**	94.6 **(-4.4)**
	R95p	Total rainfall from very wet days	mm	596.5	538.9 **(-57.6)**	595.3 **(-1.2)**	592.0 **(-4.5)**	589.6 **(-6.9)**	595.0 **(-1.5)**	552.1 **(-44.4)**
	R99p	Total rainfall from extremely wet days	mm	189.8	166.6 **(-23.2)**	189.5 **(-0.3)**	192.9 **(3.1)**	177.5 **(-12.3)**	183.3 **(-6.5)**	196.1 **(6.3)**
	Frequency									
	P95d	Number of very wet days	days	7.5	6.9 **(-0.6)**	7.6 **(0.1)**	7.5 **(0.0)**	7.6 **(0.1)**	7.4 **(-0.1)**	7.2 **(-0.3)**
	P99d	Number of extremely wet days	days	1.5	1.4 **(-0.1)**	1.5 **(0.0)**	1.6 **(0.1)**	1.5 **(0.0)**	1.5 **(0.0)**	1.5 **(0.0)**
	Duration									
	CWD	Longest wet spelll	days	20.9	18.5 **(-2.4)**	20.4 **(-0.5)**	19.4 **(-1.5)**	20.0 **(-0.9)**	20.2 **(-0.7)**	22.1 **(1.2)**
	CDD	Longest dry spell	days	49.2	50.9 **(1.7)**	45.6 **(-3.6)**	52.4 **(3.2)**	47.4 **(-1.8)**	48.6 **(-0.6)**	46.1 **(-3.1)**

Region II (Cagayan Valley)

Cagayan

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	16.3	17.1 **(0.8)**	17.6 **(1.3)**	17.9 **(1.6)**	17.4 **(1.1)**	18.2 **(1.9)**	19.3 **(3.0)**
	TNm	Average night time temperature	°C	21.9	22.5 **(0.6)**	23.0 **(1.1)**	23.3 **(1.4)**	22.7 **(0.8)**	23.6 **(1.7)**	25.0 **(3.1)**
	TNx	Warmest night time temperature	°C	25.4	26.0 **(0.6)**	26.6 **(1.2)**	26.9 **(1.5)**	26.2 **(0.8)**	27.0 **(1.6)**	28.5 **(3.1)**
	TXn	Coldest day time temperature	°C	23.3	23.8 **(0.5)**	24.1 **(0.8)**	24.6 **(1.3)**	23.9 **(0.6)**	24.9 **(1.6)**	26.2 **(2.9)**
	TXm	Average day time temperature	°C	30.1	30.7 **(0.6)**	31.3 **(1.2)**	31.6 **(1.5)**	31.0 **(0.9)**	31.8 **(1.7)**	33.3 **(3.2)**
	TXx	Warmest day time temperature	°C	35.3	35.9 **(0.6)**	36.7 **(1.4)**	37.3 **(2.0)**	36.2 **(0.9)**	37.3 **(2.0)**	39.0 **(3.7)**
	DTR	Daily temperature range	°C	8.2	8.2 **(0.0)**	8.3 **(0.1)**	8.3 **(0.1)**	8.2 **(0.0)**	8.3 **(0.1)**	8.3 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	5.0 **(-6.4)**	2.5 **(-8.9)**	2.1 **(-9.3)**	4.0 **(-7.4)**	1.5 **(-9.9)**	0.6 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.4	30.1 **(18.7)**	52.3 **(40.9)**	62.1 **(50.7)**	37.8 **(26.4)**	69.7 **(58.3)**	90.1 **(78.7)**
	TX10p	Fraction of cool days	%	11.6	6.1 **(-5.5)**	3.5 **(-8.1)**	2.7 **(-8.9)**	5.2 **(-6.4)**	2.7 **(-8.9)**	1.2 **(-10.4)**
	TX90p	Fraction of hot days	%	11.5	20.6 **(9.1)**	37.2 **(25.7)**	49.1 **(37.6)**	24.7 **(13.2)**	47.2 **(35.7)**	72.5 **(61.0)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.8	29.4 **(24.6)**	84.2 **(79.4)**	149.7 **(144.9)**	42.6 **(37.8)**	148.2 **(143.4)**	365.0 **(360.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1607.2	1542.5 **(-64.7)**	1587.8 **(-19.4)**	1574.0 **(-33.2)**	1599.4 **(-7.8)**	1600.9 **(-6.3)**	1556.8 **(-50.4)**
	SDII	Average daily rainfall intensity	mm/day	11.8	11.4 **(-0.4)**	11.6 **(-0.2)**	11.5 **(-0.3)**	11.7 **(-0.1)**	11.5 **(-0.3)**	11.4 **(-0.4)**
	Rx1day	Maximum 1-day rainfall total	mm	132.0	127.5 **(-4.5)**	135.8 **(3.8)**	136.8 **(4.8)**	133.9 **(1.9)**	140.8 **(8.8)**	146.8 **(14.8)**
	Rx5day	Maximum 5-day rainfall total	mm	223.8	233.3 **(9.5)**	235.9 **(12.1)**	230.6 **(6.8)**	230.2 **(6.4)**	232.7 **(8.9)**	239.1 **(15.3)**
	P95	Rainfall on very wet days	mm	41.0	40.1 **(-0.9)**	41.2 **(0.2)**	39.8 **(-1.2)**	41.4 **(0.4)**	40.6 **(-0.4)**	41.3 **(0.3)**
	P99	Rainfall on extremely wet days	mm	89.8	87.2 **(-2.6)**	89.6 **(-0.2)**	88.7 **(-1.1)**	88.0 **(-1.8)**	87.1 **(-2.7)**	90.4 **(0.6)**
	R95p	Total rainfall from very wet days	mm	486.5	476.2 **(-10.3)**	479.1 **(-7.4)**	474.9 **(-11.6)**	489.5 **(3.0)**	450.9 **(-35.6)**	492.0 **(5.5)**
	R99p	Total rainfall from extremely wet days	mm	173.8	169.4 **(-4.4)**	173.1 **(-0.7)**	182.3 **(8.5)**	167.4 **(-6.4)**	159.7 **(-14.1)**	184.8 **(11.0)**
	Frequency									
	P95d	Number of very wet days	days	6.8	6.4 **(-0.4)**	6.8 **(0.0)**	6.4 **(-0.4)**	6.9 **(0.1)**	6.6 **(-0.2)**	6.5 **(-0.3)**
	P99d	Number of extremely wet days	days	1.4	1.3 **(-0.1)**	1.4 **(0.0)**	1.4 **(0.0)**	1.4 **(0.0)**	1.3 **(-0.1)**	1.3 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	14.3	12.7 **(-1.6)**	14.0 **(-0.3)**	13.8 **(-0.5)**	13.7 **(-0.6)**	14.6 **(0.3)**	14.3 **(0.0)**
	CDD	Longest dry spell	days	38.5	38.1 **(-0.4)**	35.9 **(-2.6)**	40.2 **(1.7)**	39.4 **(0.9)**	37.4 **(-1.1)**	40.0 **(1.5)**

Region II (Cagayan Valley)

Isabela

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.0	17.9 **(0.9)**	18.3 **(1.3)**	18.5 **(1.5)**	17.9 **(0.9)**	19.1 **(2.1)**	20.1 **(3.1)**
	TNm	Average night time temperature	°C	21.8	22.5 **(0.7)**	23.0 **(1.2)**	23.3 **(1.5)**	22.6 **(0.8)**	23.6 **(1.8)**	25.0 **(3.2)**
	TNx	Warmest night time temperature	°C	24.9	25.5 **(0.6)**	26.1 **(1.2)**	26.4 **(1.5)**	25.6 **(0.7)**	26.6 **(1.7)**	28.1 **(3.2)**
	TXn	Coldest day time temperature	°C	23.9	24.5 **(0.6)**	25.0 **(1.1)**	25.3 **(1.4)**	24.6 **(0.7)**	25.6 **(1.7)**	26.7 **(2.8)**
	TXm	Average day time temperature	°C	29.9	30.5 **(0.6)**	31.1 **(1.2)**	31.5 **(1.6)**	30.8 **(0.9)**	31.7 **(1.8)**	33.3 **(3.4)**
	TXx	Warmest day time temperature	°C	34.6	35.2 **(0.6)**	36.1 **(1.5)**	36.7 **(2.1)**	35.6 **(1.0)**	36.7 **(2.1)**	38.5 **(3.9)**
	DTR	Daily temperature range	°C	8.1	8.1 **(0.0)**	8.1 **(0.0)**	8.2 **(0.1)**	8.1 **(0.0)**	8.1 **(0.0)**	8.2 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	5.0 **(-6.4)**	2.6 **(-8.8)**	2.2 **(-9.2)**	3.8 **(-7.6)**	1.6 **(-9.8)**	0.6 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.3	29.2 **(17.9)**	54.1 **(42.8)**	64.4 **(53.1)**	37.9 **(26.6)**	71.3 **(60.0)**	90.8 **(79.5)**
	TX10p	Fraction of cool days	%	11.5	6.0 **(-5.5)**	3.4 **(-8.1)**	2.6 **(-8.9)**	5.1 **(-6.4)**	2.5 **(-9.0)**	1.1 **(-10.4)**
	TX90p	Fraction of hot days	%	11.5	20.8 **(9.3)**	37.8 **(26.3)**	48.3 **(36.8)**	25.3 **(13.8)**	47.0 **(35.5)**	75.5 **(64.0)**
	Duration									
	WSDI	Warm Spell Duration Index	days	5.8	32.0 **(26.2)**	100.3 **(94.5)**	178.5 **(172.7)**	56.9 **(51.1)**	183.2 **(177.4)**	365.0 **(359.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1864.2	1804.0 **(-60.2)**	1868.8 **(4.6)**	1839.5 **(-24.7)**	1883.8 **(19.6)**	1882.1 **(17.9)**	1818.8 **(-45.4)**
	SDII	Average daily rainfall intensity	mm/day	11.8	11.5 **(-0.3)**	11.7 **(-0.1)**	11.6 **(-0.2)**	11.8 **(0.0)**	11.7 **(-0.1)**	11.3 **(-0.5)**
	Rx1day	Maximum 1-day rainfall total	mm	98.8	96.9 **(-1.9)**	105.1 **(6.3)**	107.6 **(8.8)**	100.0 **(1.2)**	102.2 **(3.4)**	107.6 **(8.8)**
	Rx5day	Maximum 5-day rainfall total	mm	195.8	193.1 **(-2.7)**	208.4 **(12.6)**	210.1 **(14.3)**	200.8 **(5.0)**	203.6 **(7.8)**	217.8 **(22.0)**
	P95	Rainfall on very wet days	mm	37.1	36.3 **(-0.8)**	37.0 **(-0.1)**	36.8 **(-0.3)**	37.4 **(0.3)**	36.5 **(-0.6)**	36.9 **(-0.2)**
	P99	Rainfall on extremely wet days	mm	70.0	67.7 **(-2.3)**	69.5 **(-0.5)**	72.9 **(2.9)**	71.3 **(1.3)**	71.0 **(1.0)**	72.8 **(2.8)**
	R95p	Total rainfall from very wet days	mm	457.0	421.9 **(-35.1)**	451.9 **(-5.1)**	490.1 **(33.1)**	470.3 **(13.3)**	469.1 **(12.1)**	483.0 **(26.0)**
	R99p	Total rainfall from extremely wet days	mm	151.1	145.9 **(-5.2)**	161.9 **(10.8)**	180.0 **(28.9)**	167.2 **(16.1)**	158.6 **(7.5)**	174.5 **(23.4)**
	Frequency									
	P95d	Number of very wet days	days	7.9	7.5 **(-0.4)**	7.8 **(-0.1)**	7.7 **(-0.2)**	8.1 **(0.2)**	7.7 **(-0.2)**	7.7 **(-0.2)**
	P99d	Number of extremely wet days	days	1.6	1.5 **(-0.1)**	1.6 **(0.0)**	1.7 **(0.1)**	1.7 **(0.1)**	1.7 **(0.1)**	1.8 **(0.2)**
	Duration									
	CWD	Longest wet spelll	days	18.9	18.0 **(-0.9)**	18.1 **(-0.8)**	18.4 **(-0.5)**	19.4 **(0.5)**	19.0 **(0.1)**	18.8 **(-0.1)**
	CDD	Longest dry spell	days	39.3	39.5 **(0.2)**	37.1 **(-2.2)**	41.4 **(2.1)**	39.5 **(0.2)**	38.6 **(-0.7)**	39.5 **(0.2)**

Cooler — Warmer

Drier — Wetter

Region II (Cagayan Valley)

Nueva Vizcaya

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	14.1	15.0 **(0.9)**	15.4 **(1.3)**	15.6 **(1.5)**	15.0 **(0.9)**	16.2 **(2.1)**	17.3 **(3.2)**
	TNm	Average night time temperature	°C	19.0	19.7 **(0.7)**	20.3 **(1.3)**	20.5 **(1.5)**	19.9 **(0.9)**	20.8 **(1.8)**	22.4 **(3.4)**
	TNx	Warmest night time temperature	°C	22.2	22.8 **(0.6)**	23.5 **(1.3)**	23.8 **(1.6)**	23.0 **(0.8)**	23.9 **(1.7)**	25.4 **(3.2)**
	TXn	Coldest day time temperature	°C	22.7	23.3 **(0.6)**	23.9 **(1.2)**	24.1 **(1.4)**	23.3 **(0.6)**	24.3 **(1.6)**	25.7 **(3.0)**
	TXm	Average day time temperature	°C	27.9	28.5 **(0.6)**	29.2 **(1.3)**	29.5 **(1.6)**	28.7 **(0.8)**	29.7 **(1.8)**	31.3 **(3.4)**
	TXx	Warmest day time temperature	°C	32.1	32.6 **(0.5)**	33.4 **(1.3)**	33.9 **(1.8)**	33.0 **(0.9)**	34.0 **(1.9)**	36.0 **(3.9)**
	DTR	Daily temperature range	°C	8.9	8.8 **(-0.1)**	8.9 **(0.0)**	8.9 **(0.0)**	8.9 **(0.0)**	8.8 **(-0.1)**	8.9 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	5.3 **(-6.2)**	2.9 **(-8.6)**	2.5 **(-9.0)**	4.2 **(-7.3)**	1.9 **(-9.6)**	0.7 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.4	29.8 **(18.4)**	52.6 **(41.2)**	61.7 **(50.3)**	37.4 **(26.0)**	69.1 **(57.7)**	89.5 **(78.1)**
	TX10p	Fraction of cool days	%	11.4	6.4 **(-5.0)**	3.0 **(-8.4)**	2.1 **(-9.3)**	5.1 **(-6.3)**	2.1 **(-9.3)**	1.1 **(-10.3)**
	TX90p	Fraction of hot days	%	11.4	20.3 **(8.9)**	39.9 **(28.5)**	51.4 **(40.0)**	25.9 **(14.5)**	50.3 **(38.9)**	80.3 **(68.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	7.2	47.8 **(40.6)**	212.5 **(205.3)**	365.0 **(357.8)**	108.5 **(101.3)**	365.0 **(357.8)**	365.0 **(357.8)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2131.2	2031.7 **(-99.5)**	2053.5 **(-77.7)**	2101.8 **(-29.4)**	2123.2 **(-8.0)**	1995.3 **(-135.9)**	1986.0 **(-145.2)**
	SDII	Average daily rainfall intensity	mm/day	13.2	12.9 **(-0.3)**	12.8 **(-0.4)**	12.8 **(-0.4)**	13.1 **(-0.1)**	12.6 **(-0.6)**	12.5 **(-0.7)**
	Rx1day	Maximum 1-day rainfall total	mm	87.3	91.8 **(4.5)**	97.4 **(10.1)**	96.4 **(9.1)**	93.3 **(6.0)**	86.9 **(-0.4)**	98.6 **(11.3)**
	Rx5day	Maximum 5-day rainfall total	mm	209.2	211.9 **(2.7)**	221.3 **(12.1)**	229.7 **(20.5)**	215.6 **(6.4)**	208.8 **(-0.4)**	224.9 **(15.7)**
	P95	Rainfall on very wet days	mm	38.7	37.4 **(-1.3)**	38.0 **(-0.7)**	37.8 **(-0.9)**	38.6 **(-0.1)**	37.5 **(-1.2)**	37.1 **(-1.6)**
	P99	Rainfall on extremely wet days	mm	70.0	68.4 **(-1.6)**	68.1 **(-1.9)**	71.1 **(1.1)**	69.5 **(-0.5)**	68.2 **(-1.8)**	70.0 **(0.0)**
	R95p	Total rainfall from very wet days	mm	469.3	445.8 **(-23.5)**	469.9 **(0.6)**	464.2 **(-5.1)**	470.3 **(1.0)**	456.4 **(-12.9)**	488.1 **(18.8)**
	R99p	Total rainfall from extremely wet days	mm	148.2	140.6 **(-7.6)**	154.8 **(6.6)**	167.1 **(18.9)**	153.0 **(4.8)**	139.4 **(-8.8)**	171.1 **(22.9)**
	Frequency									
	P95d	Number of very wet days	days	8.1	7.5 **(-0.6)**	7.5 **(-0.6)**	7.8 **(-0.3)**	8.1 **(0.0)**	7.5 **(-0.6)**	7.5 **(-0.6)**
	P99d	Number of extremely wet days	days	1.6	1.6 **(0.0)**	1.7 **(0.1)**	1.7 **(0.1)**	1.7 **(0.1)**	1.6 **(0.0)**	1.8 **(0.2)**
	Duration									
	CWD	Longest wet spelll	days	20.9	19.5 **(-1.4)**	20.4 **(-0.5)**	19.8 **(-1.1)**	20.0 **(-0.9)**	19.6 **(-1.3)**	19.7 **(-1.2)**
	CDD	Longest dry spell	days	41.0	41.9 **(0.9)**	40.8 **(-0.2)**	45.8 **(4.8)**	42.0 **(1.0)**	43.8 **(2.8)**	44.6 **(3.6)**

Region II (Cagayan Valley)

Quirino

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	15.2	16.2 **(1.0)**	16.5 **(1.3)**	16.7 **(1.5)**	16.1 **(0.9)**	17.3 **(2.1)**	18.5 **(3.3)**
	TNm	Average night time temperature	°C	20.0	20.6 **(0.6)**	21.2 **(1.2)**	21.5 **(1.5)**	20.8 **(0.8)**	21.8 **(1.8)**	23.3 **(3.3)**
	TNx	Warmest night time temperature	°C	23.0	23.7 **(0.7)**	24.3 **(1.3)**	24.6 **(1.6)**	23.8 **(0.8)**	24.8 **(1.8)**	26.3 **(3.3)**
	TXn	Coldest day time temperature	°C	23.1	23.7 **(0.6)**	24.1 **(1.0)**	24.5 **(1.4)**	23.8 **(0.7)**	24.6 **(1.5)**	26.0 **(2.9)**
	TXm	Average day time temperature	°C	28.5	29.1 **(0.6)**	29.7 **(1.2)**	30.1 **(1.6)**	29.3 **(0.8)**	30.2 **(1.7)**	31.9 **(3.4)**
	TXx	Warmest day time temperature	°C	32.8	33.3 **(0.5)**	34.0 **(1.2)**	34.5 **(1.7)**	33.6 **(0.8)**	34.8 **(2.0)**	36.7 **(3.9)**
	DTR	Daily temperature range	°C	8.5	8.4 **(-0.1)**	8.5 **(0.0)**	8.6 **(0.1)**	8.5 **(0.0)**	8.5 **(0.0)**	8.6 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	5.1 **(-6.3)**	2.7 **(-8.7)**	2.4 **(-9.0)**	4.2 **(-7.2)**	1.9 **(-9.5)**	0.7 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.4	26.7 **(15.3)**	46.7 **(35.3)**	56.5 **(45.1)**	33.8 **(22.4)**	64.2 **(52.8)**	88.8 **(77.4)**
	TX10p	Fraction of cool days	%	11.4	6.1 **(-5.3)**	3.5 **(-7.9)**	2.2 **(-9.2)**	5.0 **(-6.4)**	2.4 **(-9.0)**	1.0 **(-10.4)**
	TX90p	Fraction of hot days	%	11.5	20.3 **(8.8)**	38.0 **(26.5)**	49.1 **(37.6)**	25.8 **(14.3)**	48.0 **(36.5)**	79.7 **(68.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.1	38.0 **(31.9)**	162.6 **(156.5)**	298.8 **(292.7)**	78.0 **(71.9)**	310.5 **(304.4)**	365.0 **(358.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2151.5	2076.9 **(-74.6)**	2155.1 **(3.6)**	2121.1 **(-30.4)**	2163.4 **(11.9)**	2115.7 **(-35.8)**	2076.7 **(-74.8)**
	SDII	Average daily rainfall intensity	mm/day	12.9	12.5 **(-0.4)**	12.9 **(0.0)**	12.7 **(-0.2)**	13.0 **(0.1)**	12.6 **(-0.3)**	12.4 **(-0.5)**
	Rx1day	Maximum 1-day rainfall total	mm	83.5	79.0 **(-4.5)**	90.4 **(6.9)**	82.3 **(-1.2)**	89.4 **(5.9)**	84.1 **(0.6)**	93.8 **(10.3)**
	Rx5day	Maximum 5-day rainfall total	mm	194.3	188.0 **(-6.3)**	198.8 **(4.5)**	197.3 **(3.0)**	200.0 **(5.7)**	182.8 **(-11.5)**	214.4 **(20.1)**
	P95	Rainfall on very wet days	mm	38.2	37.1 **(-1.1)**	37.9 **(-0.3)**	37.8 **(-0.4)**	38.6 **(0.4)**	37.1 **(-1.1)**	36.9 **(-1.3)**
	P99	Rainfall on extremely wet days	mm	65.2	63.4 **(-1.8)**	65.9 **(0.7)**	65.3 **(0.1)**	67.7 **(2.5)**	62.7 **(-2.5)**	66.8 **(1.6)**
	R95p	Total rainfall from very wet days	mm	458.5	447.1 **(-11.4)**	483.7 **(25.2)**	487.0 **(28.5)**	481.2 **(22.7)**	461.4 **(2.9)**	472.9 **(14.4)**
	R99p	Total rainfall from extremely wet days	mm	139.4	132.8 **(-6.6)**	151.1 **(11.7)**	155.2 **(15.8)**	157.3 **(17.9)**	141.0 **(1.6)**	165.7 **(26.3)**
	Frequency									
	P95d	Number of very wet days	days	8.4	7.8 **(-0.6)**	8.5 **(0.1)**	8.1 **(-0.3)**	8.6 **(0.2)**	8.2 **(-0.2)**	8.0 **(-0.4)**
	P99d	Number of extremely wet days	days	1.7	1.6 **(-0.1)**	1.8 **(0.1)**	1.8 **(0.1)**	1.8 **(0.1)**	1.6 **(-0.1)**	1.8 **(0.1)**
	Duration									
	CWD	Longest wet spelll	days	20.8	19.9 **(-0.9)**	20.1 **(-0.7)**	20.1 **(-0.7)**	20.7 **(-0.1)**	19.9 **(-0.9)**	20.1 **(-0.7)**
	CDD	Longest dry spell	days	37.1	38.0 **(0.9)**	37.8 **(0.7)**	38.9 **(1.8)**	37.5 **(0.4)**	40.2 **(3.1)**	41.2 **(4.1)**

Cooler — Warmer

Drier — Wetter

Region III (Central Luzon)

Aurora

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	15.6	16.5 **(0.9)**	16.8 **(1.2)**	17.2 **(1.6)**	16.6 **(1.0)**	17.6 **(2.0)**	18.7 **(3.1)**
	TNm	Average night time temperature	°C	20.4	21.0 **(0.6)**	21.5 **(1.1)**	21.8 **(1.4)**	21.2 **(0.8)**	22.1 **(1.7)**	23.6 **(3.2)**
	TNx	Warmest night time temperature	°C	23.5	24.2 **(0.7)**	24.7 **(1.2)**	24.9 **(1.4)**	24.3 **(0.8)**	25.2 **(1.7)**	26.7 **(3.2)**
	TXn	Coldest day time temperature	°C	23.3	23.9 **(0.6)**	24.4 **(1.1)**	24.6 **(1.3)**	24.0 **(0.7)**	24.8 **(1.5)**	26.2 **(2.9)**
	TXm	Average day time temperature	°C	28.8	29.4 **(0.6)**	30.0 **(1.2)**	30.3 **(1.5)**	29.6 **(0.8)**	30.5 **(1.7)**	32.1 **(3.3)**
	TXx	Warmest day time temperature	°C	33.1	33.7 **(0.6)**	34.4 **(1.3)**	34.8 **(1.7)**	33.9 **(0.8)**	35.1 **(2.0)**	37.0 **(3.9)**
	DTR	Daily temperature range	°C	8.4	8.4 **(0.0)**	8.4 **(0.0)**	8.5 **(0.1)**	8.4 **(0.0)**	8.4 **(0.0)**	8.5 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	5.2 **(-6.2)**	2.5 **(-8.9)**	2.2 **(-9.2)**	3.9 **(-7.5)**	1.6 **(-9.8)**	0.5 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.4	31.5 **(20.1)**	51.1 **(39.7)**	60.8 **(49.4)**	36.4 **(25.0)**	69.9 **(58.5)**	90.7 **(79.3)**
	TX10p	Fraction of cool days	%	11.4	5.1 **(-6.3)**	2.4 **(-9.0)**	1.7 **(-9.7)**	4.0 **(-7.4)**	1.7 **(-9.7)**	0.9 **(-10.5)**
	TX90p	Fraction of hot days	%	11.4	22.8 **(11.4)**	43.3 **(31.9)**	55.4 **(44.0)**	29.2 **(17.8)**	53.7 **(42.3)**	85.5 **(74.1)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.3	59.3 **(53.0)**	193.8 **(187.5)**	334.6 **(328.3)**	86.1 **(79.8)**	365.0 **(358.7)**	365.0 **(358.7)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2335.6	2279.0 **(-56.6)**	2381.5 **(45.9)**	2276.5 **(-59.1)**	2398.1 **(62.5)**	2298.2 **(-37.4)**	2221.9 **(-113.7)**
	SDII	Average daily rainfall intensity	mm/day	13.5	13.1 **(-0.4)**	13.5 **(0.0)**	13.2 **(-0.3)**	13.6 **(0.1)**	13.2 **(-0.3)**	12.7 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	86.7	84.3 **(-2.4)**	94.3 **(7.6)**	89.4 **(2.7)**	86.3 **(-0.4)**	88.7 **(2.0)**	94.4 **(7.7)**
	Rx5day	Maximum 5-day rainfall total	mm	201.4	207.9 **(6.5)**	207.0 **(5.6)**	203.9 **(2.5)**	204.7 **(3.3)**	190.2 **(-11.2)**	207.2 **(5.8)**
	P95	Rainfall on very wet days	mm	39.9	38.1 **(-1.8)**	40.2 **(0.3)**	39.4 **(-0.5)**	40.2 **(0.3)**	39.1 **(-0.8)**	37.7 **(-2.2)**
	P99	Rainfall on extremely wet days	mm	67.0	63.8 **(-3.2)**	66.0 **(-1.0)**	64.5 **(-2.5)**	67.5 **(0.5)**	67.6 **(0.6)**	64.5 **(-2.5)**
	R95p	Total rainfall from very wet days	mm	499.8	464.1 **(-35.7)**	521.5 **(21.7)**	488.7 **(-11.1)**	508.4 **(8.6)**	496.0 **(-3.8)**	473.5 **(-26.3)**
	R99p	Total rainfall from extremely wet days	mm	150.1	139.8 **(-10.3)**	153.9 **(3.8)**	149.3 **(-0.8)**	157.3 **(7.2)**	155.3 **(5.2)**	141.5 **(-8.6)**
	Frequency									
	P95d	Number of very wet days	days	8.6	8.0 **(-0.6)**	8.9 **(0.3)**	8.2 **(-0.4)**	8.7 **(0.1)**	8.8 **(0.2)**	7.9 **(-0.7)**
	P99d	Number of extremely wet days	days	1.8	1.6 **(-0.2)**	1.8 **(0.0)**	1.7 **(-0.1)**	1.8 **(0.0)**	1.8 **(0.0)**	1.6 **(-0.2)**
	Duration									
	CWD	Longest wet spelll	days	21.4	20.3 **(-1.1)**	21.3 **(-0.1)**	20.7 **(-0.7)**	21.2 **(-0.2)**	21.7 **(0.3)**	22.1 **(0.7)**
	CDD	Longest dry spell	days	36.2	35.6 **(-0.6)**	34.8 **(-1.4)**	37.6 **(1.4)**	34.7 **(-1.5)**	36.8 **(0.6)**	37.3 **(1.1)**

Region III (Central Luzon)

Bataan

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.2	18.1 **(0.9)**	18.5 **(1.3)**	18.8 **(1.6)**	18.3 **(1.1)**	19.2 **(2.0)**	21.0 **(3.8)**
	TNm	Average night time temperature	°C	22.2	22.9 **(0.7)**	23.4 **(1.2)**	23.7 **(1.5)**	23.1 **(0.9)**	23.9 **(1.7)**	25.5 **(3.3)**
	TNx	Warmest night time temperature	°C	25.5	26.2 **(0.7)**	26.7 **(1.2)**	27.1 **(1.6)**	26.2 **(0.7)**	27.1 **(1.6)**	28.5 **(3.0)**
	TXn	Coldest day time temperature	°C	25.4	26.2 **(0.8)**	26.6 **(1.2)**	27.0 **(1.6)**	26.2 **(0.8)**	27.1 **(1.7)**	28.6 **(3.2)**
	TXm	Average day time temperature	°C	31.3	31.8 **(0.5)**	32.5 **(1.2)**	32.8 **(1.5)**	32.0 **(0.7)**	32.9 **(1.6)**	34.5 **(3.2)**
	TXx	Warmest day time temperature	°C	35.7	36.3 **(0.6)**	37.0 **(1.3)**	37.3 **(1.6)**	36.6 **(0.9)**	37.4 **(1.7)**	39.3 **(3.6)**
	DTR	Daily temperature range	°C	9.0	9.0 **(0.0)**	9.1 **(0.1)**	9.2 **(0.2)**	9.1 **(0.1)**	9.0 **(0.0)**	9.1 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	5.2 **(-6.4)**	2.4 **(-9.2)**	2.1 **(-9.5)**	3.5 **(-8.1)**	1.7 **(-9.9)**	0.7 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.7	28.1 **(16.4)**	48.7 **(37.0)**	59.1 **(47.4)**	35.8 **(24.1)**	67.3 **(55.6)**	93.4 **(81.7)**
	TX10p	Fraction of cool days	%	11.6	5.8 **(-5.8)**	2.5 **(-9.1)**	1.9 **(-9.7)**	4.3 **(-7.3)**	1.8 **(-9.8)**	1.0 **(-10.6)**
	TX90p	Fraction of hot days	%	11.5	23.6 **(12.1)**	49.3 **(37.8)**	60.9 **(49.4)**	31.7 **(20.2)**	60.8 **(49.3)**	90.6 **(79.1)**
	Duration									
	WSDI	Warm Spell Duration Index	days	10.8	139.2 **(128.4)**	365.0 **(354.2)**	365.0 **(354.2)**	274.7 **(263.9)**	365.0 **(354.2)**	365.0 **(354.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2727.1	2721.6 **(-5.5)**	2774.0 **(46.9)**	2698.4 **(-28.7)**	2710.1 **(-17.0)**	2744.9 **(17.8)**	2607.8 **(-119.3)**
	SDII	Average daily rainfall intensity	mm/day	19.9	19.9 **(0.0)**	19.9 **(0.0)**	19.6 **(-0.3)**	19.9 **(0.0)**	19.9 **(0.0)**	18.5 **(-1.4)**
	Rx1day	Maximum 1-day rainfall total	mm	133.2	128.9 **(-4.3)**	135.9 **(2.7)**	136.7 **(3.5)**	137.7 **(4.5)**	141.6 **(8.4)**	132.9 **(-0.3)**
	Rx5day	Maximum 5-day rainfall total	mm	360.6	360.1 **(-0.5)**	368.8 **(8.2)**	363.1 **(2.5)**	355.4 **(-5.2)**	373.2 **(12.6)**	331.8 **(-28.8)**
	P95	Rainfall on very wet days	mm	68.3	68.8 **(0.5)**	69.0 **(0.7)**	68.3 **(0.0)**	68.3 **(0.0)**	67.3 **(-1.0)**	66.3 **(-2.0)**
	P99	Rainfall on extremely wet days	mm	115.3	113.4 **(-1.9)**	115.2 **(-0.1)**	112.1 **(-3.2)**	113.6 **(-1.7)**	114.1 **(-1.2)**	102.7 **(-12.6)**
	R95p	Total rainfall from very wet days	mm	685.1	702.8 **(17.7)**	727.7 **(42.6)**	680.1 **(-5.0)**	685.3 **(0.2)**	708.0 **(22.9)**	607.2 **(-77.9)**
	R99p	Total rainfall from extremely wet days	mm	206.5	181.0 **(-25.5)**	215.7 **(9.2)**	203.6 **(-2.9)**	189.3 **(-17.2)**	227.4 **(20.9)**	169.2 **(-37.3)**
	Frequency									
	P95d	Number of very wet days	days	6.9	7.0 **(0.1)**	7.3 **(0.4)**	6.9 **(0.0)**	6.8 **(-0.1)**	6.7 **(-0.2)**	6.6 **(-0.3)**
	P99d	Number of extremely wet days	days	1.5	1.4 **(-0.1)**	1.6 **(0.1)**	1.4 **(-0.1)**	1.5 **(0.0)**	1.6 **(0.1)**	1.1 **(-0.4)**
	Duration									
	CWD	Longest wet spelll	days	25.0	22.7 **(-2.3)**	25.1 **(0.1)**	23.8 **(-1.2)**	24.0 **(-1.0)**	23.9 **(-1.1)**	25.3 **(0.3)**
	CDD	Longest dry spell	days	83.7	78.4 **(-5.3)**	76.7 **(-7.0)**	85.7 **(2.0)**	78.7 **(-5.0)**	76.8 **(-6.9)**	78.9 **(-4.8)**

Region III (Central Luzon)

Bulacan

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.6	18.8 **(1.2)**	19.0 **(1.4)**	19.4 **(1.8)**	18.8 **(1.2)**	19.4 **(1.8)**	21.5 **(3.9)**
	TNm	Average night time temperature	°C	22.7	23.4 **(0.7)**	23.8 **(1.1)**	24.1 **(1.4)**	23.5 **(0.8)**	24.4 **(1.7)**	25.9 **(3.2)**
	TNx	Warmest night time temperature	°C	26.0	26.7 **(0.7)**	27.2 **(1.2)**	27.5 **(1.5)**	26.8 **(0.8)**	27.7 **(1.7)**	29.1 **(3.1)**
	TXn	Coldest day time temperature	°C	25.7	26.3 **(0.6)**	26.9 **(1.2)**	27.2 **(1.5)**	26.5 **(0.8)**	27.4 **(1.7)**	28.8 **(3.1)**
	TXm	Average day time temperature	°C	31.4	32.0 **(0.6)**	32.7 **(1.3)**	33.0 **(1.6)**	32.2 **(0.8)**	33.1 **(1.7)**	34.7 **(3.3)**
	TXx	Warmest day time temperature	°C	36.0	36.6 **(0.6)**	37.3 **(1.3)**	37.7 **(1.7)**	36.9 **(0.9)**	37.9 **(1.9)**	39.7 **(3.7)**
	DTR	Daily temperature range	°C	8.8	8.7 **(-0.1)**	8.8 **(0.0)**	8.9 **(0.1)**	8.8 **(0.0)**	8.8 **(0.0)**	8.8 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	4.8 **(-6.7)**	2.2 **(-9.3)**	1.9 **(-9.6)**	3.4 **(-8.1)**	1.4 **(-10.1)**	0.5 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	30.3 **(18.9)**	52.7 **(41.3)**	63.6 **(52.2)**	38.0 **(26.6)**	72.2 **(60.8)**	94.1 **(82.7)**
	TX10p	Fraction of cool days	%	11.4	5.8 **(-5.6)**	2.4 **(-9.0)**	1.8 **(-9.6)**	4.2 **(-7.2)**	1.7 **(-9.7)**	0.9 **(-10.5)**
	TX90p	Fraction of hot days	%	11.5	24.4 **(12.9)**	48.7 **(37.2)**	61.1 **(49.6)**	31.7 **(20.2)**	59.7 **(48.2)**	87.9 **(76.4)**
	Duration									
	WSDI	Warm Spell Duration Index	days	7.3	81.2 **(73.9)**	283.7 **(276.4)**	365.0 **(357.7)**	119.3 **(112.0)**	365.0 **(357.7)**	365.0 **(357.7)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2562.3	2477.9 **(-84.4)**	2515.0 **(-47.3)**	2485.1 **(-77.2)**	2498.2 **(-64.1)**	2487.9 **(-74.4)**	2301.1 **(-261.2)**
	SDII	Average daily rainfall intensity	mm/day	16.0	15.4 **(-0.6)**	15.8 **(-0.2)**	15.1 **(-0.9)**	15.7 **(-0.3)**	15.4 **(-0.6)**	14.8 **(-1.2)**
	Rx1day	Maximum 1-day rainfall total	mm	103.5	105.9 **(2.4)**	108.3 **(4.8)**	112.0 **(8.5)**	105.9 **(2.4)**	114.4 **(10.9)**	110.7 **(7.2)**
	Rx5day	Maximum 5-day rainfall total	mm	256.1	268.0 **(11.9)**	272.2 **(16.1)**	265.2 **(9.1)**	248.8 **(-7.3)**	270.6 **(14.5)**	255.4 **(-0.7)**
	P95	Rainfall on very wet days	mm	50.5	48.7 **(-1.8)**	50.5 **(0.0)**	48.2 **(-2.3)**	48.6 **(-1.9)**	47.5 **(-3.0)**	47.3 **(-3.2)**
	P99	Rainfall on extremely wet days	mm	87.6	85.1 **(-2.5)**	87.4 **(-0.2)**	88.7 **(1.1)**	89.3 **(1.7)**	89.2 **(1.6)**	85.7 **(-1.9)**
	R95p	Total rainfall from very wet days	mm	581.4	541.4 **(-40.0)**	570.2 **(-11.2)**	527.0 **(-54.4)**	578.7 **(-2.7)**	563.2 **(-18.2)**	524.8 **(-56.6)**
	R99p	Total rainfall from extremely wet days	mm	174.0	163.9 **(-10.1)**	181.0 **(7.0)**	173.6 **(-0.4)**	177.1 **(3.1)**	176.1 **(2.1)**	179.5 **(5.5)**
	Frequency									
	P95d	Number of very wet days	days	8.0	7.6 **(-0.4)**	8.0 **(0.0)**	7.0 **(-1.0)**	7.7 **(-0.3)**	7.5 **(-0.5)**	6.9 **(-1.1)**
	P99d	Number of extremely wet days	days	1.6	1.6 **(0.0)**	1.6 **(0.0)**	1.6 **(0.0)**	1.7 **(0.1)**	1.6 **(0.0)**	1.6 **(0.0)**
	Duration									
	CWD	Longest wet spelll	days	20.9	17.7 **(-3.2)**	19.9 **(-1.0)**	18.8 **(-2.1)**	18.4 **(-2.5)**	19.2 **(-1.7)**	19.6 **(-1.3)**
	CDD	Longest dry spell	days	43.7	42.4 **(-1.3)**	39.6 **(-4.1)**	44.1 **(0.4)**	42.5 **(-1.2)**	37.6 **(-6.1)**	40.4 **(-3.3)**

Region III (Central Luzon)

Nueva Ecija

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.4	18.5 (1.1)	18.8 (1.4)	19.0 (1.6)	18.3 (0.9)	19.4 (2.0)	20.9 (3.5)
	TNm	Average night time temperature	°C	22.3	23.0 (0.7)	23.5 (1.2)	23.7 (1.4)	23.1 (0.8)	24.0 (1.7)	25.6 (3.3)
	TNx	Warmest night time temperature	°C	25.2	25.9 (0.7)	26.5 (1.3)	26.7 (1.5)	26.0 (0.8)	26.9 (1.7)	28.4 (3.2)
	TXn	Coldest day time temperature	°C	25.7	26.5 (0.8)	27.1 (1.4)	27.3 (1.6)	26.6 (0.9)	27.4 (1.7)	29.0 (3.3)
	TXm	Average day time temperature	°C	30.9	31.5 (0.6)	32.2 (1.3)	32.5 (1.6)	31.7 (0.8)	32.6 (1.7)	34.3 (3.4)
	TXx	Warmest day time temperature	°C	35.1	35.7 (0.6)	36.4 (1.3)	36.7 (1.6)	36.1 (1.0)	37.1 (2.0)	38.9 (3.8)
	DTR	Daily temperature range	°C	8.7	8.6 (-0.1)	8.7 (0.0)	8.8 (0.1)	8.7 (0.0)	8.6 (-0.1)	8.7 (0.0)
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	5.0 (-6.6)	2.7 (-8.9)	2.3 (-9.3)	3.9 (-7.7)	1.8 (-9.8)	0.8 (-10.8)
	TN90p	Fraction of warm nights	%	11.4	29.7 (18.3)	54.0 (42.6)	63.9 (52.5)	38.1 (26.7)	71.6 (60.2)	90.9 (79.5)
	TX10p	Fraction of cool days	%	11.5	6.2 (-5.3)	2.9 (-8.6)	2.1 (-9.4)	5.0 (-6.5)	2.0 (-9.5)	1.1 (-10.4)
	TX90p	Fraction of hot days	%	11.5	21.3 (9.8)	43.1 (31.6)	55.1 (43.6)	28.2 (16.7)	54.2 (42.7)	85.4 (73.9)
	Duration									
	WSDI	Warm Spell Duration Index	days	8.1	70.8 (62.7)	264.5 (256.4)	365.0 (356.9)	122.6 (114.5)	365.0 (356.9)	365.0 (356.9)
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2419.6	2352.6 (-67.0)	2417.9 (-1.7)	2375.8 (-43.8)	2405.0 (-14.6)	2345.9 (-73.7)	2219.3 (-200.3)
	SDII	Average daily rainfall intensity	mm/day	14.6	14.5 (-0.1)	14.6 (0.0)	14.3 (-0.3)	14.8 (0.2)	14.3 (-0.3)	13.7 (-0.9)
	Rx1day	Maximum 1-day rainfall total	mm	92.5	93.6 (1.1)	100.5 (8.0)	98.8 (6.3)	97.8 (5.3)	93.3 (0.8)	98.2 (5.7)
	Rx5day	Maximum 5-day rainfall total	mm	241.4	246.2 (4.8)	256.9 (15.5)	258.1 (16.7)	241.8 (0.4)	236.5 (-4.9)	247.5 (6.1)
	P95	Rainfall on very wet days	mm	43.7	43.0 (-0.7)	44.1 (0.4)	43.4 (-0.3)	43.6 (-0.1)	43.2 (-0.5)	40.9 (-2.8)
	P99	Rainfall on extremely wet days	mm	78.2	76.4 (-1.8)	79.3 (1.1)	76.9 (-1.3)	79.2 (1.0)	77.8 (-0.4)	77.3 (-0.9)
	R95p	Total rainfall from very wet days	mm	532.7	529.9 (-2.8)	554.8 (22.1)	531.1 (-1.6)	536.2 (3.5)	521.7 (-11.0)	467.6 (-65.1)
	R99p	Total rainfall from extremely wet days	mm	161.4	158.3 (-3.1)	173.3 (11.9)	162.7 (1.3)	176.3 (14.9)	157.9 (-3.5)	163.7 (2.3)
	Frequency									
	P95d	Number of very wet days	days	8.3	8.0 (-0.3)	8.5 (0.2)	7.9 (-0.4)	8.2 (-0.1)	8.2 (-0.1)	7.4 (-0.9)
	P99d	Number of extremely wet days	days	1.7	1.6 (-0.1)	1.7 (0.0)	1.7 (0.0)	1.8 (0.1)	1.6 (-0.1)	1.5 (-0.2)
	Duration									
	CWD	Longest wet spelll	days	22.7	19.7 (-3.0)	22.1 (-0.6)	20.9 (-1.8)	21.6 (-1.1)	20.7 (-2.0)	23.9 (1.2)
	CDD	Longest dry spell	days	43.4	43.2 (-0.2)	39.1 (-4.3)	47.4 (4.0)	42.1 (-1.3)	42.1 (-1.3)	39.3 (-4.1)

Region III (Central Luzon)

Pampanga

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.9	19.0 **(1.1)**	19.3 **(1.4)**	19.7 **(1.8)**	19.1 **(1.2)**	20.0 **(2.1)**	21.9 **(4.0)**
	TNm	Average night time temperature	°C	22.8	23.5 **(0.7)**	24.0 **(1.2)**	24.2 **(1.4)**	23.6 **(0.8)**	24.5 **(1.7)**	26.1 **(3.3)**
	TNx	Warmest night time temperature	°C	25.8	26.5 **(0.7)**	27.0 **(1.2)**	27.4 **(1.6)**	26.6 **(0.8)**	27.5 **(1.7)**	28.9 **(3.1)**
	TXn	Coldest day time temperature	°C	26.1	26.9 **(0.8)**	27.4 **(1.3)**	27.8 **(1.7)**	27.0 **(0.9)**	28.0 **(1.9)**	29.4 **(3.3)**
	TXm	Average day time temperature	°C	31.7	32.3 **(0.6)**	33.0 **(1.3)**	33.3 **(1.6)**	32.5 **(0.8)**	33.4 **(1.7)**	35.0 **(3.3)**
	TXx	Warmest day time temperature	°C	36.1	36.6 **(0.5)**	37.4 **(1.3)**	37.7 **(1.6)**	36.9 **(0.8)**	37.9 **(1.8)**	39.8 **(3.7)**
	DTR	Daily temperature range	°C	9.0	8.9 **(-0.1)**	9.0 **(0.0)**	9.1 **(0.1)**	8.9 **(-0.1)**	8.9 **(-0.1)**	9.0 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	4.8 **(-6.7)**	2.6 **(-8.9)**	2.0 **(-9.5)**	3.6 **(-7.9)**	1.7 **(-9.8)**	0.8 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.5	28.7 **(17.2)**	51.8 **(40.3)**	62.0 **(50.5)**	36.4 **(24.9)**	70.7 **(59.2)**	92.9 **(81.4)**
	TX10p	Fraction of cool days	%	11.4	6.0 **(-5.4)**	2.5 **(-8.9)**	1.8 **(-9.6)**	4.2 **(-7.2)**	1.8 **(-9.6)**	1.0 **(-10.4)**
	TX90p	Fraction of hot days	%	11.5	23.4 **(11.9)**	47.5 **(36.0)**	59.3 **(47.8)**	30.4 **(18.9)**	59.1 **(47.6)**	87.7 **(76.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	10.4	99.6 **(89.2)**	327.8 **(317.4)**	365.0 **(354.6)**	179.2 **(168.8)**	365.0 **(354.6)**	365.0 **(354.6)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2580.9	2528.9 **(-52.0)**	2607.4 **(26.5)**	2580.6 **(-0.3)**	2519.0 **(-61.9)**	2536.9 **(-44.0)**	2453.1 **(-127.8)**
	SDII	Average daily rainfall intensity	mm/day	17.4	17.2 **(-0.2)**	17.4 **(0.0)**	17.2 **(-0.2)**	17.5 **(0.1)**	17.3 **(-0.1)**	16.6 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	110.0	105.2 **(-4.8)**	114.8 **(4.8)**	119.3 **(9.3)**	110.4 **(0.4)**	113.9 **(3.9)**	110.4 **(0.4)**
	Rx5day	Maximum 5-day rainfall total	mm	303.0	312.1 **(9.1)**	310.3 **(7.3)**	315.9 **(12.9)**	293.5 **(-9.5)**	312.9 **(9.9)**	303.3 **(0.3)**
	P95	Rainfall on very wet days	mm	57.5	58.3 **(0.8)**	56.9 **(-0.6)**	56.2 **(-1.3)**	57.3 **(-0.2)**	57.3 **(-0.2)**	54.5 **(-3.0)**
	P99	Rainfall on extremely wet days	mm	95.7	95.3 **(-0.4)**	96.4 **(0.7)**	95.7 **(0.0)**	91.0 **(-4.7)**	92.5 **(-3.2)**	86.5 **(-9.2)**
	R95p	Total rainfall from very wet days	mm	602.0	613.6 **(11.6)**	625.4 **(23.4)**	580.2 **(-21.8)**	582.7 **(-19.3)**	579.9 **(-22.1)**	528.3 **(-73.7)**
	R99p	Total rainfall from extremely wet days	mm	175.4	154.5 **(-20.9)**	186.9 **(11.5)**	184.9 **(9.5)**	156.6 **(-18.8)**	164.8 **(-10.6)**	153.8 **(-21.6)**
	Frequency									
	P95d	Number of very wet days	days	7.4	7.6 **(0.2)**	7.4 **(0.0)**	7.2 **(-0.2)**	7.4 **(0.0)**	7.4 **(0.0)**	7.0 **(-0.4)**
	P99d	Number of extremely wet days	days	1.5	1.4 **(-0.1)**	1.5 **(0.0)**	1.4 **(-0.1)**	1.4 **(-0.1)**	1.4 **(-0.1)**	1.3 **(-0.2)**
	Duration									
	CWD	Longest wet spelll	days	24.5	21.3 **(-3.2)**	24.1 **(-0.4)**	22.2 **(-2.3)**	23.1 **(-1.4)**	24.1 **(-0.4)**	25.2 **(0.7)**
	CDD	Longest dry spell	days	65.1	62.6 **(-2.5)**	57.4 **(-7.7)**	67.9 **(2.8)**	63.0 **(-2.1)**	59.8 **(-5.3)**	58.0 **(-7.1)**

Region III (Central Luzon)

Tarlac

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	16.9	17.9 **(1.0)**	18.2 **(1.3)**	18.5 **(1.6)**	17.9 **(1.0)**	19.0 **(2.1)**	20.7 **(3.8)**
	TNm	Average night time temperature	°C	22.0	22.7 **(0.7)**	23.3 **(1.3)**	23.5 **(1.5)**	22.9 **(0.9)**	23.8 **(1.8)**	25.4 **(3.4)**
	TNx	Warmest night time temperature	°C	25.2	25.9 **(0.7)**	26.4 **(1.2)**	26.7 **(1.5)**	26.0 **(0.8)**	26.9 **(1.7)**	28.3 **(3.1)**
	TXn	Coldest day time temperature	°C	25.6	26.3 **(0.7)**	27.1 **(1.5)**	27.3 **(1.7)**	26.6 **(1.0)**	27.4 **(1.8)**	28.8 **(3.2)**
	TXm	Average day time temperature	°C	31.2	31.8 **(0.6)**	32.5 **(1.3)**	32.8 **(1.6)**	32.0 **(0.8)**	32.9 **(1.7)**	34.5 **(3.3)**
	TXx	Warmest day time temperature	°C	35.5	36.1 **(0.6)**	36.8 **(1.3)**	37.1 **(1.6)**	36.3 **(0.8)**	37.5 **(2.0)**	39.3 **(3.8)**
	DTR	Daily temperature range	°C	9.2	9.1 **(-0.1)**	9.2 **(0.0)**	9.2 **(0.0)**	9.2 **(0.0)**	9.1 **(-0.1)**	9.1 **(-0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	4.7 **(-6.9)**	2.7 **(-8.9)**	2.3 **(-9.3)**	3.8 **(-7.8)**	1.8 **(-9.8)**	0.8 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.5	28.3 **(16.8)**	54.3 **(42.8)**	64.9 **(53.4)**	37.8 **(26.3)**	72.2 **(60.7)**	91.5 **(80.0)**
	TX10p	Fraction of cool days	%	11.5	6.2 **(-5.3)**	3.3 **(-8.2)**	2.2 **(-9.3)**	5.0 **(-6.5)**	2.2 **(-9.3)**	1.1 **(-10.4)**
	TX90p	Fraction of hot days	%	11.4	21.1 **(9.7)**	42.2 **(30.8)**	53.8 **(42.4)**	27.4 **(16.0)**	51.9 **(40.5)**	85.6 **(74.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	7.5	50.0 **(42.5)**	221.4 **(213.9)**	355.2 **(347.7)**	86.1 **(78.6)**	365.0 **(357.5)**	365.0 **(357.5)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2431.2	2366.5 **(-64.7)**	2359.3 **(-71.9)**	2322.3 **(-108.9)**	2442.8 **(11.6)**	2344.0 **(-87.2)**	2279.4 **(-151.8)**
	SDII	Average daily rainfall intensity	mm/day	17.1	16.8 **(-0.3)**	16.6 **(-0.5)**	16.8 **(-0.3)**	17.1 **(0.0)**	16.5 **(-0.6)**	15.9 **(-1.2)**
	Rx1day	Maximum 1-day rainfall total	mm	110.7	104.6 **(-6.1)**	113.4 **(2.7)**	117.5 **(6.8)**	114.0 **(3.3)**	102.8 **(-7.9)**	100.6 **(-10.1)**
	Rx5day	Maximum 5-day rainfall total	mm	304.5	300.5 **(-4.0)**	318.5 **(14.0)**	291.3 **(-13.2)**	302.3 **(-2.2)**	283.1 **(-21.4)**	286.7 **(-17.8)**
	P95	Rainfall on very wet days	mm	55.3	55.3 **(0.0)**	54.7 **(-0.6)**	53.7 **(-1.6)**	55.7 **(0.4)**	54.8 **(-0.5)**	52.6 **(-2.7)**
	P99	Rainfall on extremely wet days	mm	98.1	96.3 **(-1.8)**	99.2 **(1.1)**	92.4 **(-5.7)**	96.5 **(-1.6)**	94.4 **(-3.7)**	92.3 **(-5.8)**
	R95p	Total rainfall from very wet days	mm	576.7	568.0 **(-8.7)**	577.5 **(0.8)**	546.0 **(-30.7)**	562.4 **(-14.3)**	543.6 **(-33.1)**	510.1 **(-66.6)**
	R99p	Total rainfall from extremely wet days	mm	172.8	157.8 **(-15.0)**	179.1 **(6.3)**	158.1 **(-14.7)**	162.6 **(-10.2)**	148.3 **(-24.5)**	141.4 **(-31.4)**
	Frequency									
	P95d	Number of very wet days	days	7.2	7.2 **(0.0)**	7.2 **(0.0)**	6.6 **(-0.6)**	7.3 **(0.1)**	7.0 **(-0.2)**	6.1 **(-1.1)**
	P99d	Number of extremely wet days	days	1.5	1.4 **(-0.1)**	1.5 **(0.0)**	1.3 **(-0.2)**	1.4 **(-0.1)**	1.3 **(-0.2)**	1.2 **(-0.3)**
	Duration									
	CWD	Longest wet spelll	days	23.4	21.8 **(-1.6)**	22.9 **(-0.5)**	21.6 **(-1.8)**	22.0 **(-1.4)**	24.0 **(0.6)**	25.8 **(2.4)**
	CDD	Longest dry spell	days	69.1	67.8 **(-1.3)**	63.4 **(-5.7)**	74.1 **(5.0)**	65.2 **(-3.9)**	65.8 **(-3.3)**	63.4 **(-5.7)**

Region III (Central Luzon)
Zambales

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	15.2	16.2 **(1.0)**	16.4 **(1.2)**	16.7 **(1.5)**	16.2 **(1.0)**	17.3 **(2.1)**	18.8 **(3.6)**
	TNm	Average night time temperature	°C	20.5	21.2 **(0.7)**	21.6 **(1.1)**	21.9 **(1.4)**	21.3 **(0.8)**	22.2 **(1.7)**	23.8 **(3.3)**
	TNx	Warmest night time temperature	°C	23.9	24.6 **(0.7)**	25.1 **(1.2)**	25.5 **(1.6)**	24.7 **(0.8)**	25.6 **(1.7)**	27.0 **(3.1)**
	TXn	Coldest day time temperature	°C	23.8	24.6 **(0.8)**	25.2 **(1.4)**	25.5 **(1.7)**	24.7 **(0.9)**	25.6 **(1.8)**	27.1 **(3.3)**
	TXm	Average day time temperature	°C	29.9	30.5 **(0.6)**	31.1 **(1.2)**	31.4 **(1.5)**	30.7 **(0.8)**	31.5 **(1.6)**	33.1 **(3.2)**
	TXx	Warmest day time temperature	°C	34.3	34.9 **(0.6)**	35.5 **(1.2)**	35.8 **(1.5)**	35.1 **(0.8)**	36.1 **(1.8)**	37.7 **(3.4)**
	DTR	Daily temperature range	°C	9.4	9.4 **(0.0)**	9.4 **(0.0)**	9.5 **(0.1)**	9.5 **(0.1)**	9.4 **(0.0)**	9.4 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.7	4.7 **(-7.0)**	2.5 **(-9.2)**	2.0 **(-9.7)**	3.6 **(-8.1)**	1.6 **(-10.1)**	0.7 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	29.5 **(18.1)**	50.3 **(38.9)**	61.3 **(49.9)**	37.0 **(25.6)**	68.5 **(57.1)**	93.4 **(82.0)**
	TX10p	Fraction of cool days	%	11.6	5.4 **(-6.2)**	2.2 **(-9.4)**	1.8 **(-9.8)**	3.7 **(-7.9)**	1.8 **(-9.8)**	1.0 **(-10.6)**
	TX90p	Fraction of hot days	%	11.5	24.1 **(12.6)**	46.3 **(34.8)**	57.6 **(46.1)**	31.1 **(19.6)**	61.7 **(50.2)**	89.9 **(78.4)**
	Duration									
	WSDI	Warm Spell Duration Index	days	7.8	52.4 **(44.6)**	261.3 **(253.5)**	365.0 **(357.2)**	115.6 **(107.8)**	365.0 **(357.2)**	365.0 **(357.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2653.6	2614.0 **(-39.6)**	2643.9 **(-9.7)**	2610.3 **(-43.3)**	2644.3 **(-9.3)**	2582.5 **(-71.1)**	2486.5 **(-167.1)**
	SDII	Average daily rainfall intensity	mm/day	19.5	19.5 **(0.0)**	19.2 **(-0.3)**	19.5 **(0.0)**	19.8 **(0.3)**	18.9 **(-0.6)**	17.9 **(-1.6)**
	Rx1day	Maximum 1-day rainfall total	mm	126.1	116.8 **(-9.3)**	128.5 **(2.4)**	125.0 **(-1.1)**	120.4 **(-5.7)**	117.6 **(-8.5)**	117.0 **(-9.1)**
	Rx5day	Maximum 5-day rainfall total	mm	336.7	335.1 **(-1.6)**	352.8 **(16.1)**	332.1 **(-4.6)**	322.1 **(-14.6)**	328.6 **(-8.1)**	331.9 **(-4.8)**
	P95	Rainfall on very wet days	mm	67.7	69.4 **(1.7)**	68.5 **(0.8)**	68.5 **(0.8)**	68.4 **(0.7)**	66.7 **(-1.0)**	66.1 **(-1.6)**
	P99	Rainfall on extremely wet days	mm	112.4	108.7 **(-3.7)**	113.5 **(1.1)**	112.1 **(-0.3)**	109.0 **(-3.4)**	106.7 **(-5.7)**	107.3 **(-5.1)**
	R95p	Total rainfall from very wet days	mm	651.0	637.1 **(-13.9)**	650.8 **(-0.2)**	640.9 **(-10.1)**	645.2 **(-5.8)**	620.0 **(-31.0)**	615.9 **(-35.1)**
	R99p	Total rainfall from extremely wet days	mm	184.7	174.8 **(-9.9)**	190.4 **(5.7)**	185.2 **(0.5)**	164.0 **(-20.7)**	173.0 **(-11.7)**	174.8 **(-9.9)**
	Frequency									
	P95d	Number of very wet days	days	6.9	7.0 **(0.1)**	7.0 **(0.1)**	6.9 **(0.0)**	7.1 **(0.2)**	6.7 **(-0.2)**	6.6 **(-0.3)**
	P99d	Number of extremely wet days	days	1.4	1.3 **(-0.1)**	1.5 **(0.1)**	1.4 **(0.0)**	1.3 **(-0.1)**	1.3 **(-0.1)**	1.3 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	22.9	20.1 **(-2.8)**	22.8 **(-0.1)**	21.3 **(-1.6)**	22.1 **(-0.8)**	22.0 **(-0.9)**	22.6 **(-0.3)**
	CDD	Longest dry spell	days	69.7	66.9 **(-2.8)**	64.7 **(-5.0)**	72.7 **(3.0)**	67.1 **(-2.6)**	65.0 **(-4.7)**	67.4 **(-2.3)**

Region IV-A (Calabarzon)

Batangas

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.2	19.0 **(0.8)**	19.4 **(1.2)**	19.8 **(1.6)**	19.1 **(0.9)**	20.0 **(1.8)**	21.8 **(3.6)**
	TNm	Average night time temperature	°C	22.7	23.3 **(0.6)**	23.8 **(1.1)**	24.1 **(1.4)**	23.4 **(0.7)**	24.3 **(1.6)**	25.8 **(3.1)**
	TNx	Warmest night time temperature	°C	25.6	26.2 **(0.6)**	26.8 **(1.2)**	27.1 **(1.5)**	26.3 **(0.7)**	27.2 **(1.6)**	28.6 **(3.0)**
	TXn	Coldest day time temperature	°C	25.2	25.9 **(0.7)**	26.4 **(1.2)**	26.6 **(1.4)**	25.9 **(0.7)**	26.8 **(1.6)**	28.2 **(3.0)**
	TXm	Average day time temperature	°C	31.0	31.5 **(0.5)**	32.1 **(1.1)**	32.4 **(1.4)**	31.8 **(0.8)**	32.6 **(1.6)**	34.2 **(3.2)**
	TXx	Warmest day time temperature	°C	35.0	35.6 **(0.6)**	36.3 **(1.3)**	36.6 **(1.6)**	35.8 **(0.8)**	36.8 **(1.8)**	38.6 **(3.6)**
	DTR	Daily temperature range	°C	8.3	8.3 **(0.0)**	8.3 **(0.0)**	8.4 **(0.1)**	8.4 **(0.1)**	8.3 **(0.0)**	8.3 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.6 **(-7.7)**	1.5 **(-9.8)**	1.2 **(-10.1)**	2.8 **(-8.5)**	0.9 **(-10.4)**	0.3 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.1	31.7 **(20.6)**	51.1 **(40.0)**	63.5 **(52.4)**	36.9 **(25.8)**	71.0 **(59.9)**	96.2 **(85.1)**
	TX10p	Fraction of cool days	%	11.4	5.2 **(-6.2)**	2.2 **(-9.2)**	1.4 **(-10.0)**	3.8 **(-7.6)**	1.4 **(-10.0)**	0.7 **(-10.7)**
	TX90p	Fraction of hot days	%	11.4	26.0 **(14.6)**	53.8 **(42.4)**	65.4 **(54.0)**	34.5 **(23.1)**	66.5 **(55.1)**	91.9 **(80.5)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.9	66.9 **(63.0)**	153.5 **(149.6)**	231.8 **(227.9)**	101.1 **(97.2)**	280.0 **(276.1)**	365.0 **(361.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1881.0	1860.5 **(-20.5)**	1899.5 **(18.5)**	1784.5 **(-96.5)**	1865.0 **(-16.0)**	1813.7 **(-67.3)**	1744.4 **(-136.6)**
	SDII	Average daily rainfall intensity	mm/day	12.2	12.1 **(-0.1)**	12.2 **(0.0)**	11.5 **(-0.7)**	12.0 **(-0.2)**	11.8 **(-0.4)**	11.6 **(-0.6)**
	Rx1day	Maximum 1-day rainfall total	mm	110.4	108.6 **(-1.8)**	115.5 **(5.1)**	117.1 **(6.7)**	107.6 **(-2.8)**	116.3 **(5.9)**	124.9 **(14.5)**
	Rx5day	Maximum 5-day rainfall total	mm	209.4	206.4 **(-3.0)**	229.4 **(20.0)**	216.4 **(7.0)**	200.5 **(-8.9)**	205.6 **(-3.8)**	219.9 **(10.5)**
	P95	Rainfall on very wet days	mm	40.3	41.4 **(1.1)**	42.1 **(1.8)**	39.1 **(-1.2)**	40.4 **(0.1)**	40.4 **(0.1)**	38.0 **(-2.3)**
	P99	Rainfall on extremely wet days	mm	81.0	83.3 **(2.3)**	82.0 **(1.0)**	80.7 **(-0.3)**	81.0 **(0.0)**	84.3 **(3.3)**	81.8 **(0.8)**
	R95p	Total rainfall from very wet days	mm	498.0	509.7 **(11.7)**	540.3 **(42.3)**	472.4 **(-25.6)**	502.6 **(4.6)**	514.5 **(16.5)**	491.8 **(-6.2)**
	R99p	Total rainfall from extremely wet days	mm	165.8	167.4 **(1.6)**	191.1 **(25.3)**	174.3 **(8.5)**	168.8 **(3.0)**	198.4 **(32.6)**	179.8 **(14.0)**
	Frequency									
	P95d	Number of very wet days	days	7.6	7.9 **(0.3)**	8.0 **(0.4)**	7.0 **(-0.6)**	7.6 **(0.0)**	7.3 **(-0.3)**	6.9 **(-0.7)**
	P99d	Number of extremely wet days	days	1.5	1.7 **(0.2)**	1.6 **(0.1)**	1.5 **(0.0)**	1.6 **(0.1)**	1.7 **(0.2)**	1.6 **(0.1)**
	Duration									
	CWD	Longest wet spelll	days	16.6	14.8 **(-1.8)**	16.0 **(-0.6)**	15.1 **(-1.5)**	15.4 **(-1.2)**	15.9 **(-0.7)**	15.6 **(-1.0)**
	CDD	Longest dry spell	days	40.4	40.9 **(0.5)**	37.6 **(-2.8)**	40.4 **(0.0)**	39.9 **(-0.5)**	38.0 **(-2.4)**	40.9 **(0.5)**

Cooler — Warmer

Drier — Wetter

Region IV-A (Calabarzon)

Cavite

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.5	18.4 **(0.9)**	18.8 **(1.3)**	19.2 **(1.7)**	18.5 **(1.0)**	19.3 **(1.8)**	21.1 **(3.6)**
	TNm	Average night time temperature	°C	22.4	23.1 **(0.7)**	23.5 **(1.1)**	23.8 **(1.4)**	23.2 **(0.8)**	24.1 **(1.7)**	25.6 **(3.2)**
	TNx	Warmest night time temperature	°C	25.6	26.3 **(0.7)**	26.8 **(1.2)**	27.1 **(1.5)**	26.4 **(0.8)**	27.3 **(1.7)**	28.7 **(3.1)**
	TXn	Coldest day time temperature	°C	24.9	25.6 **(0.7)**	26.1 **(1.2)**	26.4 **(1.5)**	25.6 **(0.7)**	26.5 **(1.6)**	28.0 **(3.1)**
	TXm	Average day time temperature	°C	31.0	31.6 **(0.6)**	32.2 **(1.2)**	32.5 **(1.5)**	31.8 **(0.8)**	32.6 **(1.6)**	34.2 **(3.2)**
	TXx	Warmest day time temperature	°C	35.5	36.0 **(0.5)**	36.7 **(1.2)**	37.0 **(1.5)**	36.3 **(0.8)**	37.2 **(1.7)**	39.1 **(3.6)**
	DTR	Daily temperature range	°C	8.6	8.6 **(0.0)**	8.7 **(0.1)**	8.7 **(0.1)**	8.7 **(0.1)**	8.6 **(0.0)**	8.7 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.0 **(-8.3)**	1.3 **(-10.0)**	0.7 **(-10.6)**	2.5 **(-8.8)**	0.6 **(-10.7)**	0.2 **(-11.1)**
	TN90p	Fraction of warm nights	%	11.2	34.4 **(23.2)**	56.5 **(45.3)**	67.2 **(56.0)**	41.2 **(30.0)**	73.8 **(62.6)**	96.6 **(85.4)**
	TX10p	Fraction of cool days	%	11.4	5.1 **(-6.3)**	2.0 **(-9.4)**	1.4 **(-10.0)**	3.4 **(-8.0)**	1.3 **(-10.1)**	0.7 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	25.5 **(14.0)**	53.2 **(41.7)**	64.1 **(52.6)**	33.4 **(21.9)**	65.1 **(53.6)**	91.4 **(79.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	5.2	58.2 **(53.0)**	187.9 **(182.7)**	282.7 **(277.5)**	107.4 **(102.2)**	363.8 **(358.6)**	365.0 **(359.8)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1850.1	1832.5 **(-17.6)**	1838.7 **(-11.4)**	1771.0 **(-79.1)**	1839.3 **(-10.8)**	1830.0 **(-20.1)**	1738.5 **(-111.6)**
	SDII	Average daily rainfall intensity	mm/day	13.3	13.1 **(-0.2)**	13.3 **(0.0)**	12.8 **(-0.5)**	13.1 **(-0.2)**	13.2 **(-0.1)**	12.6 **(-0.7)**
	Rx1day	Maximum 1-day rainfall total	mm	116.4	118.0 **(1.6)**	121.0 **(4.6)**	124.6 **(8.2)**	116.9 **(0.5)**	124.6 **(8.2)**	122.9 **(6.5)**
	Rx5day	Maximum 5-day rainfall total	mm	243.2	250.9 **(7.7)**	267.8 **(24.6)**	243.7 **(0.5)**	228.9 **(-14.3)**	261.5 **(18.3)**	253.4 **(10.2)**
	P95	Rainfall on very wet days	mm	45.5	45.5 **(0.0)**	48.1 **(2.6)**	44.4 **(-1.1)**	45.1 **(-0.4)**	46.0 **(0.5)**	43.6 **(-1.9)**
	P99	Rainfall on extremely wet days	mm	87.1	89.1 **(2.0)**	96.5 **(9.4)**	94.9 **(7.8)**	87.3 **(0.2)**	95.4 **(8.3)**	92.3 **(5.2)**
	R95p	Total rainfall from very wet days	mm	500.1	496.6 **(-3.5)**	556.5 **(56.4)**	529.4 **(29.3)**	509.8 **(9.7)**	536.2 **(36.1)**	514.2 **(14.1)**
	R99p	Total rainfall from extremely wet days	mm	162.0	169.9 **(7.9)**	202.2 **(40.2)**	184.4 **(22.4)**	151.5 **(-10.5)**	190.0 **(28.0)**	183.8 **(21.8)**
	Frequency									
	P95d	Number of very wet days	days	7.0	7.0 **(0.0)**	7.5 **(0.5)**	6.9 **(-0.1)**	6.9 **(-0.1)**	7.0 **(0.0)**	6.7 **(-0.3)**
	P99d	Number of extremely wet days	days	1.4	1.4 **(0.0)**	1.7 **(0.3)**	1.7 **(0.3)**	1.4 **(0.0)**	1.7 **(0.3)**	1.5 **(0.1)**
	Duration									
	CWD	Longest wet spelll	days	18.5	16.4 **(-2.1)**	17.4 **(-1.1)**	16.5 **(-2.0)**	16.5 **(-2.0)**	17.1 **(-1.4)**	16.9 **(-1.6)**
	CDD	Longest dry spell	days	51.9	50.6 **(-1.3)**	49.6 **(-2.3)**	53.5 **(1.6)**	52.4 **(0.5)**	51.1 **(-0.8)**	52.9 **(1.0)**

Region IV-A (Calabarzon)

Laguna

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.1	19.0 **(0.9)**	19.3 **(1.2)**	19.7 **(1.6)**	19.2 **(1.1)**	19.9 **(1.8)**	21.4 **(3.3)**
	TNm	Average night time temperature	°C	22.7	23.4 **(0.7)**	23.9 **(1.2)**	24.2 **(1.5)**	23.5 **(0.8)**	24.4 **(1.7)**	25.9 **(3.2)**
	TNx	Warmest night time temperature	°C	25.8	26.5 **(0.7)**	27.0 **(1.2)**	27.4 **(1.6)**	26.6 **(0.8)**	27.5 **(1.7)**	28.9 **(3.1)**
	TXn	Coldest day time temperature	°C	25.0	25.7 **(0.7)**	26.2 **(1.2)**	26.3 **(1.3)**	25.7 **(0.7)**	26.5 **(1.5)**	27.8 **(2.8)**
	TXm	Average day time temperature	°C	30.8	31.5 **(0.7)**	32.1 **(1.3)**	32.3 **(1.5)**	31.7 **(0.9)**	32.5 **(1.7)**	34.1 **(3.3)**
	TXx	Warmest day time temperature	°C	35.1	35.6 **(0.5)**	36.4 **(1.3)**	36.8 **(1.7)**	36.0 **(0.9)**	37.0 **(1.9)**	38.8 **(3.7)**
	DTR	Daily temperature range	°C	8.1	8.1 **(0.0)**	8.2 **(0.1)**	8.2 **(0.1)**	8.2 **(0.1)**	8.1 **(0.0)**	8.2 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.4 **(-7.9)**	1.6 **(-9.7)**	1.2 **(-10.1)**	2.7 **(-8.6)**	0.9 **(-10.4)**	0.2 **(-11.1)**
	TN90p	Fraction of warm nights	%	11.2	37.6 **(26.4)**	61.1 **(49.9)**	72.1 **(60.9)**	43.7 **(32.5)**	78.9 **(67.7)**	96.8 **(85.6)**
	TX10p	Fraction of cool days	%	11.4	4.9 **(-6.5)**	2.0 **(-9.4)**	1.4 **(-10.0)**	3.8 **(-7.6)**	1.5 **(-9.9)**	0.8 **(-10.6)**
	TX90p	Fraction of hot days	%	11.5	26.5 **(15.0)**	50.4 **(38.9)**	63.1 **(51.6)**	36.1 **(24.6)**	64.8 **(53.3)**	90.7 **(79.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.9	50.9 **(46.0)**	174.2 **(169.3)**	264.0 **(259.1)**	106.4 **(101.5)**	330.5 **(325.6)**	365.0 **(360.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2112.0	2062.2 **(-49.8)**	2047.8 **(-64.2)**	2042.9 **(-69.1)**	2069.0 **(-43.0)**	2073.5 **(-38.5)**	1929.4 **(-182.6)**
	SDII	Average daily rainfall intensity	mm/day	12.8	12.5 **(-0.3)**	12.5 **(-0.3)**	12.2 **(-0.6)**	12.5 **(-0.3)**	12.3 **(-0.5)**	11.8 **(-1.0)**
	Rx1day	Maximum 1-day rainfall total	mm	109.2	113.3 **(4.1)**	116.5 **(7.3)**	112.5 **(3.3)**	117.0 **(7.8)**	117.3 **(8.1)**	132.4 **(23.2)**
	Rx5day	Maximum 5-day rainfall total	mm	217.6	225.3 **(7.7)**	232.2 **(14.6)**	223.1 **(5.5)**	218.6 **(1.0)**	224.2 **(6.6)**	236.8 **(19.2)**
	P95	Rainfall on very wet days	mm	42.5	41.9 **(-0.6)**	41.4 **(-1.1)**	39.7 **(-2.8)**	41.7 **(-0.8)**	40.1 **(-2.4)**	37.5 **(-5.0)**
	P99	Rainfall on extremely wet days	mm	83.8	83.0 **(-0.8)**	87.6 **(3.8)**	80.4 **(-3.4)**	81.9 **(-1.9)**	83.3 **(-0.5)**	80.5 **(-3.3)**
	R95p	Total rainfall from very wet days	mm	543.3	528.2 **(-15.1)**	550.4 **(7.1)**	495.1 **(-48.2)**	528.3 **(-15.0)**	525.3 **(-18.0)**	481.9 **(-61.4)**
	R99p	Total rainfall from extremely wet days	mm	173.0	178.8 **(5.8)**	210.2 **(37.2)**	175.1 **(2.1)**	176.1 **(3.1)**	175.4 **(2.4)**	191.8 **(18.8)**
	Frequency									
	P95d	Number of very wet days	days	8.1	8.0 **(-0.1)**	7.8 **(-0.3)**	7.2 **(-0.9)**	7.7 **(-0.4)**	7.4 **(-0.7)**	6.7 **(-1.4)**
	P99d	Number of extremely wet days	days	1.7	1.7 **(0.0)**	1.9 **(0.2)**	1.6 **(-0.1)**	1.6 **(-0.1)**	1.6 **(-0.1)**	1.6 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	19.3	17.6 **(-1.7)**	19.1 **(-0.2)**	18.4 **(-0.9)**	17.8 **(-1.5)**	17.6 **(-1.7)**	17.8 **(-1.5)**
	CDD	Longest dry spell	days	37.2	36.9 **(-0.3)**	34.6 **(-2.6)**	37.6 **(0.4)**	37.3 **(0.1)**	36.2 **(-1.0)**	38.0 **(0.8)**

Cooler — Warmer

Drier — Wetter

Region IV-A (Calabarzon)

Quezon

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.4	19.2 **(0.8)**	19.6 **(1.2)**	19.9 **(1.5)**	19.4 **(1.0)**	20.2 **(1.8)**	21.5 **(3.1)**
	TNm	Average night time temperature	°C	22.6	23.3 **(0.7)**	23.8 **(1.2)**	24.0 **(1.4)**	23.4 **(0.8)**	24.3 **(1.7)**	25.8 **(3.2)**
	TNx	Warmest night time temperature	°C	25.6	26.3 **(0.7)**	26.8 **(1.2)**	27.1 **(1.5)**	26.4 **(0.8)**	27.3 **(1.7)**	28.7 **(3.1)**
	TXn	Coldest day time temperature	°C	24.4	25.1 **(0.7)**	25.6 **(1.2)**	25.7 **(1.3)**	25.1 **(0.7)**	26.0 **(1.6)**	27.2 **(2.8)**
	TXm	Average day time temperature	°C	30.1	30.7 **(0.6)**	31.3 **(1.2)**	31.5 **(1.4)**	30.9 **(0.8)**	31.7 **(1.6)**	33.2 **(3.1)**
	TXx	Warmest day time temperature	°C	34.3	34.9 **(0.6)**	35.5 **(1.2)**	36.0 **(1.7)**	35.2 **(0.9)**	36.2 **(1.9)**	38.0 **(3.7)**
	DTR	Daily temperature range	°C	7.4	7.4 **(0.0)**	7.4 **(0.0)**	7.5 **(0.1)**	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.7 **(-7.6)**	1.6 **(-9.7)**	1.2 **(-10.1)**	2.7 **(-8.6)**	0.9 **(-10.4)**	0.3 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.2	35.8 **(24.6)**	56.6 **(45.4)**	68.8 **(57.6)**	40.4 **(29.2)**	75.0 **(63.8)**	97.2 **(86.0)**
	TX10p	Fraction of cool days	%	11.3	4.7 **(-6.6)**	2.0 **(-9.3)**	1.4 **(-9.9)**	3.5 **(-7.8)**	1.3 **(-10.0)**	0.7 **(-10.6)**
	TX90p	Fraction of hot days	%	11.3	25.9 **(14.6)**	52.4 **(41.1)**	64.4 **(53.1)**	35.8 **(24.5)**	64.8 **(53.5)**	89.9 **(78.6)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.4	48.3 **(44.9)**	167.4 **(164.0)**	235.2 **(231.8)**	96.8 **(93.4)**	293.4 **(290.0)**	365.0 **(361.6)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2515.5	2507.7 **(-7.8)**	2483.7 **(-31.8)**	2495.1 **(-20.4)**	2523.8 **(8.3)**	2541.7 **(26.2)**	2437.0 **(-78.5)**
	SDII	Average daily rainfall intensity	mm/day	12.6	12.6 **(0.0)**	12.7 **(0.1)**	12.5 **(-0.1)**	12.7 **(0.1)**	12.8 **(0.2)**	12.2 **(-0.4)**
	Rx1day	Maximum 1-day rainfall total	mm	102.9	106.2 **(3.3)**	111.2 **(8.3)**	107.2 **(4.3)**	109.3 **(6.4)**	114.6 **(11.7)**	124.3 **(21.4)**
	Rx5day	Maximum 5-day rainfall total	mm	220.7	235.0 **(14.3)**	243.5 **(22.8)**	220.3 **(-0.4)**	230.2 **(9.5)**	234.8 **(14.1)**	226.1 **(5.4)**
	P95	Rainfall on very wet days	mm	40.9	40.6 **(-0.3)**	41.5 **(0.6)**	39.9 **(-1.0)**	40.2 **(-0.7)**	41.0 **(0.1)**	37.9 **(-3.0)**
	P99	Rainfall on extremely wet days	mm	80.1	80.4 **(0.3)**	85.4 **(5.3)**	79.3 **(-0.8)**	81.8 **(1.7)**	81.5 **(1.4)**	76.8 **(-3.3)**
	R95p	Total rainfall from very wet days	mm	624.2	621.3 **(-2.9)**	673.0 **(48.8)**	610.0 **(-14.2)**	623.9 **(-0.3)**	636.0 **(11.8)**	577.2 **(-47.0)**
	R99p	Total rainfall from extremely wet days	mm	196.0	206.6 **(10.6)**	225.0 **(29.0)**	197.4 **(1.4)**	204.2 **(8.2)**	207.0 **(11.0)**	211.1 **(15.1)**
	Frequency									
	P95d	Number of very wet days	days	9.8	9.4 **(-0.4)**	9.9 **(0.1)**	9.5 **(-0.3)**	9.7 **(-0.1)**	10.0 **(0.2)**	9.0 **(-0.8)**
	P99d	Number of extremely wet days	days	2.0	2.0 **(0.0)**	2.4 **(0.4)**	2.0 **(0.0)**	2.1 **(0.1)**	2.1 **(0.1)**	1.8 **(-0.2)**
	Duration									
	CWD	Longest wet spelll	days	24.1	22.4 **(-1.7)**	23.9 **(-0.2)**	23.3 **(-0.8)**	22.8 **(-1.3)**	23.4 **(-0.7)**	24.1 **(0.0)**
	CDD	Longest dry spell	days	26.4	26.0 **(-0.4)**	25.6 **(-0.8)**	26.8 **(0.4)**	26.5 **(0.1)**	25.5 **(-0.9)**	29.1 **(2.7)**

Cooler — Warmer

Drier — Wetter

Region IV-A (Calabarzon)

Rizal

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.2	18.1 **(0.9)**	18.4 **(1.2)**	18.8 **(1.6)**	18.3 **(1.1)**	19.0 **(1.8)**	20.6 **(3.4)**
	TNm	Average night time temperature	°C	22.2	22.9 **(0.7)**	23.4 **(1.2)**	23.7 **(1.5)**	23.0 **(0.8)**	23.9 **(1.7)**	25.5 **(3.3)**
	TNx	Warmest night time temperature	°C	25.7	26.4 **(0.7)**	26.9 **(1.2)**	27.3 **(1.6)**	26.5 **(0.8)**	27.4 **(1.7)**	28.9 **(3.2)**
	TXn	Coldest day time temperature	°C	24.7	25.4 **(0.7)**	25.9 **(1.2)**	26.1 **(1.4)**	25.5 **(0.8)**	26.4 **(1.7)**	27.6 **(2.9)**
	TXm	Average day time temperature	°C	30.7	31.3 **(0.6)**	31.9 **(1.2)**	32.2 **(1.5)**	31.6 **(0.9)**	32.4 **(1.7)**	34.0 **(3.3)**
	TXx	Warmest day time temperature	°C	35.3	36.0 **(0.7)**	36.7 **(1.4)**	37.1 **(1.8)**	36.2 **(0.9)**	37.2 **(1.9)**	39.1 **(3.8)**
	DTR	Daily temperature range	°C	8.5	8.5 **(0.0)**	8.5 **(0.0)**	8.6 **(0.1)**	8.6 **(0.1)**	8.5 **(0.0)**	8.5 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.9 **(-7.4)**	1.7 **(-9.6)**	1.4 **(-9.9)**	2.7 **(-8.6)**	1.0 **(-10.3)**	0.3 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.3	34.0 **(22.7)**	56.0 **(44.7)**	67.2 **(55.9)**	41.3 **(30.0)**	75.2 **(63.9)**	96.3 **(85.0)**
	TX10p	Fraction of cool days	%	11.5	5.4 **(-6.1)**	2.4 **(-9.1)**	1.7 **(-9.8)**	4.2 **(-7.3)**	1.7 **(-9.8)**	1.0 **(-10.5)**
	TX90p	Fraction of hot days	%	11.5	24.0 **(12.5)**	46.8 **(35.3)**	58.5 **(47.0)**	33.0 **(21.5)**	59.3 **(47.8)**	88.4 **(76.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.1	58.7 **(52.6)**	199.9 **(193.8)**	313.3 **(307.2)**	118.5 **(112.4)**	365.0 **(358.9)**	365.0 **(358.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2449.3	2421.9 **(-27.4)**	2378.9 **(-70.4)**	2376.2 **(-73.1)**	2378.3 **(-71.0)**	2406.7 **(-42.6)**	2241.5 **(-207.8)**
	SDII	Average daily rainfall intensity	mm/day	14.4	14.3 **(-0.1)**	14.2 **(-0.2)**	13.8 **(-0.6)**	14.3 **(-0.1)**	13.9 **(-0.5)**	13.2 **(-1.2)**
	Rx1day	Maximum 1-day rainfall total	mm	113.8	121.2 **(7.4)**	130.7 **(16.9)**	118.1 **(4.3)**	123.7 **(9.9)**	124.5 **(10.7)**	124.3 **(10.5)**
	Rx5day	Maximum 5-day rainfall total	mm	242.4	257.1 **(14.7)**	255.8 **(13.4)**	239.0 **(-3.4)**	239.9 **(-2.5)**	257.3 **(14.9)**	250.3 **(7.9)**
	P95	Rainfall on very wet days	mm	48.8	48.0 **(-0.8)**	48.4 **(-0.4)**	45.5 **(-3.3)**	47.5 **(-1.3)**	46.6 **(-2.2)**	45.6 **(-3.2)**
	P99	Rainfall on extremely wet days	mm	90.6	89.9 **(-0.7)**	96.1 **(5.5)**	87.7 **(-2.9)**	88.1 **(-2.5)**	89.6 **(-1.0)**	88.1 **(-2.5)**
	R95p	Total rainfall from very wet days	mm	621.8	612.3 **(-9.5)**	636.0 **(14.2)**	580.8 **(-41.0)**	599.8 **(-22.0)**	598.3 **(-23.5)**	518.4 **(-103.4)**
	R99p	Total rainfall from extremely wet days	mm	192.4	200.3 **(7.9)**	231.2 **(38.8)**	200.3 **(7.9)**	189.9 **(-2.5)**	200.2 **(7.8)**	200.3 **(7.9)**
	Frequency									
	P95d	Number of very wet days	days	8.5	8.2 **(-0.3)**	8.6 **(0.1)**	7.6 **(-0.9)**	8.1 **(-0.4)**	7.9 **(-0.6)**	6.6 **(-1.9)**
	P99d	Number of extremely wet days	days	1.7	1.8 **(0.1)**	2.0 **(0.3)**	1.7 **(0.0)**	1.7 **(0.0)**	1.7 **(0.0)**	1.6 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	20.0	17.2 **(-2.8)**	18.8 **(-1.2)**	18.2 **(-1.8)**	18.5 **(-1.5)**	18.1 **(-1.9)**	18.2 **(-1.8)**
	CDD	Longest dry spell	days	33.0	31.7 **(-1.3)**	31.1 **(-1.9)**	34.1 **(1.1)**	32.6 **(-0.4)**	31.7 **(-1.3)**	34.1 **(1.1)**

Cooler — Warmer

Drier — Wetter

MIMAROPA Region

Marinduque

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.6	20.4 **(0.8)**	20.7 **(1.1)**	21.0 **(1.4)**	20.4 **(0.8)**	21.0 **(1.4)**	22.4 **(2.8)**
	TNm	Average night time temperature	°C	23.3	23.9 **(0.6)**	24.3 **(1.0)**	24.6 **(1.3)**	24.0 **(0.7)**	24.8 **(1.5)**	26.2 **(2.9)**
	TNx	Warmest night time temperature	°C	25.8	26.4 **(0.6)**	26.9 **(1.1)**	27.2 **(1.4)**	26.5 **(0.7)**	27.4 **(1.6)**	28.8 **(3.0)**
	TXn	Coldest day time temperature	°C	24.8	25.6 **(0.8)**	25.9 **(1.1)**	26.1 **(1.3)**	25.6 **(0.8)**	26.2 **(1.4)**	27.5 **(2.7)**
	TXm	Average day time temperature	°C	30.3	30.9 **(0.6)**	31.4 **(1.1)**	31.6 **(1.3)**	31.0 **(0.7)**	31.8 **(1.5)**	33.2 **(2.9)**
	TXx	Warmest day time temperature	°C	34.3	35.0 **(0.7)**	35.4 **(1.1)**	35.8 **(1.5)**	35.0 **(0.7)**	35.9 **(1.6)**	37.5 **(3.2)**
	DTR	Daily temperature range	°C	7.0	7.0 **(0.0)**	7.0 **(0.0)**	7.0 **(0.0)**	7.0 **(0.0)**	7.0 **(0.0)**	7.0 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	2.1 **(-9.5)**	1.1 **(-10.5)**	0.8 **(-10.8)**	2.1 **(-9.5)**	0.6 **(-11.0)**	0.3 **(-11.3)**
	TN90p	Fraction of warm nights	%	11.2	51.9 **(40.7)**	75.6 **(64.4)**	83.2 **(72.0)**	53.1 **(41.9)**	89.1 **(77.9)**	99.3 **(88.1)**
	TX10p	Fraction of cool days	%	11.4	1.5 **(-9.9)**	0.5 **(-10.9)**	0.4 **(-11.0)**	1.2 **(-10.2)**	0.2 **(-11.2)**	0.0 **(-11.4)**
	TX90p	Fraction of hot days	%	11.3	45.8 **(34.5)**	71.9 **(60.6)**	83.9 **(72.6)**	50.1 **(38.8)**	87.4 **(76.1)**	99.1 **(87.8)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.2	30.2 **(28.0)**	65.9 **(63.7)**	80.7 **(78.5)**	36.7 **(34.5)**	87.7 **(85.5)**	98.1 **(95.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2155.8	2153.9 **(-1.9)**	2162.5 **(6.7)**	2097.5 **(-58.3)**	2162.7 **(6.9)**	2217.4 **(61.6)**	2036.1 **(-119.7)**
	SDII	Average daily rainfall intensity	mm/day	10.9	10.9 **(0.0)**	11.1 **(0.2)**	10.8 **(-0.1)**	10.9 **(0.0)**	10.9 **(0.0)**	10.5 **(-0.4)**
	Rx1day	Maximum 1-day rainfall total	mm	83.6	88.0 **(4.4)**	84.3 **(0.7)**	78.9 **(-4.7)**	82.9 **(-0.7)**	82.2 **(-1.4)**	91.5 **(7.9)**
	Rx5day	Maximum 5-day rainfall total	mm	183.6	194.6 **(11.0)**	182.9 **(-0.7)**	172.5 **(-11.1)**	191.6 **(8.0)**	167.6 **(-16.0)**	187.2 **(3.6)**
	P95	Rainfall on very wet days	mm	32.1	33.7 **(1.6)**	33.4 **(1.3)**	31.6 **(-0.5)**	32.9 **(0.8)**	31.7 **(-0.4)**	30.7 **(-1.4)**
	P99	Rainfall on extremely wet days	mm	65.3	73.0 **(7.7)**	72.0 **(6.7)**	68.7 **(3.4)**	71.9 **(6.6)**	69.6 **(4.3)**	65.7 **(0.4)**
	R95p	Total rainfall from very wet days	mm	508.9	579.1 **(70.2)**	570.3 **(61.4)**	497.6 **(-11.3)**	551.2 **(42.3)**	527.2 **(18.3)**	507.4 **(-1.5)**
	R99p	Total rainfall from extremely wet days	mm	165.8	204.9 **(39.1)**	206.7 **(40.9)**	178.4 **(12.6)**	198.2 **(32.4)**	191.8 **(26.0)**	180.6 **(14.8)**
	Frequency									
	P95d	Number of very wet days	days	10.0	10.8 **(0.8)**	10.1 **(0.1)**	9.4 **(-0.6)**	10.3 **(0.3)**	9.8 **(-0.2)**	9.3 **(-0.7)**
	P99d	Number of extremely wet days	days	2.0	2.5 **(0.5)**	2.5 **(0.5)**	2.2 **(0.2)**	2.4 **(0.4)**	2.5 **(0.5)**	2.1 **(0.1)**
	Duration									
	CWD	Longest wet spelll	days	25.6	24.1 **(-1.5)**	24.2 **(-1.4)**	23.8 **(-1.8)**	25.7 **(0.1)**	24.6 **(-1.0)**	26.3 **(0.7)**
	CDD	Longest dry spell	days	26.0	25.0 **(-1.0)**	24.2 **(-1.8)**	25.2 **(-0.8)**	25.9 **(-0.1)**	23.4 **(-2.6)**	26.5 **(0.5)**

MIMAROPA Region

Occidental Mindoro

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.9	18.7 **(0.8)**	19.3 **(1.4)**	19.5 **(1.6)**	18.9 **(1.0)**	19.8 **(1.9)**	21.5 **(3.6)**
	TNm	Average night time temperature	°C	21.4	22.0 **(0.6)**	22.5 **(1.1)**	22.8 **(1.4)**	22.2 **(0.8)**	23.1 **(1.7)**	24.6 **(3.2)**
	TNx	Warmest night time temperature	°C	23.8	24.5 **(0.7)**	25.0 **(1.2)**	25.3 **(1.5)**	24.6 **(0.8)**	25.5 **(1.7)**	26.8 **(3.0)**
	TXn	Coldest day time temperature	°C	24.5	25.3 **(0.8)**	25.8 **(1.3)**	25.9 **(1.4)**	25.3 **(0.8)**	26.2 **(1.7)**	27.6 **(3.1)**
	TXm	Average day time temperature	°C	29.6	30.2 **(0.6)**	30.8 **(1.2)**	31.1 **(1.5)**	30.4 **(0.8)**	31.2 **(1.6)**	32.8 **(3.2)**
	TXx	Warmest day time temperature	°C	33.0	33.6 **(0.6)**	34.3 **(1.3)**	34.6 **(1.6)**	33.7 **(0.7)**	34.7 **(1.7)**	36.5 **(3.5)**
	DTR	Daily temperature range	°C	8.2	8.1 **(-0.1)**	8.2 **(0.0)**	8.3 **(0.1)**	8.2 **(0.0)**	8.2 **(0.0)**	8.3 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.7	3.5 **(-8.2)**	1.8 **(-9.9)**	1.4 **(-10.3)**	3.2 **(-8.5)**	1.2 **(-10.5)**	0.8 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.5	32.3 **(20.8)**	51.9 **(40.4)**	64.1 **(52.6)**	35.8 **(24.3)**	71.8 **(60.3)**	96.0 **(84.5)**
	TX10p	Fraction of cool days	%	11.4	4.4 **(-7.0)**	1.6 **(-9.8)**	1.2 **(-10.2)**	3.2 **(-8.2)**	1.2 **(-10.2)**	0.6 **(-10.8)**
	TX90p	Fraction of hot days	%	11.4	26.3 **(14.9)**	50.3 **(38.9)**	63.6 **(52.2)**	32.9 **(21.5)**	66.7 **(55.3)**	92.5 **(81.1)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.9	27.9 **(25.0)**	105.4 **(102.5)**	160.3 **(157.4)**	50.5 **(47.6)**	202.4 **(199.5)**	365.0 **(362.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1981.1	1952.5 **(-28.6)**	1976.2 **(-4.9)**	1838.4 **(-142.7)**	1959.2 **(-21.9)**	1911.4 **(-69.7)**	1733.7 **(-247.4)**
	SDII	Average daily rainfall intensity	mm/day	11.0	11.0 **(0.0)**	11.0 **(0.0)**	10.5 **(-0.5)**	11.0 **(0.0)**	10.7 **(-0.3)**	10.3 **(-0.7)**
	Rx1day	Maximum 1-day rainfall total	mm	77.9	78.2 **(0.3)**	81.1 **(3.2)**	76.0 **(-1.9)**	83.8 **(5.9)**	78.3 **(0.4)**	72.4 **(-5.5)**
	Rx5day	Maximum 5-day rainfall total	mm	175.0	178.6 **(3.6)**	181.7 **(6.7)**	169.8 **(-5.2)**	177.8 **(2.8)**	181.1 **(6.1)**	167.2 **(-7.8)**
	P95	Rainfall on very wet days	mm	33.2	33.6 **(0.4)**	33.1 **(-0.1)**	32.5 **(-0.7)**	33.3 **(0.1)**	32.4 **(-0.8)**	31.3 **(-1.9)**
	P99	Rainfall on extremely wet days	mm	56.0	57.7 **(1.7)**	55.8 **(-0.2)**	56.6 **(0.6)**	57.9 **(1.9)**	59.9 **(3.9)**	54.9 **(-1.1)**
	R95p	Total rainfall from very wet days	mm	436.1	452.2 **(16.1)**	446.2 **(10.1)**	414.4 **(-21.7)**	436.0 **(-0.1)**	441.8 **(5.7)**	379.2 **(-56.9)**
	R99p	Total rainfall from extremely wet days	mm	135.3	150.5 **(15.2)**	144.4 **(9.1)**	133.2 **(-2.1)**	150.5 **(15.2)**	146.9 **(11.6)**	116.6 **(-18.7)**
	Frequency									
	P95d	Number of very wet days	days	9.0	9.1 **(0.1)**	8.9 **(-0.1)**	8.5 **(-0.5)**	9.2 **(0.2)**	8.4 **(-0.6)**	7.4 **(-1.6)**
	P99d	Number of extremely wet days	days	1.8	1.9 **(0.1)**	1.8 **(0.0)**	1.8 **(0.0)**	2.0 **(0.2)**	2.1 **(0.3)**	1.7 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	23.2	21.0 **(-2.2)**	21.6 **(-1.6)**	21.0 **(-2.2)**	22.5 **(-0.7)**	20.9 **(-2.3)**	20.4 **(-2.8)**
	CDD	Longest dry spell	days	36.3	37.6 **(1.3)**	36.9 **(0.6)**	39.4 **(3.1)**	36.8 **(0.5)**	38.2 **(1.9)**	41.6 **(5.3)**

MIMAROPA Region

Oriental Mindoro

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.4	19.1 **(0.7)**	19.6 **(1.2)**	19.9 **(1.5)**	19.4 **(1.0)**	20.1 **(1.7)**	21.6 **(3.2)**
	TNm	Average night time temperature	°C	21.8	22.4 **(0.6)**	22.9 **(1.1)**	23.2 **(1.4)**	22.6 **(0.8)**	23.4 **(1.6)**	24.9 **(3.1)**
	TNx	Warmest night time temperature	°C	24.2	24.9 **(0.7)**	25.4 **(1.2)**	25.6 **(1.4)**	25.0 **(0.8)**	25.8 **(1.6)**	27.3 **(3.1)**
	TXn	Coldest day time temperature	°C	24.6	25.3 **(0.7)**	25.8 **(1.2)**	25.9 **(1.3)**	25.3 **(0.7)**	26.2 **(1.6)**	27.5 **(2.9)**
	TXm	Average day time temperature	°C	29.7	30.3 **(0.6)**	30.8 **(1.1)**	31.1 **(1.4)**	30.5 **(0.8)**	31.3 **(1.6)**	32.8 **(3.1)**
	TXx	Warmest day time temperature	°C	33.1	33.6 **(0.5)**	34.3 **(1.2)**	34.6 **(1.5)**	33.9 **(0.8)**	34.8 **(1.7)**	36.7 **(3.6)**
	DTR	Daily temperature range	°C	7.8	7.8 **(0.0)**	7.9 **(0.1)**	7.9 **(0.1)**	7.8 **(0.0)**	7.8 **(0.0)**	7.9 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.7	4.0 **(-7.7)**	1.9 **(-9.8)**	1.4 **(-10.3)**	3.2 **(-8.5)**	1.3 **(-10.4)**	0.8 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.5	34.3 **(22.8)**	54.1 **(42.6)**	66.7 **(55.2)**	39.0 **(27.5)**	73.4 **(61.9)**	97.5 **(86.0)**
	TX10p	Fraction of cool days	%	11.4	4.0 **(-7.4)**	1.5 **(-9.9)**	1.3 **(-10.1)**	2.9 **(-8.5)**	1.2 **(-10.2)**	0.7 **(-10.7)**
	TX90p	Fraction of hot days	%	11.4	27.6 **(16.2)**	54.5 **(43.1)**	67.4 **(56.0)**	34.9 **(23.5)**	68.3 **(56.9)**	94.8 **(83.4)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.7	44.8 **(42.1)**	125.0 **(122.3)**	179.2 **(176.5)**	68.7 **(66.0)**	194.2 **(191.5)**	339.0 **(336.3)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1992.7	1966.4 **(-26.3)**	1970.7 **(-22.0)**	1881.9 **(-110.8)**	2012.2 **(19.5)**	1942.5 **(-50.2)**	1780.9 **(-211.8)**
	SDII	Average daily rainfall intensity	mm/day	10.7	10.6 **(-0.1)**	10.6 **(-0.1)**	10.2 **(-0.5)**	10.7 **(0.0)**	10.3 **(-0.4)**	9.8 **(-0.9)**
	Rx1day	Maximum 1-day rainfall total	mm	81.8	82.3 **(0.5)**	85.6 **(3.8)**	85.4 **(3.6)**	86.9 **(5.1)**	84.0 **(2.2)**	76.6 **(-5.2)**
	Rx5day	Maximum 5-day rainfall total	mm	172.4	172.7 **(0.3)**	181.5 **(9.1)**	168.5 **(-3.9)**	177.4 **(5.0)**	177.1 **(4.7)**	166.4 **(-6.0)**
	P95	Rainfall on very wet days	mm	33.4	33.2 **(-0.2)**	33.7 **(0.3)**	31.8 **(-1.6)**	33.0 **(-0.4)**	32.7 **(-0.7)**	31.6 **(-1.8)**
	P99	Rainfall on extremely wet days	mm	60.5	60.3 **(-0.2)**	62.4 **(1.9)**	58.5 **(-2.0)**	62.2 **(1.7)**	61.1 **(0.6)**	56.6 **(-3.9)**
	R95p	Total rainfall from very wet days	mm	462.8	451.8 **(-11.0)**	489.2 **(26.4)**	431.7 **(-31.1)**	457.3 **(-5.5)**	452.8 **(-10.0)**	425.4 **(-37.4)**
	R99p	Total rainfall from extremely wet days	mm	147.8	143.4 **(-4.4)**	163.5 **(15.7)**	150.1 **(2.3)**	158.4 **(10.6)**	158.5 **(10.7)**	129.5 **(-18.3)**
	Frequency									
	P95d	Number of very wet days	days	9.2	9.1 **(-0.1)**	9.2 **(0.0)**	8.2 **(-1.0)**	9.0 **(-0.2)**	8.7 **(-0.5)**	8.0 **(-1.2)**
	P99d	Number of extremely wet days	days	1.9	1.8 **(-0.1)**	2.0 **(0.1)**	1.8 **(-0.1)**	2.0 **(0.1)**	1.9 **(0.0)**	1.6 **(-0.3)**
	Duration									
	CWD	Longest wet spelll	days	22.1	21.1 **(-1.0)**	22.3 **(0.2)**	21.3 **(-0.8)**	22.2 **(0.1)**	22.5 **(0.4)**	22.4 **(0.3)**
	CDD	Longest dry spell	days	27.5	27.9 **(0.4)**	27.5 **(0.0)**	28.3 **(0.8)**	26.7 **(-0.8)**	27.2 **(-0.3)**	29.8 **(2.3)**

Cooler — Warmer

Drier — Wetter

MIMAROPA Region

Palawan

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.5	20.2 **(0.7)**	20.8 **(1.3)**	21.0 **(1.5)**	20.3 **(0.8)**	21.2 **(1.7)**	22.7 **(3.2)**
	TNm	Average night time temperature	°C	22.8	23.4 **(0.6)**	23.9 **(1.1)**	24.2 **(1.4)**	23.6 **(0.8)**	24.3 **(1.5)**	25.9 **(3.1)**
	TNx	Warmest night time temperature	°C	25.5	26.2 **(0.7)**	26.6 **(1.1)**	26.9 **(1.4)**	26.3 **(0.8)**	27.2 **(1.7)**	28.6 **(3.1)**
	TXn	Coldest day time temperature	°C	25.8	26.5 **(0.7)**	27.0 **(1.2)**	27.2 **(1.4)**	26.6 **(0.8)**	27.3 **(1.5)**	28.7 **(2.9)**
	TXm	Average day time temperature	°C	30.7	31.3 **(0.6)**	31.8 **(1.1)**	32.1 **(1.4)**	31.5 **(0.8)**	32.3 **(1.6)**	33.9 **(3.2)**
	TXx	Warmest day time temperature	°C	34.2	34.8 **(0.6)**	35.4 **(1.2)**	35.7 **(1.5)**	35.0 **(0.8)**	36.0 **(1.8)**	37.7 **(3.5)**
	DTR	Daily temperature range	°C	7.9	7.8 **(-0.1)**	7.9 **(0.0)**	7.9 **(0.0)**	7.9 **(0.0)**	7.9 **(0.0)**	7.9 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.1	2.5 **(-8.6)**	0.8 **(-10.3)**	0.3 **(-10.8)**	1.8 **(-9.3)**	0.3 **(-10.8)**	0.0 **(-11.1)**
	TN90p	Fraction of warm nights	%	11.8	38.6 **(26.8)**	62.0 **(50.2)**	76.7 **(64.9)**	43.6 **(31.8)**	81.4 **(69.6)**	99.7 **(87.9)**
	TX10p	Fraction of cool days	%	11.1	2.4 **(-8.7)**	0.6 **(-10.5)**	0.3 **(-10.8)**	1.6 **(-9.5)**	0.3 **(-10.8)**	0.2 **(-10.9)**
	TX90p	Fraction of hot days	%	12.1	39.6 **(27.5)**	69.2 **(57.1)**	82.1 **(70.0)**	48.8 **(36.7)**	82.9 **(70.8)**	98.0 **(85.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	5.9	95.5 **(89.6)**	247.2 **(241.3)**	352.5 **(346.6)**	151.7 **(145.8)**	365.0 **(359.1)**	365.0 **(359.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1675.6	1572.0 **(-103.6)**	1593.4 **(-82.2)**	1474.2 **(-201.4)**	1624.2 **(-51.4)**	1543.0 **(-132.6)**	1369.6 **(-306.0)**
	SDII	Average daily rainfall intensity	mm/day	11.6	11.0 **(-0.6)**	11.1 **(-0.5)**	10.3 **(-1.3)**	11.1 **(-0.5)**	10.8 **(-0.8)**	9.5 **(-2.1)**
	Rx1day	Maximum 1-day rainfall total	mm	66.7	63.5 **(-3.2)**	65.9 **(-0.8)**	62.8 **(-3.9)**	67.4 **(0.7)**	63.8 **(-2.9)**	54.0 **(-12.7)**
	Rx5day	Maximum 5-day rainfall total	mm	162.3	150.2 **(-12.1)**	162.8 **(0.5)**	148.7 **(-13.6)**	159.0 **(-3.3)**	154.8 **(-7.5)**	131.4 **(-30.9)**
	P95	Rainfall on very wet days	mm	33.5	32.0 **(-1.5)**	32.6 **(-0.9)**	28.7 **(-4.8)**	32.7 **(-0.8)**	29.7 **(-3.8)**	26.3 **(-7.2)**
	P99	Rainfall on extremely wet days	mm	54.5	52.1 **(-2.4)**	53.0 **(-1.5)**	48.0 **(-6.5)**	55.6 **(1.1)**	49.9 **(-4.6)**	39.4 **(-15.1)**
	R95p	Total rainfall from very wet days	mm	338.5	295.4 **(-43.1)**	317.9 **(-20.6)**	256.6 **(-81.9)**	317.0 **(-21.5)**	285.3 **(-53.2)**	216.3 **(-122.2)**
	R99p	Total rainfall from extremely wet days	mm	98.2	80.3 **(-17.9)**	90.1 **(-8.1)**	74.4 **(-23.8)**	102.5 **(4.3)**	81.5 **(-16.7)**	57.7 **(-40.5)**
	Frequency									
	P95d	Number of very wet days	days	7.2	6.7 **(-0.5)**	6.5 **(-0.7)**	5.5 **(-1.7)**	6.5 **(-0.7)**	6.0 **(-1.2)**	4.4 **(-2.8)**
	P99d	Number of extremely wet days	days	1.5	1.3 **(-0.2)**	1.4 **(-0.1)**	1.1 **(-0.4)**	1.5 **(0.0)**	1.2 **(-0.3)**	0.9 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	17.8	16.2 **(-1.6)**	17.3 **(-0.5)**	15.6 **(-2.2)**	15.9 **(-1.9)**	16.9 **(-0.9)**	15.2 **(-2.6)**
	CDD	Longest dry spell	days	66.2	70.8 **(4.6)**	66.7 **(0.5)**	68.2 **(2.0)**	67.8 **(1.6)**	69.8 **(3.6)**	72.0 **(5.8)**

MIMAROPA Region

Romblon

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.1	20.9 **(0.8)**	21.3 **(1.2)**	21.4 **(1.3)**	20.9 **(0.8)**	21.7 **(1.6)**	23.0 **(2.9)**
	TNm	Average night time temperature	°C	23.2	23.8 **(0.6)**	24.3 **(1.1)**	24.5 **(1.3)**	24.0 **(0.8)**	24.7 **(1.5)**	26.1 **(2.9)**
	TNx	Warmest night time temperature	°C	25.8	26.5 **(0.7)**	26.9 **(1.1)**	27.1 **(1.3)**	26.5 **(0.7)**	27.3 **(1.5)**	28.8 **(3.0)**
	TXn	Coldest day time temperature	°C	24.2	24.9 **(0.7)**	25.3 **(1.1)**	25.5 **(1.3)**	25.0 **(0.8)**	25.7 **(1.5)**	27.1 **(2.9)**
	TXm	Average day time temperature	°C	29.5	30.1 **(0.6)**	30.5 **(1.0)**	30.8 **(1.3)**	30.2 **(0.7)**	31.0 **(1.5)**	32.4 **(2.9)**
	TXx	Warmest day time temperature	°C	33.3	33.9 **(0.6)**	34.4 **(1.1)**	34.7 **(1.4)**	34.0 **(0.7)**	34.9 **(1.6)**	36.4 **(3.1)**
	DTR	Daily temperature range	°C	6.2	6.2 **(0.0)**	6.3 **(0.1)**	6.3 **(0.1)**	6.3 **(0.1)**	6.3 **(0.1)**	6.3 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.8	1.7 **(-10.1)**	1.1 **(-10.7)**	0.6 **(-11.2)**	1.8 **(-10.0)**	0.6 **(-11.2)**	0.3 **(-11.5)**
	TN90p	Fraction of warm nights	%	11.6	55.8 **(44.2)**	81.2 **(69.6)**	88.2 **(76.6)**	59.3 **(47.7)**	92.7 **(81.1)**	99.9 **(88.3)**
	TX10p	Fraction of cool days	%	11.3	1.0 **(-10.3)**	0.5 **(-10.8)**	0.2 **(-11.1)**	0.9 **(-10.4)**	0.0 **(-11.3)**	-0.1 **(-11.4)**
	TX90p	Fraction of hot days	%	11.5	48.6 **(37.1)**	79.3 **(67.8)**	89.6 **(78.1)**	56.1 **(44.6)**	91.1 **(79.6)**	100.0 **(88.5)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.8	70.0 **(65.2)**	139.0 **(134.2)**	189.4 **(184.6)**	80.0 **(75.2)**	202.4 **(197.6)**	232.0 **(227.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1833.8	1783.0 **(-50.8)**	1829.2 **(-4.6)**	1697.8 **(-136.0)**	1773.7 **(-60.1)**	1778.2 **(-55.6)**	1673.8 **(-160.0)**
	SDII	Average daily rainfall intensity	mm/day	9.7	9.7 **(0.0)**	9.5 **(-0.2)**	9.5 **(-0.2)**	9.6 **(-0.1)**	9.4 **(-0.3)**	8.5 **(-1.2)**
	Rx1day	Maximum 1-day rainfall total	mm	80.3	74.5 **(-5.8)**	79.9 **(-0.4)**	76.0 **(-4.3)**	88.3 **(8.0)**	73.8 **(-6.5)**	70.0 **(-10.3)**
	Rx5day	Maximum 5-day rainfall total	mm	158.8	158.3 **(-0.5)**	165.7 **(6.9)**	154.8 **(-4.0)**	174.0 **(15.2)**	151.9 **(-6.9)**	141.3 **(-17.5)**
	P95	Rainfall on very wet days	mm	29.5	30.3 **(0.8)**	30.8 **(1.3)**	28.9 **(-0.6)**	30.5 **(1.0)**	29.5 **(0.0)**	25.7 **(-3.8)**
	P99	Rainfall on extremely wet days	mm	56.1	58.3 **(2.2)**	57.8 **(1.7)**	59.1 **(3.0)**	59.8 **(3.7)**	55.4 **(-0.7)**	46.3 **(-9.8)**
	R95p	Total rainfall from very wet days	mm	440.8	443.9 **(3.1)**	497.0 **(56.2)**	445.1 **(4.3)**	449.0 **(8.2)**	445.0 **(4.2)**	331.9 **(-108.9)**
	R99p	Total rainfall from extremely wet days	mm	148.3	145.7 **(-2.6)**	181.8 **(33.5)**	133.3 **(-15.0)**	171.1 **(22.8)**	141.4 **(-6.9)**	103.7 **(-44.6)**
	Frequency									
	P95d	Number of very wet days	days	9.3	9.4 **(0.1)**	9.9 **(0.6)**	8.6 **(-0.7)**	9.7 **(0.4)**	9.3 **(0.0)**	7.4 **(-1.9)**
	P99d	Number of extremely wet days	days	1.9	2.0 **(0.1)**	2.1 **(0.2)**	2.0 **(0.1)**	2.1 **(0.2)**	2.0 **(0.1)**	1.3 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	20.2	18.4 **(-1.8)**	18.5 **(-1.7)**	17.8 **(-2.4)**	18.3 **(-1.9)**	18.0 **(-2.2)**	17.9 **(-2.3)**
	CDD	Longest dry spell	days	24.2	24.9 **(0.7)**	24.4 **(0.2)**	24.7 **(0.5)**	24.2 **(0.0)**	25.3 **(1.1)**	26.8 **(2.6)**

Region V (Bicol Region)

Albay

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.1	19.8 **(0.7)**	20.2 **(1.1)**	20.5 **(1.4)**	20.0 **(0.9)**	20.8 **(1.7)**	22.3 **(3.2)**
	TNm	Average night time temperature	°C	23.2	23.8 **(0.6)**	24.3 **(1.1)**	24.6 **(1.4)**	24.0 **(0.8)**	24.9 **(1.7)**	26.3 **(3.1)**
	TNx	Warmest night time temperature	°C	26.0	26.6 **(0.6)**	27.1 **(1.1)**	27.5 **(1.5)**	26.7 **(0.7)**	27.6 **(1.6)**	29.0 **(3.0)**
	TXn	Coldest day time temperature	°C	24.6	25.4 **(0.8)**	25.7 **(1.1)**	25.9 **(1.3)**	25.4 **(0.8)**	26.2 **(1.6)**	27.5 **(2.9)**
	TXm	Average day time temperature	°C	30.1	30.7 **(0.6)**	31.3 **(1.2)**	31.5 **(1.4)**	30.9 **(0.8)**	31.7 **(1.6)**	33.2 **(3.1)**
	TXx	Warmest day time temperature	°C	33.9	34.6 **(0.7)**	35.1 **(1.2)**	35.6 **(1.7)**	34.7 **(0.8)**	35.7 **(1.8)**	37.4 **(3.5)**
	DTR	Daily temperature range	°C	6.9	6.8 **(-0.1)**	6.9 **(0.0)**	6.9 **(0.0)**	6.9 **(0.0)**	6.9 **(0.0)**	6.9 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.1 **(-8.3)**	1.5 **(-9.9)**	1.0 **(-10.4)**	2.5 **(-8.9)**	0.9 **(-10.5)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	37.7 **(26.3)**	57.8 **(46.4)**	71.2 **(59.8)**	41.4 **(30.0)**	77.8 **(66.4)**	98.2 **(86.8)**
	TX10p	Fraction of cool days	%	11.4	3.6 **(-7.8)**	1.5 **(-9.9)**	1.2 **(-10.2)**	2.9 **(-8.5)**	1.0 **(-10.4)**	0.5 **(-10.9)**
	TX90p	Fraction of hot days	%	11.4	32.3 **(20.9)**	61.2 **(49.8)**	74.0 **(62.6)**	42.6 **(31.2)**	73.3 **(61.9)**	95.3 **(83.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.1	50.2 **(47.1)**	169.4 **(166.3)**	250.0 **(246.9)**	94.3 **(91.2)**	253.9 **(250.8)**	365.0 **(361.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2880.4	2791.2 **(-89.2)**	2853.5 **(-26.9)**	2743.5 **(-136.9)**	2849.6 **(-30.8)**	2822.7 **(-57.7)**	2708.9 **(-171.5)**
	SDII	Average daily rainfall intensity	mm/day	13.3	13.1 **(-0.2)**	13.1 **(-0.2)**	12.8 **(-0.5)**	13.0 **(-0.3)**	12.8 **(-0.5)**	12.7 **(-0.6)**
	Rx1day	Maximum 1-day rainfall total	mm	122.2	112.9 **(-9.3)**	123.9 **(1.7)**	132.9 **(10.7)**	117.9 **(-4.3)**	122.7 **(0.5)**	127.0 **(4.8)**
	Rx5day	Maximum 5-day rainfall total	mm	258.9	249.2 **(-9.7)**	274.1 **(15.2)**	263.9 **(5.0)**	254.9 **(-4.0)**	260.4 **(1.5)**	259.7 **(0.8)**
	P95	Rainfall on very wet days	mm	45.0	45.4 **(0.4)**	45.3 **(0.3)**	43.8 **(-1.2)**	44.6 **(-0.4)**	43.6 **(-1.4)**	42.2 **(-2.8)**
	P99	Rainfall on extremely wet days	mm	89.0	88.1 **(-0.9)**	91.8 **(2.8)**	89.2 **(0.2)**	85.6 **(-3.4)**	91.6 **(2.6)**	91.6 **(2.6)**
	R95p	Total rainfall from very wet days	mm	771.6	751.4 **(-20.2)**	745.2 **(-26.4)**	751.8 **(-19.8)**	738.3 **(-33.3)**	688.9 **(-82.7)**	730.5 **(-41.1)**
	R99p	Total rainfall from extremely wet days	mm	248.2	247.2 **(-1.0)**	247.8 **(-0.4)**	249.5 **(1.3)**	234.2 **(-14.0)**	262.9 **(14.7)**	281.7 **(33.5)**
	Frequency									
	P95d	Number of very wet days	days	10.7	10.5 **(-0.2)**	11.0 **(0.3)**	9.9 **(-0.8)**	10.5 **(-0.2)**	10.0 **(-0.7)**	8.5 **(-2.2)**
	P99d	Number of extremely wet days	days	2.1	2.1 **(0.0)**	2.3 **(0.2)**	2.1 **(0.0)**	2.0 **(-0.1)**	2.3 **(0.2)**	2.1 **(0.0)**
	Duration									
	CWD	Longest wet spelll	days	19.8	18.8 **(-1.0)**	18.6 **(-1.2)**	17.6 **(-2.2)**	18.4 **(-1.4)**	19.1 **(-0.7)**	21.5 **(1.7)**
	CDD	Longest dry spell	days	14.6	15.6 **(1.0)**	13.6 **(-1.0)**	14.1 **(-0.5)**	14.3 **(-0.3)**	14.2 **(-0.4)**	14.3 **(-0.3)**

Region V (Bicol Region)

Camarines Norte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.4	20.2 **(0.8)**	20.8 **(1.4)**	20.9 **(1.5)**	20.5 **(1.1)**	21.2 **(1.8)**	22.9 **(3.5)**
	TNm	Average night time temperature	°C	23.5	24.1 **(0.6)**	24.6 **(1.1)**	24.9 **(1.4)**	24.2 **(0.7)**	25.1 **(1.6)**	26.6 **(3.1)**
	TNx	Warmest night time temperature	°C	26.2	26.9 **(0.7)**	27.4 **(1.2)**	27.7 **(1.5)**	27.0 **(0.8)**	27.9 **(1.7)**	29.2 **(3.0)**
	TXn	Coldest day time temperature	°C	24.7	25.5 **(0.8)**	25.8 **(1.1)**	26.1 **(1.4)**	25.5 **(0.8)**	26.3 **(1.6)**	27.5 **(2.8)**
	TXm	Average day time temperature	°C	30.2	30.8 **(0.6)**	31.4 **(1.2)**	31.7 **(1.5)**	31.1 **(0.9)**	31.8 **(1.6)**	33.3 **(3.1)**
	TXx	Warmest day time temperature	°C	34.4	35.0 **(0.6)**	35.6 **(1.2)**	36.1 **(1.7)**	35.2 **(0.8)**	36.2 **(1.8)**	37.9 **(3.5)**
	DTR	Daily temperature range	°C	6.7	6.7 **(0.0)**	6.8 **(0.1)**	6.8 **(0.1)**	6.8 **(0.1)**	6.7 **(0.0)**	6.7 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.3 **(-8.1)**	1.5 **(-9.9)**	1.0 **(-10.4)**	2.6 **(-8.8)**	0.8 **(-10.6)**	0.3 **(-11.1)**
	TN90p	Fraction of warm nights	%	11.3	35.1 **(23.8)**	58.4 **(47.1)**	70.5 **(59.2)**	41.9 **(30.6)**	76.7 **(65.4)**	98.2 **(86.9)**
	TX10p	Fraction of cool days	%	11.2	4.5 **(-6.7)**	1.9 **(-9.3)**	1.3 **(-9.9)**	3.7 **(-7.5)**	1.3 **(-9.9)**	0.6 **(-10.6)**
	TX90p	Fraction of hot days	%	11.4	25.9 **(14.5)**	47.7 **(36.3)**	59.8 **(48.4)**	34.8 **(23.4)**	62.6 **(51.2)**	89.0 **(77.6)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.5	52.9 **(49.4)**	143.3 **(139.8)**	209.7 **(206.2)**	92.2 **(88.7)**	253.3 **(249.8)**	365.0 **(361.5)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2837.9	2788.0 **(-49.9)**	2797.3 **(-40.6)**	2788.7 **(-49.2)**	2835.8 **(-2.1)**	2884.7 **(46.8)**	2710.1 **(-127.8)**
	SDII	Average daily rainfall intensity	mm/day	13.6	13.5 **(-0.1)**	13.4 **(-0.2)**	13.4 **(-0.2)**	13.5 **(-0.1)**	13.5 **(-0.1)**	12.8 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	126.6	125.1 **(-1.5)**	130.5 **(3.9)**	143.3 **(16.7)**	143.7 **(17.1)**	139.6 **(13.0)**	151.6 **(25.0)**
	Rx5day	Maximum 5-day rainfall total	mm	264.3	276.7 **(12.4)**	285.3 **(21.0)**	272.7 **(8.4)**	294.7 **(30.4)**	295.2 **(30.9)**	302.0 **(37.7)**
	P95	Rainfall on very wet days	mm	46.4	47.0 **(0.6)**	47.0 **(0.6)**	45.9 **(-0.5)**	46.2 **(-0.2)**	46.4 **(0.0)**	45.2 **(-1.2)**
	P99	Rainfall on extremely wet days	mm	88.6	89.7 **(1.1)**	89.9 **(1.3)**	89.4 **(0.8)**	91.7 **(3.1)**	88.0 **(-0.6)**	86.0 **(-2.6)**
	R95p	Total rainfall from very wet days	mm	752.4	756.6 **(4.2)**	781.6 **(29.2)**	763.4 **(11.0)**	743.9 **(-8.5)**	780.8 **(28.4)**	745.7 **(-6.7)**
	R99p	Total rainfall from extremely wet days	mm	247.1	260.6 **(13.5)**	293.4 **(46.3)**	266.9 **(19.8)**	276.8 **(29.7)**	260.4 **(13.3)**	248.6 **(1.5)**
	Frequency									
	P95d	Number of very wet days	days	10.3	10.5 **(0.2)**	10.5 **(0.2)**	10.1 **(-0.2)**	10.1 **(-0.2)**	10.3 **(0.0)**	9.5 **(-0.8)**
	P99d	Number of extremely wet days	days	2.0	2.0 **(0.0)**	2.2 **(0.2)**	2.1 **(0.1)**	2.2 **(0.2)**	2.1 **(0.1)**	2.0 **(0.0)**
	Duration									
	CWD	Longest wet spelll	days	22.1	20.8 **(-1.3)**	21.6 **(-0.5)**	21.5 **(-0.6)**	21.3 **(-0.8)**	21.3 **(-0.8)**	21.6 **(-0.5)**
	CDD	Longest dry spell	days	20.0	20.0 **(0.0)**	19.7 **(-0.3)**	20.0 **(0.0)**	20.2 **(0.2)**	20.2 **(0.2)**	21.3 **(1.3)**

Region V (Bicol Region)

Camarines Sur

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.6	20.4 (**0.8**)	20.9 (**1.3**)	21.1 (**1.5**)	20.6 (**1.0**)	21.5 (**1.9**)	22.9 (**3.3**)
	TNm	Average night time temperature	°C	23.4	24.1 (**0.7**)	24.6 (**1.2**)	24.9 (**1.5**)	24.2 (**0.8**)	25.1 (**1.7**)	26.6 (**3.2**)
	TNx	Warmest night time temperature	°C	26.0	26.7 (**0.7**)	27.2 (**1.2**)	27.5 (**1.5**)	26.8 (**0.8**)	27.6 (**1.6**)	29.1 (**3.1**)
	TXn	Coldest day time temperature	°C	24.9	25.6 (**0.7**)	26.0 (**1.1**)	26.2 (**1.3**)	25.6 (**0.7**)	26.4 (**1.5**)	27.7 (**2.8**)
	TXm	Average day time temperature	°C	30.2	30.8 (**0.6**)	31.4 (**1.2**)	31.6 (**1.4**)	31.0 (**0.8**)	31.8 (**1.6**)	33.3 (**3.1**)
	TXx	Warmest day time temperature	°C	34.0	34.8 (**0.8**)	35.3 (**1.3**)	35.7 (**1.7**)	34.9 (**0.9**)	35.8 (**1.8**)	37.6 (**3.6**)
	DTR	Daily temperature range	°C	6.7	6.7 (**0.0**)	6.7 (**0.0**)	6.7 (**0.0**)	6.7 (**0.0**)	6.7 (**0.0**)	6.7 (**0.0**)
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.0 (**-8.4**)	1.4 (**-10.0**)	0.8 (**-10.6**)	2.5 (**-8.9**)	0.7 (**-10.7**)	0.3 (**-11.1**)
	TN90p	Fraction of warm nights	%	11.4	35.1 (**23.7**)	58.3 (**46.9**)	69.4 (**58.0**)	43.5 (**32.1**)	76.3 (**64.9**)	98.8 (**87.4**)
	TX10p	Fraction of cool days	%	11.4	3.9 (**-7.5**)	1.8 (**-9.6**)	1.2 (**-10.2**)	3.2 (**-8.2**)	1.1 (**-10.3**)	0.6 (**-10.8**)
	TX90p	Fraction of hot days	%	11.4	28.9 (**17.5**)	54.2 (**42.8**)	65.8 (**54.4**)	39.0 (**27.6**)	68.9 (**57.5**)	92.6 (**81.2**)
	Duration									
	WSDI	Warm Spell Duration Index	days	3.3	60.5 (**57.2**)	177.9 (**174.6**)	254.7 (**251.4**)	101.9 (**98.6**)	307.9 (**304.6**)	365.0 (**361.7**)
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2755.1	2729.7 (**-25.4**)	2694.6 (**-60.5**)	2666.8 (**-88.3**)	2745.6 (**-9.5**)	2741.7 (**-13.4**)	2556.0 (**-199.1**)
	SDII	Average daily rainfall intensity	mm/day	12.9	12.8 (**-0.1**)	12.7 (**-0.2**)	12.5 (**-0.4**)	12.8 (**-0.1**)	12.5 (**-0.4**)	12.1 (**-0.8**)
	Rx1day	Maximum 1-day rainfall total	mm	111.2	110.9 (**-0.3**)	111.3 (**0.1**)	130.2 (**19.0**)	119.9 (**8.7**)	108.3 (**-2.9**)	126.5 (**15.3**)
	Rx5day	Maximum 5-day rainfall total	mm	248.5	247.5 (**-1.0**)	244.3 (**-4.2**)	258.6 (**10.1**)	261.0 (**12.5**)	238.4 (**-10.1**)	260.5 (**12.0**)
	P95	Rainfall on very wet days	mm	42.8	43.5 (**0.7**)	43.8 (**1.0**)	41.3 (**-1.5**)	42.6 (**-0.2**)	40.9 (**-1.9**)	40.2 (**-2.6**)
	P99	Rainfall on extremely wet days	mm	80.6	79.3 (**-1.3**)	80.8 (**0.2**)	77.6 (**-3.0**)	80.9 (**0.3**)	79.1 (**-1.5**)	76.1 (**-4.5**)
	R95p	Total rainfall from very wet days	mm	700.2	651.7 (**-48.5**)	690.9 (**-9.3**)	627.9 (**-72.3**)	676.6 (**-23.6**)	651.0 (**-49.2**)	661.6 (**-38.6**)
	R99p	Total rainfall from extremely wet days	mm	223.7	206.3 (**-17.4**)	218.9 (**-4.8**)	231.4 (**7.7**)	231.9 (**8.2**)	208.8 (**-14.9**)	236.1 (**12.4**)
	Frequency									
	P95d	Number of very wet days	days	10.5	10.8 (**0.3**)	10.8 (**0.3**)	9.5 (**-1.0**)	10.3 (**-0.2**)	10.0 (**-0.5**)	8.9 (**-1.6**)
	P99d	Number of extremely wet days	days	2.1	2.1 (**0.0**)	2.3 (**0.2**)	2.0 (**-0.1**)	2.1 (**0.0**)	2.2 (**0.1**)	2.0 (**-0.1**)
	Duration									
	CWD	Longest wet spelll	days	24.2	22.1 (**-2.1**)	22.4 (**-1.8**)	21.5 (**-2.7**)	22.7 (**-1.5**)	22.4 (**-1.8**)	24.9 (**0.7**)
	CDD	Longest dry spell	days	18.7	19.2 (**0.5**)	17.6 (**-1.1**)	18.5 (**-0.2**)	18.6 (**-0.1**)	18.7 (**0.0**)	18.4 (**-0.3**)

Region V (Bicol Region)

Catanduanes

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.4	19.2 **(0.8)**	19.6 **(1.2)**	19.9 **(1.5)**	19.3 **(0.9)**	20.1 **(1.7)**	21.4 **(3.0)**
	TNm	Average night time temperature	°C	22.3	23.0 **(0.7)**	23.4 **(1.1)**	23.7 **(1.4)**	23.1 **(0.8)**	23.9 **(1.6)**	25.3 **(3.0)**
	TNx	Warmest night time temperature	°C	25.4	26.1 **(0.7)**	26.5 **(1.1)**	26.8 **(1.4)**	26.2 **(0.8)**	27.0 **(1.6)**	28.4 **(3.0)**
	TXn	Coldest day time temperature	°C	24.8	25.6 **(0.8)**	26.0 **(1.2)**	26.2 **(1.4)**	25.6 **(0.8)**	26.3 **(1.5)**	27.6 **(2.8)**
	TXm	Average day time temperature	°C	29.9	30.6 **(0.7)**	31.1 **(1.2)**	31.4 **(1.5)**	30.7 **(0.8)**	31.5 **(1.6)**	32.9 **(3.0)**
	TXx	Warmest day time temperature	°C	33.6	34.3 **(0.7)**	34.8 **(1.2)**	35.3 **(1.7)**	34.5 **(0.9)**	35.4 **(1.8)**	37.0 **(3.4)**
	DTR	Daily temperature range	°C	7.6	7.6 **(0.0)**	7.6 **(0.0)**	7.6 **(0.0)**	7.6 **(0.0)**	7.6 **(0.0)**	7.6 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.7	2.3 **(-9.4)**	1.2 **(-10.5)**	0.9 **(-10.8)**	2.0 **(-9.7)**	0.7 **(-11.0)**	0.4 **(-11.3)**
	TN90p	Fraction of warm nights	%	11.5	48.4 **(36.9)**	76.6 **(65.1)**	86.5 **(75.0)**	53.9 **(42.4)**	87.1 **(75.6)**	99.3 **(87.8)**
	TX10p	Fraction of cool days	%	11.5	2.1 **(-9.4)**	0.9 **(-10.6)**	0.6 **(-10.9)**	1.8 **(-9.7)**	0.6 **(-10.9)**	0.4 **(-11.1)**
	TX90p	Fraction of hot days	%	11.5	41.3 **(29.8)**	73.3 **(61.8)**	83.8 **(72.3)**	52.6 **(41.1)**	87.5 **(76.0)**	98.1 **(86.6)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.8	48.6 **(44.8)**	109.9 **(106.1)**	139.2 **(135.4)**	66.7 **(62.9)**	135.9 **(132.1)**	174.7 **(170.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2750.0	2657.5 **(-92.5)**	2676.3 **(-73.7)**	2672.0 **(-78.0)**	2709.5 **(-40.5)**	2642.0 **(-108.0)**	2521.4 **(-228.6)**
	SDII	Average daily rainfall intensity	mm/day	13.2	13.0 **(-0.2)**	12.9 **(-0.3)**	12.8 **(-0.4)**	12.9 **(-0.3)**	12.7 **(-0.5)**	12.1 **(-1.1)**
	Rx1day	Maximum 1-day rainfall total	mm	122.0	121.2 **(-0.8)**	115.2 **(-6.8)**	130.6 **(8.6)**	124.8 **(2.8)**	114.3 **(-7.7)**	143.6 **(21.6)**
	Rx5day	Maximum 5-day rainfall total	mm	252.8	257.3 **(4.5)**	242.8 **(-10.0)**	261.3 **(8.5)**	252.7 **(-0.1)**	237.2 **(-15.6)**	268.7 **(15.9)**
	P95	Rainfall on very wet days	mm	44.8	44.4 **(-0.4)**	44.0 **(-0.8)**	44.1 **(-0.7)**	44.1 **(-0.7)**	43.3 **(-1.5)**	42.8 **(-2.0)**
	P99	Rainfall on extremely wet days	mm	89.4	90.3 **(0.9)**	93.6 **(4.2)**	83.3 **(-6.1)**	86.3 **(-3.1)**	83.9 **(-5.5)**	76.3 **(-13.1)**
	R95p	Total rainfall from very wet days	mm	749.4	732.4 **(-17.0)**	780.4 **(31.0)**	704.6 **(-44.8)**	696.5 **(-52.9)**	655.2 **(-94.2)**	620.7 **(-128.7)**
	R99p	Total rainfall from extremely wet days	mm	246.8	252.9 **(6.1)**	265.9 **(19.1)**	232.4 **(-14.4)**	236.9 **(-9.9)**	217.6 **(-29.2)**	249.6 **(2.8)**
	Frequency									
	P95d	Number of very wet days	days	10.3	10.0 **(-0.3)**	9.8 **(-0.5)**	9.8 **(-0.5)**	10.2 **(-0.1)**	9.5 **(-0.8)**	8.7 **(-1.6)**
	P99d	Number of extremely wet days	days	2.1	2.2 **(0.1)**	2.4 **(0.3)**	1.8 **(-0.3)**	2.0 **(-0.1)**	1.9 **(-0.2)**	1.7 **(-0.4)**
	Duration									
	CWD	Longest wet spelll	days	20.9	19.5 **(-1.4)**	20.6 **(-0.3)**	20.9 **(0.0)**	19.6 **(-1.3)**	20.9 **(0.0)**	23.6 **(2.7)**
	CDD	Longest dry spell	days	14.2	14.5 **(0.3)**	14.6 **(0.4)**	14.2 **(0.0)**	15.1 **(0.9)**	14.5 **(0.3)**	14.9 **(0.7)**

Cooler — Warmer

Drier — Wetter

Region V (Bicol Region)

Masbate

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.3	21.0 **(0.7)**	21.5 **(1.2)**	21.7 **(1.4)**	21.2 **(0.9)**	22.0 **(1.7)**	23.6 **(3.3)**
	TNm	Average night time temperature	°C	24.0	24.6 **(0.6)**	25.1 **(1.1)**	25.3 **(1.3)**	24.7 **(0.7)**	25.6 **(1.6)**	27.1 **(3.1)**
	TNx	Warmest night time temperature	°C	26.7	27.4 **(0.7)**	27.8 **(1.1)**	28.1 **(1.4)**	27.4 **(0.7)**	28.3 **(1.6)**	29.7 **(3.0)**
	TXn	Coldest day time temperature	°C	26.2	26.9 **(0.7)**	27.3 **(1.1)**	27.5 **(1.3)**	26.9 **(0.7)**	27.7 **(1.5)**	29.0 **(2.8)**
	TXm	Average day time temperature	°C	31.6	32.3 **(0.7)**	32.8 **(1.2)**	33.1 **(1.5)**	32.4 **(0.8)**	33.3 **(1.7)**	34.7 **(3.1)**
	TXx	Warmest day time temperature	°C	35.1	35.7 **(0.6)**	36.3 **(1.2)**	36.7 **(1.6)**	35.9 **(0.8)**	36.9 **(1.8)**	38.4 **(3.3)**
	DTR	Daily temperature range	°C	7.6	7.6 **(0.0)**	7.7 **(0.1)**	7.7 **(0.1)**	7.7 **(0.1)**	7.7 **(0.1)**	7.7 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	2.6 **(-9.0)**	1.3 **(-10.3)**	0.8 **(-10.8)**	2.4 **(-9.2)**	0.7 **(-10.9)**	0.5 **(-11.1)**
	TN90p	Fraction of warm nights	%	11.7	39.1 **(27.4)**	64.3 **(52.6)**	78.0 **(66.3)**	45.0 **(33.3)**	82.2 **(70.5)**	99.5 **(87.8)**
	TX10p	Fraction of cool days	%	11.4	3.0 **(-8.4)**	1.3 **(-10.1)**	1.0 **(-10.4)**	2.4 **(-9.0)**	0.9 **(-10.5)**	0.6 **(-10.8)**
	TX90p	Fraction of hot days	%	11.3	35.2 **(23.9)**	64.3 **(53.0)**	77.0 **(65.7)**	44.8 **(33.5)**	77.1 **(65.8)**	97.0 **(85.7)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.9	89.7 **(84.8)**	269.1 **(264.2)**	348.8 **(343.9)**	145.0 **(140.1)**	359.6 **(354.7)**	365.0 **(360.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1995.3	1918.4 **(-76.9)**	1980.0 **(-15.3)**	1910.7 **(-84.6)**	1956.3 **(-39.0)**	1918.3 **(-77.0)**	1779.1 **(-216.2)**
	SDII	Average daily rainfall intensity	mm/day	10.8	10.5 **(-0.3)**	10.9 **(0.1)**	10.5 **(-0.3)**	10.5 **(-0.3)**	10.3 **(-0.5)**	9.9 **(-0.9)**
	Rx1day	Maximum 1-day rainfall total	mm	110.7	115.4 **(4.7)**	116.9 **(6.2)**	114.1 **(3.4)**	121.1 **(10.4)**	114.5 **(3.8)**	120.3 **(9.6)**
	Rx5day	Maximum 5-day rainfall total	mm	195.7	207.5 **(11.8)**	202.3 **(6.6)**	198.7 **(3.0)**	208.8 **(13.1)**	204.3 **(8.6)**	204.7 **(9.0)**
	P95	Rainfall on very wet days	mm	34.8	34.3 **(-0.5)**	35.5 **(0.7)**	33.7 **(-1.1)**	33.9 **(-0.9)**	34.0 **(-0.8)**	30.6 **(-4.2)**
	P99	Rainfall on extremely wet days	mm	82.8	86.8 **(4.0)**	86.7 **(3.9)**	86.5 **(3.7)**	82.5 **(-0.3)**	78.7 **(-4.1)**	73.7 **(-9.1)**
	R95p	Total rainfall from very wet days	mm	563.8	562.0 **(-1.8)**	621.7 **(57.9)**	573.2 **(9.4)**	552.6 **(-11.2)**	537.6 **(-26.2)**	465.5 **(-98.3)**
	R99p	Total rainfall from extremely wet days	mm	202.7	220.3 **(17.6)**	227.9 **(25.2)**	230.4 **(27.7)**	214.9 **(12.2)**	200.6 **(-2.1)**	189.2 **(-13.5)**
	Frequency									
	P95d	Number of very wet days	days	9.1	8.7 **(-0.4)**	9.4 **(0.3)**	8.3 **(-0.8)**	8.5 **(-0.6)**	8.2 **(-0.9)**	6.9 **(-2.2)**
	P99d	Number of extremely wet days	days	1.8	2.1 **(0.3)**	2.0 **(0.2)**	2.0 **(0.2)**	1.9 **(0.1)**	1.7 **(-0.1)**	1.4 **(-0.4)**
	Duration									
	CWD	Longest wet spelll	days	17.9	16.1 **(-1.8)**	16.9 **(-1.0)**	16.7 **(-1.2)**	16.5 **(-1.4)**	16.0 **(-1.9)**	17.1 **(-0.8)**
	CDD	Longest dry spell	days	24.4	26.9 **(2.5)**	22.6 **(-1.8)**	23.3 **(-1.1)**	23.6 **(-0.8)**	24.0 **(-0.4)**	23.8 **(-0.6)**

Region V (Bicol Region)

Sorsogon

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.8	20.5 **(0.7)**	21.0 **(1.2)**	21.3 **(1.5)**	20.7 **(0.9)**	21.6 **(1.8)**	23.1 **(3.3)**
	TNm	Average night time temperature	°C	23.5	24.1 **(0.6)**	24.6 **(1.1)**	24.8 **(1.3)**	24.2 **(0.7)**	25.1 **(1.6)**	26.6 **(3.1)**
	TNx	Warmest night time temperature	°C	26.0	26.7 **(0.7)**	27.1 **(1.1)**	27.4 **(1.4)**	26.8 **(0.8)**	27.6 **(1.6)**	29.0 **(3.0)**
	TXn	Coldest day time temperature	°C	25.7	26.4 **(0.7)**	26.8 **(1.1)**	26.9 **(1.2)**	26.4 **(0.7)**	27.2 **(1.5)**	28.5 **(2.8)**
	TXm	Average day time temperature	°C	31.0	31.6 **(0.6)**	32.2 **(1.2)**	32.4 **(1.4)**	31.8 **(0.8)**	32.6 **(1.6)**	34.1 **(3.1)**
	TXx	Warmest day time temperature	°C	34.4	35.0 **(0.6)**	35.6 **(1.2)**	36.0 **(1.6)**	35.3 **(0.9)**	36.2 **(1.8)**	37.8 **(3.4)**
	DTR	Daily temperature range	°C	7.5	7.5 **(0.0)**	7.6 **(0.1)**	7.6 **(0.1)**	7.5 **(0.0)**	7.6 **(0.1)**	7.5 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.1 **(-8.3)**	1.4 **(-10.0)**	0.7 **(-10.7)**	2.4 **(-9.0)**	0.7 **(-10.7)**	0.3 **(-11.1)**
	TN90p	Fraction of warm nights	%	11.4	35.4 **(24.0)**	58.0 **(46.6)**	70.3 **(58.9)**	39.3 **(27.9)**	78.8 **(67.4)**	98.8 **(87.4)**
	TX10p	Fraction of cool days	%	11.3	3.5 **(-7.8)**	1.6 **(-9.7)**	1.1 **(-10.2)**	2.8 **(-8.5)**	1.0 **(-10.3)**	0.6 **(-10.7)**
	TX90p	Fraction of hot days	%	11.3	30.1 **(18.8)**	56.7 **(45.4)**	68.5 **(57.2)**	40.8 **(29.5)**	70.7 **(59.4)**	96.0 **(84.7)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.9	66.3 **(62.4)**	203.3 **(199.4)**	284.1 **(280.2)**	109.0 **(105.1)**	291.4 **(287.5)**	365.0 **(361.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2801.0	2712.2 **(-88.8)**	2783.5 **(-17.5)**	2663.4 **(-137.6)**	2768.7 **(-32.3)**	2713.9 **(-87.1)**	2628.3 **(-172.7)**
	SDII	Average daily rainfall intensity	mm/day	12.8	12.5 **(-0.3)**	12.7 **(-0.1)**	12.2 **(-0.6)**	12.5 **(-0.3)**	12.2 **(-0.6)**	12.0 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	121.8	125.8 **(4.0)**	132.3 **(10.5)**	130.7 **(8.9)**	113.3 **(-8.5)**	133.2 **(11.4)**	136.9 **(15.1)**
	Rx5day	Maximum 5-day rainfall total	mm	264.0	270.7 **(6.7)**	300.5 **(36.5)**	264.6 **(0.6)**	269.9 **(5.9)**	261.4 **(-2.6)**	268.0 **(4.0)**
	P95	Rainfall on very wet days	mm	41.7	41.5 **(-0.2)**	42.5 **(0.8)**	40.9 **(-0.8)**	42.0 **(0.3)**	40.0 **(-1.7)**	38.8 **(-2.9)**
	P99	Rainfall on extremely wet days	mm	86.9	85.6 **(-1.3)**	85.2 **(-1.7)**	87.2 **(0.3)**	83.7 **(-3.2)**	85.2 **(-1.7)**	80.9 **(-6.0)**
	R95p	Total rainfall from very wet days	mm	751.3	752.8 **(1.5)**	784.7 **(33.4)**	758.0 **(6.7)**	733.3 **(-18.0)**	695.5 **(-55.8)**	681.9 **(-69.4)**
	R99p	Total rainfall from extremely wet days	mm	247.2	260.1 **(12.9)**	262.8 **(15.6)**	255.8 **(8.6)**	242.2 **(-5.0)**	249.9 **(2.7)**	263.4 **(16.2)**
	Frequency									
	P95d	Number of very wet days	days	10.8	10.6 **(-0.2)**	11.1 **(0.3)**	10.0 **(-0.8)**	10.8 **(0.0)**	9.8 **(-1.0)**	8.7 **(-2.1)**
	P99d	Number of extremely wet days	days	2.2	2.2 **(0.0)**	2.1 **(-0.1)**	2.2 **(0.0)**	2.1 **(-0.1)**	2.0 **(-0.2)**	1.9 **(-0.3)**
	Duration									
	CWD	Longest wet spelll	days	20.5	20.3 **(-0.2)**	19.4 **(-1.1)**	18.4 **(-2.1)**	19.8 **(-0.7)**	19.4 **(-1.1)**	22.6 **(2.1)**
	CDD	Longest dry spell	days	15.2	15.6 **(0.4)**	15.0 **(-0.2)**	14.4 **(-0.8)**	15.2 **(0.0)**	15.0 **(-0.2)**	14.0 **(-1.2)**

Region VI (Western Visayas)

Aklan

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.7	21.4 **(0.7)**	22.0 **(1.3)**	22.1 **(1.4)**	21.7 **(1.0)**	22.5 **(1.8)**	24.0 **(3.3)**
	TNm	Average night time temperature	°C	23.5	24.1 **(0.6)**	24.6 **(1.1)**	24.9 **(1.4)**	24.2 **(0.7)**	25.1 **(1.6)**	26.5 **(3.0)**
	TNx	Warmest night time temperature	°C	25.7	26.3 **(0.6)**	26.8 **(1.1)**	27.0 **(1.3)**	26.5 **(0.8)**	27.3 **(1.6)**	28.7 **(3.0)**
	TXn	Coldest day time temperature	°C	25.3	26.0 **(0.7)**	26.4 **(1.1)**	26.5 **(1.2)**	25.9 **(0.6)**	26.8 **(1.5)**	28.1 **(2.8)**
	TXm	Average day time temperature	°C	30.0	30.6 **(0.6)**	31.2 **(1.2)**	31.4 **(1.4)**	30.8 **(0.8)**	31.6 **(1.6)**	33.1 **(3.1)**
	TXx	Warmest day time temperature	°C	33.6	34.1 **(0.5)**	34.7 **(1.1)**	35.1 **(1.5)**	34.4 **(0.8)**	35.3 **(1.7)**	37.0 **(3.4)**
	DTR	Daily temperature range	°C	6.5	6.5 **(0.0)**	6.6 **(0.1)**	6.6 **(0.1)**	6.6 **(0.1)**	6.5 **(0.0)**	6.6 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.1 **(-8.3)**	1.4 **(-10.0)**	0.8 **(-10.6)**	2.4 **(-9.0)**	0.7 **(-10.7)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	37.1 **(25.7)**	58.3 **(46.9)**	72.5 **(61.1)**	43.6 **(32.2)**	78.7 **(67.3)**	98.5 **(87.1)**
	TX10p	Fraction of cool days	%	11.4	3.4 **(-8.0)**	1.2 **(-10.2)**	0.9 **(-10.5)**	2.7 **(-8.7)**	0.9 **(-10.5)**	0.5 **(-10.9)**
	TX90p	Fraction of hot days	%	11.6	32.6 **(21.0)**	55.9 **(44.3)**	70.7 **(59.1)**	39.9 **(28.3)**	70.4 **(58.8)**	93.8 **(82.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	9.1	153.7 **(144.6)**	365.0 **(355.9)**	365.0 **(355.9)**	271.4 **(262.3)**	365.0 **(355.9)**	365.0 **(355.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1786.7	1694.4 **(-92.3)**	1743.4 **(-43.3)**	1670.1 **(-116.6)**	1736.8 **(-49.9)**	1666.7 **(-120.0)**	1511.8 **(-274.9)**
	SDII	Average daily rainfall intensity	mm/day	9.7	9.4 **(-0.3)**	9.2 **(-0.5)**	9.2 **(-0.5)**	9.4 **(-0.3)**	9.0 **(-0.7)**	8.4 **(-1.3)**
	Rx1day	Maximum 1-day rainfall total	mm	69.5	65.9 **(-3.6)**	65.0 **(-4.5)**	60.3 **(-9.2)**	66.7 **(-2.8)**	64.2 **(-5.3)**	66.5 **(-3.0)**
	Rx5day	Maximum 5-day rainfall total	mm	152.6	146.0 **(-6.6)**	151.7 **(-0.9)**	143.5 **(-9.1)**	150.3 **(-2.3)**	141.4 **(-11.2)**	141.8 **(-10.8)**
	P95	Rainfall on very wet days	mm	29.0	28.1 **(-0.9)**	28.7 **(-0.3)**	27.6 **(-1.4)**	28.2 **(-0.8)**	27.1 **(-1.9)**	25.3 **(-3.7)**
	P99	Rainfall on extremely wet days	mm	55.1	53.9 **(-1.2)**	53.2 **(-1.9)**	53.9 **(-1.2)**	57.5 **(2.4)**	50.8 **(-4.3)**	48.1 **(-7.0)**
	R95p	Total rainfall from very wet days	mm	401.9	362.1 **(-39.8)**	395.3 **(-6.6)**	359.7 **(-42.2)**	388.2 **(-13.7)**	344.0 **(-57.9)**	302.6 **(-99.3)**
	R99p	Total rainfall from extremely wet days	mm	129.2	118.2 **(-11.0)**	115.7 **(-13.5)**	113.3 **(-15.9)**	131.1 **(1.9)**	112.6 **(-16.6)**	100.2 **(-29.0)**
	Frequency									
	P95d	Number of very wet days	days	9.1	8.3 **(-0.8)**	8.7 **(-0.4)**	8.1 **(-1.0)**	8.9 **(-0.2)**	7.8 **(-1.3)**	6.7 **(-2.4)**
	P99d	Number of extremely wet days	days	1.9	1.8 **(-0.1)**	1.8 **(-0.1)**	1.7 **(-0.2)**	2.1 **(0.2)**	1.6 **(-0.3)**	1.3 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	21.4	19.7 **(-1.7)**	21.8 **(0.4)**	20.5 **(-0.9)**	21.0 **(-0.4)**	21.1 **(-0.3)**	22.8 **(1.4)**
	CDD	Longest dry spell	days	34.1	35.3 **(1.2)**	33.3 **(-0.8)**	33.1 **(-1.0)**	31.3 **(-2.8)**	33.6 **(-0.5)**	35.4 **(1.3)**

Region VI (Western Visayas)

Antique

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.0	20.7 **(0.7)**	21.3 **(1.3)**	21.5 **(1.5)**	21.0 **(1.0)**	21.9 **(1.9)**	23.5 **(3.5)**
	TNm	Average night time temperature	°C	23.0	23.6 **(0.6)**	24.2 **(1.2)**	24.4 **(1.4)**	23.8 **(0.8)**	24.7 **(1.7)**	26.2 **(3.2)**
	TNx	Warmest night time temperature	°C	25.4	26.1 **(0.7)**	26.5 **(1.1)**	26.7 **(1.3)**	26.1 **(0.7)**	27.0 **(1.6)**	28.4 **(3.0)**
	TXn	Coldest day time temperature	°C	25.3	26.0 **(0.7)**	26.6 **(1.3)**	26.6 **(1.3)**	26.2 **(0.9)**	27.0 **(1.7)**	28.5 **(3.2)**
	TXm	Average day time temperature	°C	30.0	30.6 **(0.6)**	31.2 **(1.2)**	31.5 **(1.5)**	30.8 **(0.8)**	31.7 **(1.7)**	33.3 **(3.3)**
	TXx	Warmest day time temperature	°C	33.7	34.4 **(0.7)**	34.9 **(1.2)**	35.4 **(1.7)**	34.5 **(0.8)**	35.6 **(1.9)**	37.3 **(3.6)**
	DTR	Daily temperature range	°C	6.9	6.9 **(0.0)**	7.0 **(0.1)**	7.1 **(0.2)**	7.0 **(0.1)**	7.0 **(0.1)**	7.2 **(0.3)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.6 **(-8.8)**	1.3 **(-10.1)**	0.8 **(-10.6)**	2.2 **(-9.2)**	0.7 **(-10.7)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	33.0 **(21.6)**	55.3 **(43.9)**	68.4 **(57.0)**	38.1 **(26.7)**	73.2 **(61.8)**	97.0 **(85.6)**
	TX10p	Fraction of cool days	%	11.4	4.1 **(-7.3)**	1.7 **(-9.7)**	1.1 **(-10.3)**	3.0 **(-8.4)**	1.0 **(-10.4)**	0.5 **(-10.9)**
	TX90p	Fraction of hot days	%	11.6	29.3 **(17.7)**	54.4 **(42.8)**	69.9 **(58.3)**	36.7 **(25.1)**	73.6 **(62.0)**	94.5 **(82.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.5	81.4 **(74.9)**	289.4 **(282.9)**	365.0 **(358.5)**	142.9 **(136.4)**	365.0 **(358.5)**	365.0 **(358.5)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1824.6	1762.2 **(-62.4)**	1731.9 **(-92.7)**	1663.5 **(-161.1)**	1758.5 **(-66.1)**	1560.1 **(-264.5)**	1416.7 **(-407.9)**
	SDII	Average daily rainfall intensity	mm/day	10.2	9.8 **(-0.4)**	9.7 **(-0.5)**	9.4 **(-0.8)**	9.7 **(-0.5)**	8.8 **(-1.4)**	8.6 **(-1.6)**
	Rx1day	Maximum 1-day rainfall total	mm	67.1	66.1 **(-1.0)**	63.4 **(-3.7)**	62.0 **(-5.1)**	65.8 **(-1.3)**	63.3 **(-3.8)**	55.7 **(-11.4)**
	Rx5day	Maximum 5-day rainfall total	mm	158.7	164.2 **(5.5)**	156.1 **(-2.6)**	154.8 **(-3.9)**	151.4 **(-7.3)**	146.6 **(-12.1)**	138.0 **(-20.7)**
	P95	Rainfall on very wet days	mm	30.4	29.6 **(-0.8)**	29.1 **(-1.3)**	29.1 **(-1.3)**	29.4 **(-1.0)**	26.7 **(-3.7)**	27.1 **(-3.3)**
	P99	Rainfall on extremely wet days	mm	50.5	50.1 **(-0.4)**	51.3 **(0.8)**	49.1 **(-1.4)**	52.0 **(1.5)**	44.8 **(-5.7)**	47.2 **(-3.3)**
	R95p	Total rainfall from very wet days	mm	392.1	369.9 **(-22.2)**	374.8 **(-17.3)**	361.9 **(-30.2)**	370.3 **(-21.8)**	321.1 **(-71.0)**	274.2 **(-117.9)**
	R99p	Total rainfall from extremely wet days	mm	118.7	114.1 **(-4.6)**	118.6 **(-0.1)**	101.2 **(-17.5)**	130.9 **(12.2)**	93.5 **(-25.2)**	90.9 **(-27.8)**
	Frequency									
	P95d	Number of very wet days	days	8.9	8.2 **(-0.7)**	8.3 **(-0.6)**	8.0 **(-0.9)**	8.4 **(-0.5)**	7.2 **(-1.7)**	6.2 **(-2.7)**
	P99d	Number of extremely wet days	days	1.8	1.8 **(0.0)**	2.0 **(0.2)**	1.6 **(-0.2)**	2.0 **(0.2)**	1.4 **(-0.4)**	1.4 **(-0.4)**
	Duration									
	CWD	Longest wet spelll	days	22.3	20.2 **(-2.1)**	19.7 **(-2.6)**	18.6 **(-3.7)**	21.0 **(-1.3)**	18.8 **(-3.5)**	17.0 **(-5.3)**
	CDD	Longest dry spell	days	36.2	36.2 **(0.0)**	35.9 **(-0.3)**	35.4 **(-0.8)**	34.2 **(-2.0)**	35.7 **(-0.5)**	40.1 **(3.9)**

Region VI (Western Visayas)

Capiz

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.7	21.3 (**0.6**)	22.1 (**1.4**)	22.2 (**1.5**)	21.7 (**1.0**)	22.4 (**1.7**)	24.1 (**3.4**)
	TNm	Average night time temperature	°C	23.7	24.3 (**0.6**)	24.8 (**1.1**)	25.1 (**1.4**)	24.4 (**0.7**)	25.3 (**1.6**)	26.8 (**3.1**)
	TNx	Warmest night time temperature	°C	26.0	26.6 (**0.6**)	27.1 (**1.1**)	27.4 (**1.4**)	26.8 (**0.8**)	27.6 (**1.6**)	29.0 (**3.0**)
	TXn	Coldest day time temperature	°C	25.5	26.2 (**0.7**)	26.7 (**1.2**)	26.7 (**1.2**)	26.2 (**0.7**)	27.0 (**1.5**)	28.4 (**2.9**)
	TXm	Average day time temperature	°C	30.4	31.0 (**0.6**)	31.5 (**1.1**)	31.8 (**1.4**)	31.2 (**0.8**)	32.1 (**1.7**)	33.5 (**3.1**)
	TXx	Warmest day time temperature	°C	34.1	34.6 (**0.5**)	35.3 (**1.2**)	35.7 (**1.6**)	34.8 (**0.7**)	35.9 (**1.8**)	37.7 (**3.6**)
	DTR	Daily temperature range	°C	6.7	6.7 (**0.0**)	6.8 (**0.1**)	6.7 (**0.0**)	6.7 (**0.0**)	6.7 (**0.0**)	6.8 (**0.1**)
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	3.4 (**-8.1**)	1.6 (**-9.9**)	0.9 (**-10.6**)	2.6 (**-8.9**)	0.8 (**-10.7**)	0.5 (**-11.0**)
	TN90p	Fraction of warm nights	%	11.5	35.9 (**24.4**)	59.6 (**48.1**)	71.4 (**59.9**)	42.0 (**30.5**)	78.0 (**66.5**)	98.2 (**86.7**)
	TX10p	Fraction of cool days	%	11.4	5.0 (**-6.4**)	1.8 (**-9.6**)	1.4 (**-10.0**)	3.6 (**-7.8**)	1.3 (**-10.1**)	0.7 (**-10.7**)
	TX90p	Fraction of hot days	%	11.6	26.9 (**15.3**)	51.3 (**39.7**)	63.6 (**52.0**)	36.5 (**24.9**)	64.6 (**53.0**)	89.9 (**78.3**)
	Duration									
	WSDI	Warm Spell Duration Index	days	8.7	101.3 (**92.6**)	319.7 (**311.0**)	365.0 (**356.3**)	162.9 (**154.2**)	365.0 (**356.3**)	365.0 (**356.3**)
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1821.5	1724.4 (**-97.1**)	1749.4 (**-72.1**)	1685.3 (**-136.2**)	1765.2 (**-56.3**)	1681.9 (**-139.6**)	1531.7 (**-289.8**)
	SDII	Average daily rainfall intensity	mm/day	10.0	9.7 (**-0.3**)	9.5 (**-0.5**)	9.5 (**-0.5**)	9.7 (**-0.3**)	9.2 (**-0.8**)	8.6 (**-1.4**)
	Rx1day	Maximum 1-day rainfall total	mm	80.2	79.7 (**-0.5**)	81.4 (**1.2**)	79.5 (**-0.7**)	75.6 (**-4.6**)	76.1 (**-4.1**)	74.4 (**-5.8**)
	Rx5day	Maximum 5-day rainfall total	mm	162.9	166.0 (**3.1**)	166.3 (**3.4**)	163.8 (**0.9**)	154.8 (**-8.1**)	148.7 (**-14.2**)	154.6 (**-8.3**)
	P95	Rainfall on very wet days	mm	31.7	31.1 (**-0.6**)	30.6 (**-1.1**)	29.5 (**-2.2**)	31.0 (**-0.7**)	29.2 (**-2.5**)	27.3 (**-4.4**)
	P99	Rainfall on extremely wet days	mm	62.5	60.7 (**-1.8**)	61.9 (**-0.6**)	60.5 (**-2.0**)	62.1 (**-0.4**)	55.5 (**-7.0**)	52.1 (**-10.4**)
	R95p	Total rainfall from very wet days	mm	441.8	396.7 (**-45.1**)	408.7 (**-33.1**)	393.1 (**-48.7**)	407.6 (**-34.2**)	363.9 (**-77.9**)	306.3 (**-135.5**)
	R99p	Total rainfall from extremely wet days	mm	144.6	127.8 (**-16.8**)	146.0 (**1.4**)	124.6 (**-20.0**)	135.1 (**-9.5**)	118.1 (**-26.5**)	114.4 (**-30.2**)
	Frequency									
	P95d	Number of very wet days	days	8.9	8.5 (**-0.4**)	7.7 (**-1.2**)	7.7 (**-1.2**)	8.4 (**-0.5**)	7.6 (**-1.3**)	5.4 (**-3.5**)
	P99d	Number of extremely wet days	days	1.8	1.6 (**-0.2**)	1.8 (**0.0**)	1.6 (**-0.2**)	1.7 (**-0.1**)	1.4 (**-0.4**)	1.2 (**-0.6**)
	Duration									
	CWD	Longest wet spelll	days	19.0	17.9 (**-1.1**)	18.8 (**-0.2**)	17.8 (**-1.2**)	18.4 (**-0.6**)	19.3 (**0.3**)	18.8 (**-0.2**)
	CDD	Longest dry spell	days	31.3	31.4 (**0.1**)	31.5 (**0.2**)	29.8 (**-1.5**)	30.1 (**-1.2**)	31.4 (**0.1**)	32.4 (**1.1**)

Region VI (Western Visayas)

Guimaras

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.3	21.0 (0.7)	21.4 (1.1)	21.7 (1.4)	21.1 (0.8)	21.9 (1.6)	23.3 (3.0)
	TNm	Average night time temperature	°C	23.9	24.5 (0.6)	24.9 (1.0)	25.2 (1.3)	24.7 (0.8)	25.5 (1.6)	26.9 (3.0)
	TNx	Warmest night time temperature	°C	26.6	27.2 (0.6)	27.7 (1.1)	27.9 (1.3)	27.3 (0.7)	28.2 (1.6)	29.5 (2.9)
	TXn	Coldest day time temperature	°C	26.6	27.3 (0.7)	27.7 (1.1)	27.8 (1.2)	27.4 (0.8)	28.1 (1.5)	29.5 (2.9)
	TXm	Average day time temperature	°C	31.4	32.1 (0.7)	32.5 (1.1)	32.8 (1.4)	32.2 (0.8)	33.0 (1.6)	34.5 (3.1)
	TXx	Warmest day time temperature	°C	35.3	36.0 (0.7)	36.5 (1.2)	36.8 (1.5)	36.1 (0.8)	37.1 (1.8)	38.7 (3.4)
	DTR	Daily temperature range	°C	7.5	7.5 (0.0)	7.5 (0.0)	7.5 (0.0)	7.5 (0.0)	7.5 (0.0)	7.5 (0.0)
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.2 (-9.2)	0.8 (-10.6)	0.4 (-11.0)	1.8 (-9.6)	0.3 (-11.1)	0.1 (-11.3)
	TN90p	Fraction of warm nights	%	11.4	49.8 (38.4)	74.4 (63.0)	84.7 (73.3)	52.9 (41.5)	89.5 (78.1)	99.7 (88.3)
	TX10p	Fraction of cool days	%	11.6	2.5 (-9.1)	1.1 (-10.5)	0.9 (-10.7)	2.1 (-9.5)	0.8 (-10.8)	0.6 (-11.0)
	TX90p	Fraction of hot days	%	11.8	38.5 (26.7)	67.2 (55.4)	83.3 (71.5)	45.8 (34.0)	83.4 (71.6)	99.6 (87.8)
	Duration									
	WSDI	Warm Spell Duration Index	days	4.7	84.1 (79.4)	218.2 (213.5)	320.8 (316.1)	116.4 (111.7)	356.7 (352.0)	365.0 (360.3)
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1980.7	1853.3 (-127.4)	2021.4 (40.7)	1904.3 (-76.4)	1913.2 (-67.5)	1918.9 (-61.8)	1804.4 (-176.3)
	SDII	Average daily rainfall intensity	mm/day	12.5	12.0 (-0.5)	12.7 (0.2)	12.1 (-0.4)	12.1 (-0.4)	11.9 (-0.6)	11.0 (-1.5)
	Rx1day	Maximum 1-day rainfall total	mm	104.2	111.4 (7.2)	106.7 (2.5)	103.0 (-1.2)	104.4 (0.2)	106.5 (2.3)	103.1 (-1.1)
	Rx5day	Maximum 5-day rainfall total	mm	218.7	226.9 (8.2)	226.6 (7.9)	219.1 (0.4)	223.7 (5.0)	205.7 (-13.0)	195.0 (-23.7)
	P95	Rainfall on very wet days	mm	42.9	41.9 (-1.0)	42.3 (-0.6)	41.1 (-1.8)	41.2 (-1.7)	39.6 (-3.3)	36.8 (-6.1)
	P99	Rainfall on extremely wet days	mm	74.3	74.7 (0.4)	71.5 (-2.8)	70.2 (-4.1)	71.7 (-2.6)	65.9 (-8.4)	58.0 (-16.3)
	R95p	Total rainfall from very wet days	mm	514.1	485.1 (-29.0)	530.7 (16.6)	481.0 (-33.1)	494.7 (-19.4)	454.6 (-59.5)	368.0 (-146.1)
	R99p	Total rainfall from extremely wet days	mm	165.6	171.0 (5.4)	170.1 (4.5)	160.3 (-5.3)	156.5 (-9.1)	148.6 (-17.0)	105.8 (-59.8)
	Frequency									
	P95d	Number of very wet days	days	7.8	7.3 (-0.5)	7.9 (0.1)	7.2 (-0.6)	7.2 (-0.6)	6.9 (-0.9)	5.6 (-2.2)
	P99d	Number of extremely wet days	days	1.6	1.6 (0.0)	1.5 (-0.1)	1.5 (-0.1)	1.5 (-0.1)	1.3 (-0.3)	0.9 (-0.7)
	Duration									
	CWD	Longest wet spelll	days	15.6	15.3 (-0.3)	16.6 (1.0)	15.5 (-0.1)	16.1 (0.5)	16.7 (1.1)	16.3 (0.7)
	CDD	Longest dry spell	days	29.8	30.8 (1.0)	29.4 (-0.4)	30.4 (0.6)	28.6 (-1.2)	31.7 (1.9)	30.7 (0.9)

Region VI (Western Visayas)

Iloilo

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.2	20.9 **(0.7)**	21.5 **(1.3)**	21.7 **(1.5)**	21.1 **(0.9)**	22.1 **(1.9)**	23.7 **(3.5)**
	TNm	Average night time temperature	°C	23.4	24.0 **(0.6)**	24.5 **(1.1)**	24.8 **(1.4)**	24.2 **(0.8)**	25.0 **(1.6)**	26.5 **(3.1)**
	TNx	Warmest night time temperature	°C	25.8	26.4 **(0.6)**	27.0 **(1.2)**	27.2 **(1.4)**	26.6 **(0.8)**	27.4 **(1.6)**	28.8 **(3.0)**
	TXn	Coldest day time temperature	°C	25.7	26.3 **(0.6)**	26.9 **(1.2)**	27.0 **(1.3)**	26.5 **(0.8)**	27.3 **(1.6)**	28.8 **(3.1)**
	TXm	Average day time temperature	°C	30.5	31.1 **(0.6)**	31.7 **(1.2)**	32.0 **(1.5)**	31.3 **(0.8)**	32.2 **(1.7)**	33.8 **(3.3)**
	TXx	Warmest day time temperature	°C	34.3	34.9 **(0.6)**	35.6 **(1.3)**	35.9 **(1.6)**	35.1 **(0.8)**	36.1 **(1.8)**	38.0 **(3.7)**
	DTR	Daily temperature range	°C	7.1	7.1 **(0.0)**	7.2 **(0.1)**	7.2 **(0.1)**	7.1 **(0.0)**	7.2 **(0.1)**	7.2 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.0 **(-8.3)**	1.4 **(-9.9)**	0.8 **(-10.5)**	2.4 **(-8.9)**	0.6 **(-10.7)**	0.4 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.4	35.0 **(23.6)**	59.8 **(48.4)**	72.1 **(60.7)**	41.3 **(29.9)**	77.7 **(66.3)**	97.7 **(86.3)**
	TX10p	Fraction of cool days	%	11.5	4.6 **(-6.9)**	2.2 **(-9.3)**	1.7 **(-9.8)**	3.7 **(-7.8)**	1.4 **(-10.1)**	0.9 **(-10.6)**
	TX90p	Fraction of hot days	%	11.6	27.7 **(16.1)**	52.6 **(41.0)**	65.5 **(53.9)**	35.9 **(24.3)**	65.6 **(54.0)**	91.6 **(80.0)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.4	65.6 **(59.2)**	204.6 **(198.2)**	305.9 **(299.5)**	120.1 **(113.7)**	365.0 **(358.6)**	365.0 **(358.6)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1873.6	1785.9 **(-87.7)**	1824.8 **(-48.8)**	1737.5 **(-136.1)**	1803.8 **(-69.8)**	1731.4 **(-142.2)**	1572.3 **(-301.3)**
	SDII	Average daily rainfall intensity	mm/day	10.7	10.3 **(-0.4)**	10.2 **(-0.5)**	10.0 **(-0.7)**	10.3 **(-0.4)**	9.9 **(-0.8)**	9.5 **(-1.2)**
	Rx1day	Maximum 1-day rainfall total	mm	81.3	83.7 **(2.4)**	80.2 **(-1.1)**	83.3 **(2.0)**	81.8 **(0.5)**	79.7 **(-1.6)**	73.7 **(-7.6)**
	Rx5day	Maximum 5-day rainfall total	mm	174.6	179.9 **(5.3)**	180.8 **(6.2)**	177.6 **(3.0)**	174.3 **(-0.3)**	164.0 **(-10.6)**	159.4 **(-15.2)**
	P95	Rainfall on very wet days	mm	33.9	33.3 **(-0.6)**	32.9 **(-1.0)**	31.7 **(-2.2)**	33.0 **(-0.9)**	31.3 **(-2.6)**	29.4 **(-4.5)**
	P99	Rainfall on extremely wet days	mm	60.4	59.1 **(-1.3)**	60.8 **(0.4)**	61.5 **(1.1)**	60.7 **(0.3)**	55.8 **(-4.6)**	50.9 **(-9.5)**
	R95p	Total rainfall from very wet days	mm	442.9	422.4 **(-20.5)**	437.5 **(-5.4)**	408.7 **(-34.2)**	406.0 **(-36.9)**	397.8 **(-45.1)**	314.7 **(-128.2)**
	R99p	Total rainfall from extremely wet days	mm	139.9	134.5 **(-5.4)**	148.6 **(8.7)**	145.7 **(5.8)**	137.4 **(-2.5)**	117.7 **(-22.2)**	106.9 **(-33.0)**
	Frequency									
	P95d	Number of very wet days	days	8.8	8.2 **(-0.6)**	8.4 **(-0.4)**	7.8 **(-1.0)**	8.3 **(-0.5)**	7.9 **(-0.9)**	6.3 **(-2.5)**
	P99d	Number of extremely wet days	days	1.8	1.7 **(-0.1)**	1.9 **(0.1)**	1.9 **(0.1)**	1.8 **(0.0)**	1.5 **(-0.3)**	1.2 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	18.7	17.9 **(-0.8)**	18.2 **(-0.5)**	17.3 **(-1.4)**	18.0 **(-0.7)**	17.8 **(-0.9)**	17.9 **(-0.8)**
	CDD	Longest dry spell	days	30.8	31.0 **(0.2)**	29.9 **(-0.9)**	29.8 **(-1.0)**	29.9 **(-0.9)**	30.1 **(-0.7)**	33.0 **(2.2)**

Region VI (Western Visayas)
Negros Occidental

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.6	20.4 **(0.8)**	21.0 **(1.4)**	21.2 **(1.6)**	20.7 **(1.1)**	21.6 **(2.0)**	23.2 **(3.6)**
	TNm	Average night time temperature	°C	22.4	23.0 **(0.6)**	23.6 **(1.2)**	23.8 **(1.4)**	23.2 **(0.8)**	24.1 **(1.7)**	25.7 **(3.3)**
	TNx	Warmest night time temperature	°C	24.8	25.4 **(0.6)**	25.9 **(1.1)**	26.1 **(1.3)**	25.6 **(0.8)**	26.4 **(1.6)**	27.8 **(3.0)**
	TXn	Coldest day time temperature	°C	25.7	26.4 **(0.7)**	26.9 **(1.2)**	27.0 **(1.3)**	26.5 **(0.8)**	27.3 **(1.6)**	28.9 **(3.2)**
	TXm	Average day time temperature	°C	30.2	30.8 **(0.6)**	31.4 **(1.2)**	31.7 **(1.5)**	31.0 **(0.8)**	31.9 **(1.7)**	33.6 **(3.4)**
	TXx	Warmest day time temperature	°C	33.6	34.2 **(0.6)**	34.9 **(1.3)**	35.3 **(1.7)**	34.4 **(0.8)**	35.5 **(1.9)**	37.3 **(3.7)**
	DTR	Daily temperature range	°C	7.8	7.8 **(0.0)**	7.8 **(0.0)**	7.9 **(0.1)**	7.8 **(0.0)**	7.8 **(0.0)**	7.9 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.9 **(-8.5)**	1.4 **(-10.0)**	0.9 **(-10.5)**	2.4 **(-9.0)**	0.7 **(-10.7)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	35.4 **(24.0)**	63.8 **(52.4)**	75.7 **(64.3)**	43.3 **(31.9)**	81.3 **(69.9)**	98.7 **(87.3)**
	TX10p	Fraction of cool days	%	11.5	4.6 **(-6.9)**	2.1 **(-9.4)**	1.5 **(-10.0)**	3.5 **(-8.0)**	1.3 **(-10.2)**	0.7 **(-10.8)**
	TX90p	Fraction of hot days	%	11.7	28.6 **(16.9)**	56.1 **(44.4)**	69.0 **(57.3)**	38.0 **(26.3)**	68.5 **(56.8)**	94.0 **(82.3)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.1	74.3 **(68.2)**	190.8 **(184.7)**	291.3 **(285.2)**	107.7 **(101.6)**	308.6 **(302.5)**	365.0 **(358.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1923.8	1859.9 **(-63.9)**	1854.1 **(-69.7)**	1771.1 **(-152.7)**	1831.2 **(-92.6)**	1752.7 **(-171.1)**	1577.5 **(-346.3)**
	SDII	Average daily rainfall intensity	mm/day	9.4	9.2 **(-0.2)**	8.8 **(-0.6)**	8.7 **(-0.7)**	9.1 **(-0.3)**	8.5 **(-0.9)**	7.5 **(-1.9)**
	Rx1day	Maximum 1-day rainfall total	mm	62.8	64.4 **(1.6)**	62.6 **(-0.2)**	61.9 **(-0.9)**	61.5 **(-1.3)**	59.7 **(-3.1)**	53.8 **(-9.0)**
	Rx5day	Maximum 5-day rainfall total	mm	152.4	153.7 **(1.3)**	152.7 **(0.3)**	149.4 **(-3.0)**	144.5 **(-7.9)**	140.4 **(-12.0)**	127.4 **(-25.0)**
	P95	Rainfall on very wet days	mm	26.1	25.7 **(-0.4)**	25.5 **(-0.6)**	24.6 **(-1.5)**	25.5 **(-0.6)**	23.4 **(-2.7)**	20.5 **(-5.6)**
	P99	Rainfall on extremely wet days	mm	47.5	48.3 **(0.8)**	47.2 **(-0.3)**	45.9 **(-1.6)**	45.8 **(-1.7)**	43.4 **(-4.1)**	38.5 **(-9.0)**
	R95p	Total rainfall from very wet days	mm	399.7	391.6 **(-8.1)**	379.4 **(-20.3)**	372.3 **(-27.4)**	368.6 **(-31.1)**	332.7 **(-67.0)**	260.0 **(-139.7)**
	R99p	Total rainfall from extremely wet days	mm	127.6	124.4 **(-3.2)**	128.0 **(0.4)**	124.3 **(-3.3)**	120.5 **(-7.1)**	110.7 **(-16.9)**	91.2 **(-36.4)**
	Frequency									
	P95d	Number of very wet days	days	10.2	9.6 **(-0.6)**	9.4 **(-0.8)**	8.9 **(-1.3)**	9.4 **(-0.8)**	8.4 **(-1.8)**	6.4 **(-3.8)**
	P99d	Number of extremely wet days	days	2.0	2.1 **(0.1)**	1.9 **(-0.1)**	2.0 **(0.0)**	1.9 **(-0.1)**	1.7 **(-0.3)**	1.4 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	25.7	23.4 **(-2.3)**	24.6 **(-1.1)**	23.1 **(-2.6)**	24.6 **(-1.1)**	24.0 **(-1.7)**	23.0 **(-2.7)**
	CDD	Longest dry spell	days	22.8	22.5 **(-0.3)**	21.4 **(-1.4)**	22.1 **(-0.7)**	21.4 **(-1.4)**	21.6 **(-1.2)**	22.7 **(-0.1)**

Region VII (Central Visayas)

Bohol

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.5	21.1 (0.6)	21.6 (1.1)	22.0 (1.5)	21.3 (0.8)	22.2 (1.7)	23.9 (3.4)
	TNm	Average night time temperature	°C	23.0	23.6 (0.6)	24.1 (1.1)	24.4 (1.4)	23.8 (0.8)	24.6 (1.6)	26.2 (3.2)
	TNx	Warmest night time temperature	°C	25.4	26.0 (0.6)	26.5 (1.1)	26.8 (1.4)	26.1 (0.7)	27.0 (1.6)	28.4 (3.0)
	TXn	Coldest day time temperature	°C	26.1	26.7 (0.6)	27.2 (1.1)	27.4 (1.3)	26.9 (0.8)	27.7 (1.6)	29.2 (3.1)
	TXm	Average day time temperature	°C	30.7	31.4 (0.7)	31.9 (1.2)	32.2 (1.5)	31.5 (0.8)	32.4 (1.7)	34.0 (3.3)
	TXx	Warmest day time temperature	°C	33.8	34.5 (0.7)	35.1 (1.3)	35.5 (1.7)	34.6 (0.8)	35.7 (1.9)	37.3 (3.5)
	DTR	Daily temperature range	°C	7.7	7.7 (0.0)	7.7 (0.0)	7.8 (0.1)	7.7 (0.0)	7.7 (0.0)	7.7 (0.0)
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.0 (-8.3)	1.3 (-10.0)	0.8 (-10.5)	2.3 (-9.0)	0.7 (-10.6)	0.3 (-11.0)
	TN90p	Fraction of warm nights	%	11.6	39.0 (27.4)	63.2 (51.6)	76.2 (64.6)	44.5 (32.9)	81.5 (69.9)	99.3 (87.7)
	TX10p	Fraction of cool days	%	11.5	3.5 (-8.0)	1.5 (-10.0)	1.1 (-10.4)	2.7 (-8.8)	1.0 (-10.5)	0.7 (-10.8)
	TX90p	Fraction of hot days	%	11.7	33.8 (22.1)	60.0 (48.3)	73.5 (61.8)	43.2 (31.5)	79.3 (67.6)	97.6 (85.9)
	Duration									
	WSDI	Warm Spell Duration Index	days	4.6	66.0 (61.4)	217.6 (213.0)	293.0 (288.4)	130.3 (125.7)	305.4 (300.8)	365.0 (360.4)
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2265.0	2186.0 (-79.0)	2174.3 (-90.7)	2154.4 (-110.6)	2206.6 (-58.4)	2151.2 (-113.8)	1913.8 (-351.2)
	SDII	Average daily rainfall intensity	mm/day	10.8	10.5 (-0.3)	10.5 (-0.3)	10.4 (-0.4)	10.6 (-0.2)	10.3 (-0.5)	9.2 (-1.6)
	Rx1day	Maximum 1-day rainfall total	mm	74.3	69.8 (-4.5)	69.5 (-4.8)	71.9 (-2.4)	68.3 (-6.0)	65.8 (-8.5)	65.5 (-8.8)
	Rx5day	Maximum 5-day rainfall total	mm	158.6	150.8 (-7.8)	159.6 (1.0)	157.2 (-1.4)	154.3 (-4.3)	151.9 (-6.7)	140.1 (-18.5)
	P95	Rainfall on very wet days	mm	28.8	28.5 (-0.3)	28.6 (-0.2)	28.2 (-0.6)	28.2 (-0.6)	27.5 (-1.3)	23.7 (-5.1)
	P99	Rainfall on extremely wet days	mm	48.6	48.7 (0.1)	48.2 (-0.4)	48.6 (0.0)	47.2 (-1.4)	46.3 (-2.3)	40.6 (-8.0)
	R95p	Total rainfall from very wet days	mm	431.9	410.0 (-21.9)	434.3 (2.4)	421.2 (-10.7)	412.4 (-19.5)	389.5 (-42.4)	285.9 (-146.0)
	R99p	Total rainfall from extremely wet days	mm	137.8	128.8 (-9.0)	146.3 (8.5)	152.3 (14.5)	131.0 (-6.8)	123.6 (-14.2)	107.8 (-30.0)
	Frequency									
	P95d	Number of very wet days	days	10.4	10.0 (-0.4)	10.2 (-0.2)	9.6 (-0.8)	10.1 (-0.3)	9.4 (-1.0)	7.1 (-3.3)
	P99d	Number of extremely wet days	days	2.1	2.0 (-0.1)	2.1 (0.0)	2.0 (-0.1)	1.9 (-0.2)	1.9 (-0.2)	1.6 (-0.5)
	Duration									
	CWD	Longest wet spelll	days	22.6	21.2 (-1.4)	22.5 (-0.1)	21.6 (-1.0)	21.5 (-1.1)	23.0 (0.4)	23.5 (0.9)
	CDD	Longest dry spell	days	17.8	17.6 (-0.2)	17.4 (-0.4)	18.4 (0.6)	17.5 (-0.3)	17.3 (-0.5)	18.5 (0.7)

Region VII (Central Visayas)

Cebu

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.8	20.5 **(0.7)**	21.1 **(1.3)**	21.3 **(1.5)**	20.8 **(1.0)**	21.6 **(1.8)**	23.1 **(3.3)**
	TNm	Average night time temperature	°C	22.6	23.2 **(0.6)**	23.6 **(1.0)**	23.9 **(1.3)**	23.3 **(0.7)**	24.1 **(1.5)**	25.7 **(3.1)**
	TNx	Warmest night time temperature	°C	24.9	25.5 **(0.6)**	26.0 **(1.1)**	26.3 **(1.4)**	25.7 **(0.8)**	26.4 **(1.5)**	27.9 **(3.0)**
	TXn	Coldest day time temperature	°C	25.6	26.3 **(0.7)**	26.9 **(1.3)**	26.9 **(1.3)**	26.5 **(0.9)**	27.2 **(1.6)**	28.8 **(3.2)**
	TXm	Average day time temperature	°C	30.3	30.9 **(0.6)**	31.5 **(1.2)**	31.8 **(1.5)**	31.1 **(0.8)**	32.0 **(1.7)**	33.5 **(3.2)**
	TXx	Warmest day time temperature	°C	33.5	34.2 **(0.7)**	34.8 **(1.3)**	35.2 **(1.7)**	34.3 **(0.8)**	35.3 **(1.8)**	37.1 **(3.6)**
	DTR	Daily temperature range	°C	7.8	7.7 **(-0.1)**	7.8 **(0.0)**	7.8 **(0.0)**	7.8 **(0.0)**	7.8 **(0.0)**	7.8 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	2.7 **(-8.6)**	1.1 **(-10.2)**	0.6 **(-10.7)**	2.1 **(-9.2)**	0.5 **(-10.8)**	0.2 **(-11.1)**
	TN90p	Fraction of warm nights	%	11.4	45.1 **(33.7)**	69.0 **(57.6)**	81.1 **(69.7)**	49.7 **(38.3)**	84.3 **(72.9)**	99.6 **(88.2)**
	TX10p	Fraction of cool days	%	11.4	3.6 **(-7.8)**	1.4 **(-10.0)**	0.9 **(-10.5)**	2.2 **(-9.2)**	0.9 **(-10.5)**	0.5 **(-10.9)**
	TX90p	Fraction of hot days	%	11.6	36.9 **(25.3)**	65.2 **(53.6)**	76.8 **(65.2)**	48.2 **(36.6)**	81.3 **(69.7)**	97.5 **(85.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	5.9	85.4 **(79.5)**	246.5 **(240.6)**	328.8 **(322.9)**	131.7 **(125.8)**	354.2 **(348.3)**	365.0 **(359.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2077.9	2007.9 **(-70.0)**	2008.4 **(-69.5)**	1981.6 **(-96.3)**	2033.5 **(-44.4)**	1957.7 **(-120.2)**	1808.3 **(-269.6)**
	SDII	Average daily rainfall intensity	mm/day	9.6	9.4 **(-0.2)**	9.3 **(-0.3)**	9.2 **(-0.4)**	9.3 **(-0.3)**	9.1 **(-0.5)**	8.3 **(-1.3)**
	Rx1day	Maximum 1-day rainfall total	mm	65.2	63.6 **(-1.6)**	66.8 **(1.6)**	62.2 **(-3.0)**	60.8 **(-4.4)**	59.8 **(-5.4)**	55.8 **(-9.4)**
	Rx5day	Maximum 5-day rainfall total	mm	146.7	137.6 **(-9.1)**	145.5 **(-1.2)**	139.9 **(-6.8)**	137.2 **(-9.5)**	132.4 **(-14.3)**	122.6 **(-24.1)**
	P95	Rainfall on very wet days	mm	25.4	25.2 **(-0.2)**	24.8 **(-0.6)**	24.2 **(-1.2)**	25.3 **(-0.1)**	24.4 **(-1.0)**	21.9 **(-3.5)**
	P99	Rainfall on extremely wet days	mm	44.7	45.8 **(1.1)**	44.4 **(-0.3)**	42.8 **(-1.9)**	42.8 **(-1.9)**	41.7 **(-3.0)**	33.1 **(-11.6)**
	R95p	Total rainfall from very wet days	mm	403.0	408.4 **(5.4)**	384.5 **(-18.5)**	375.9 **(-27.1)**	375.0 **(-28.0)**	384.6 **(-18.4)**	274.6 **(-128.4)**
	R99p	Total rainfall from extremely wet days	mm	131.4	138.6 **(7.2)**	137.4 **(6.0)**	130.0 **(-1.4)**	117.5 **(-13.9)**	114.8 **(-16.6)**	92.9 **(-38.5)**
	Frequency									
	P95d	Number of very wet days	days	10.7	10.4 **(-0.3)**	10.6 **(-0.1)**	9.6 **(-1.1)**	10.5 **(-0.2)**	9.8 **(-0.9)**	7.5 **(-3.2)**
	P99d	Number of extremely wet days	days	2.2	2.2 **(0.0)**	2.2 **(0.0)**	2.0 **(-0.2)**	2.0 **(-0.2)**	1.9 **(-0.3)**	1.4 **(-0.8)**
	Duration									
	CWD	Longest wet spelll	days	26.5	23.9 **(-2.6)**	26.5 **(0.0)**	23.4 **(-3.1)**	23.9 **(-2.6)**	25.7 **(-0.8)**	25.2 **(-1.3)**
	CDD	Longest dry spell	days	19.1	18.6 **(-0.5)**	17.7 **(-1.4)**	18.0 **(-1.1)**	17.8 **(-1.3)**	18.9 **(-0.2)**	18.7 **(-0.4)**

Region VII (Central Visayas)

Negros Oriental

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.9	19.6 **(0.7)**	20.2 **(1.3)**	20.6 **(1.7)**	19.9 **(1.0)**	20.8 **(1.9)**	22.5 **(3.6)**
	TNm	Average night time temperature	°C	21.6	22.2 **(0.6)**	22.7 **(1.1)**	23.0 **(1.4)**	22.3 **(0.7)**	23.2 **(1.6)**	24.7 **(3.1)**
	TNx	Warmest night time temperature	°C	24.0	24.6 **(0.6)**	25.1 **(1.1)**	25.3 **(1.3)**	24.8 **(0.8)**	25.5 **(1.5)**	27.0 **(3.0)**
	TXn	Coldest day time temperature	°C	25.5	26.1 **(0.6)**	26.6 **(1.1)**	26.8 **(1.3)**	26.4 **(0.9)**	27.1 **(1.6)**	28.6 **(3.1)**
	TXm	Average day time temperature	°C	29.7	30.3 **(0.6)**	30.9 **(1.2)**	31.2 **(1.5)**	30.5 **(0.8)**	31.4 **(1.7)**	33.0 **(3.3)**
	TXx	Warmest day time temperature	°C	32.9	33.6 **(0.7)**	34.2 **(1.3)**	34.6 **(1.7)**	33.8 **(0.9)**	34.7 **(1.8)**	36.4 **(3.5)**
	DTR	Daily temperature range	°C	8.1	8.1 **(0.0)**	8.2 **(0.1)**	8.2 **(0.1)**	8.1 **(0.0)**	8.2 **(0.1)**	8.3 **(0.2)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	3.1 **(-8.5)**	1.6 **(-10.0)**	1.0 **(-10.6)**	2.6 **(-9.0)**	0.9 **(-10.7)**	0.6 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.5	37.1 **(25.6)**	64.2 **(52.7)**	79.9 **(68.4)**	43.9 **(32.4)**	81.2 **(69.7)**	98.9 **(87.4)**
	TX10p	Fraction of cool days	%	11.4	3.5 **(-7.9)**	1.5 **(-9.9)**	1.0 **(-10.4)**	2.7 **(-8.7)**	0.9 **(-10.5)**	0.6 **(-10.8)**
	TX90p	Fraction of hot days	%	11.6	35.0 **(23.4)**	65.4 **(53.8)**	78.4 **(66.8)**	42.6 **(31.0)**	77.5 **(65.9)**	97.3 **(85.7)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.8	78.4 **(73.6)**	205.9 **(201.1)**	273.8 **(269.0)**	115.3 **(110.5)**	295.9 **(291.1)**	365.0 **(360.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1906.6	1900.7 **(-5.9)**	1846.2 **(-60.4)**	1808.1 **(-98.5)**	1851.6 **(-55.0)**	1798.3 **(-108.3)**	1652.4 **(-254.2)**
	SDII	Average daily rainfall intensity	mm/day	9.2	9.2 **(0.0)**	8.8 **(-0.4)**	8.7 **(-0.5)**	8.9 **(-0.3)**	8.6 **(-0.6)**	7.2 **(-2.0)**
	Rx1day	Maximum 1-day rainfall total	mm	56.0	54.2 **(-1.8)**	53.8 **(-2.2)**	54.0 **(-2.0)**	55.3 **(-0.7)**	54.8 **(-1.2)**	44.3 **(-11.7)**
	Rx5day	Maximum 5-day rainfall total	mm	139.9	131.7 **(-8.2)**	129.8 **(-10.1)**	136.0 **(-3.9)**	134.0 **(-5.9)**	133.4 **(-6.5)**	109.1 **(-30.8)**
	P95	Rainfall on very wet days	mm	25.1	25.4 **(0.3)**	24.7 **(-0.4)**	23.5 **(-1.6)**	24.4 **(-0.7)**	21.8 **(-3.3)**	18.8 **(-6.3)**
	P99	Rainfall on extremely wet days	mm	42.4	42.1 **(-0.3)**	42.3 **(-0.1)**	43.0 **(0.6)**	41.2 **(-1.2)**	39.6 **(-2.8)**	31.6 **(-10.8)**
	R95p	Total rainfall from very wet days	mm	372.2	390.5 **(18.3)**	353.5 **(-18.7)**	362.7 **(-9.5)**	353.1 **(-19.1)**	337.8 **(-34.4)**	216.0 **(-156.2)**
	R99p	Total rainfall from extremely wet days	mm	114.5	110.7 **(-3.8)**	113.0 **(-1.5)**	111.7 **(-2.8)**	115.0 **(0.5)**	104.5 **(-10.0)**	73.4 **(-41.1)**
	Frequency									
	P95d	Number of very wet days	days	10.3	10.3 **(0.0)**	9.9 **(-0.4)**	9.3 **(-1.0)**	9.7 **(-0.6)**	8.8 **(-1.5)**	6.4 **(-3.9)**
	P99d	Number of extremely wet days	days	2.1	2.0 **(-0.1)**	2.1 **(0.0)**	2.1 **(0.0)**	2.0 **(-0.1)**	1.8 **(-0.3)**	1.3 **(-0.8)**
	Duration									
	CWD	Longest wet spelll	days	26.5	25.0 **(-1.5)**	26.2 **(-0.3)**	24.0 **(-2.5)**	25.2 **(-1.3)**	25.2 **(-1.3)**	25.1 **(-1.4)**
	CDD	Longest dry spell	days	21.9	21.9 **(0.0)**	21.4 **(-0.5)**	21.1 **(-0.8)**	21.0 **(-0.9)**	20.4 **(-1.5)**	23.5 **(1.6)**

Cooler — Warmer

Drier — Wetter

Region VIII (Eastern Visayas)

Eastern Samar

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.3	20.0 **(0.7)**	20.6 **(1.3)**	20.9 **(1.6)**	20.3 **(1.0)**	21.2 **(1.9)**	22.8 **(3.5)**
	TNm	Average night time temperature	°C	22.7	23.4 **(0.7)**	23.9 **(1.2)**	24.1 **(1.4)**	23.5 **(0.8)**	24.4 **(1.7)**	25.9 **(3.2)**
	TNx	Warmest night time temperature	°C	25.9	26.6 **(0.7)**	27.0 **(1.1)**	27.3 **(1.4)**	26.7 **(0.8)**	27.5 **(1.6)**	29.0 **(3.1)**
	TXn	Coldest day time temperature	°C	25.2	25.7 **(0.5)**	26.4 **(1.2)**	26.5 **(1.3)**	26.1 **(0.9)**	26.7 **(1.5)**	28.2 **(3.0)**
	TXm	Average day time temperature	°C	30.8	31.4 **(0.6)**	31.9 **(1.1)**	32.3 **(1.5)**	31.6 **(0.8)**	32.5 **(1.7)**	34.0 **(3.2)**
	TXx	Warmest day time temperature	°C	34.2	34.8 **(0.6)**	35.4 **(1.2)**	35.9 **(1.7)**	35.0 **(0.8)**	35.9 **(1.7)**	37.6 **(3.4)**
	DTR	Daily temperature range	°C	8.1	8.0 **(-0.1)**	8.1 **(0.0)**	8.1 **(0.0)**	8.1 **(0.0)**	8.0 **(-0.1)**	8.1 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.4 **(-8.0)**	1.6 **(-9.8)**	1.2 **(-10.2)**	2.9 **(-8.5)**	1.0 **(-10.4)**	0.5 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.4	34.6 **(23.2)**	59.7 **(48.3)**	71.2 **(59.8)**	41.6 **(30.2)**	77.7 **(66.3)**	98.7 **(87.3)**
	TX10p	Fraction of cool days	%	11.4	4.3 **(-7.1)**	1.6 **(-9.8)**	1.3 **(-10.1)**	3.1 **(-8.3)**	1.1 **(-10.3)**	0.7 **(-10.7)**
	TX90p	Fraction of hot days	%	11.4	28.2 **(16.8)**	52.8 **(41.4)**	64.4 **(53.0)**	39.4 **(28.0)**	69.3 **(57.9)**	96.1 **(84.7)**
	Duration									
	WSDI	Warm Spell Duration Index	days	6.0	102.3 **(96.3)**	291.3 **(285.3)**	365.0 **(359.0)**	174.1 **(168.1)**	365.0 **(359.0)**	365.0 **(359.0)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2751.6	2635.7 **(-115.9)**	2649.8 **(-101.8)**	2617.3 **(-134.3)**	2721.0 **(-30.6)**	2626.1 **(-125.5)**	2430.2 **(-321.4)**
	SDII	Average daily rainfall intensity	mm/day	12.2	12.0 **(-0.2)**	11.8 **(-0.4)**	11.7 **(-0.5)**	12.0 **(-0.2)**	11.6 **(-0.6)**	10.9 **(-1.3)**
	Rx1day	Maximum 1-day rainfall total	mm	108.9	100.9 **(-8.0)**	103.7 **(-5.2)**	99.5 **(-9.4)**	100.2 **(-8.7)**	105.6 **(-3.3)**	108.9 **(0.0)**
	Rx5day	Maximum 5-day rainfall total	mm	230.7	222.9 **(-7.8)**	218.9 **(-11.8)**	205.0 **(-25.7)**	221.1 **(-9.6)**	231.1 **(0.4)**	228.2 **(-2.5)**
	P95	Rainfall on very wet days	mm	38.5	38.1 **(-0.4)**	37.4 **(-1.1)**	37.5 **(-1.0)**	37.7 **(-0.8)**	37.1 **(-1.4)**	33.9 **(-4.6)**
	P99	Rainfall on extremely wet days	mm	79.5	75.6 **(-3.9)**	77.9 **(-1.6)**	76.8 **(-2.7)**	74.0 **(-5.5)**	72.2 **(-7.3)**	67.2 **(-12.3)**
	R95p	Total rainfall from very wet days	mm	687.9	668.5 **(-19.4)**	636.7 **(-51.2)**	653.2 **(-34.7)**	647.2 **(-40.7)**	632.9 **(-55.0)**	526.7 **(-161.2)**
	R99p	Total rainfall from extremely wet days	mm	228.9	202.0 **(-26.9)**	217.3 **(-11.6)**	208.9 **(-20.0)**	197.5 **(-31.4)**	208.8 **(-20.1)**	196.5 **(-32.4)**
	Frequency									
	P95d	Number of very wet days	days	11.2	10.8 **(-0.4)**	10.6 **(-0.6)**	10.8 **(-0.4)**	11.1 **(-0.1)**	10.5 **(-0.7)**	8.4 **(-2.8)**
	P99d	Number of extremely wet days	days	2.3	2.0 **(-0.3)**	2.2 **(-0.1)**	2.1 **(-0.2)**	2.0 **(-0.3)**	1.9 **(-0.4)**	1.7 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	23.2	21.6 **(-1.6)**	24.0 **(0.8)**	23.2 **(0.0)**	22.3 **(-0.9)**	22.0 **(-1.2)**	25.2 **(2.0)**
	CDD	Longest dry spell	days	12.9	12.2 **(-0.7)**	12.8 **(-0.1)**	12.3 **(-0.6)**	12.3 **(-0.6)**	11.6 **(-1.3)**	12.1 **(-0.8)**

Region VIII (Eastern Visayas)

Leyte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.0	20.7 **(0.7)**	21.2 **(1.2)**	21.5 **(1.5)**	20.9 **(0.9)**	21.9 **(1.9)**	23.4 **(3.4)**
	TNm	Average night time temperature	°C	23.1	23.7 **(0.6)**	24.2 **(1.1)**	24.4 **(1.3)**	23.8 **(0.7)**	24.7 **(1.6)**	26.2 **(3.1)**
	TNx	Warmest night time temperature	°C	25.8	26.4 **(0.6)**	26.9 **(1.1)**	27.2 **(1.4)**	26.5 **(0.7)**	27.4 **(1.6)**	28.8 **(3.0)**
	TXn	Coldest day time temperature	°C	25.0	25.6 **(0.6)**	26.3 **(1.3)**	26.3 **(1.3)**	25.8 **(0.8)**	26.6 **(1.6)**	28.0 **(3.0)**
	TXm	Average day time temperature	°C	30.5	31.1 **(0.6)**	31.6 **(1.1)**	31.9 **(1.4)**	31.2 **(0.7)**	32.1 **(1.6)**	33.6 **(3.1)**
	TXx	Warmest day time temperature	°C	33.7	34.3 **(0.6)**	35.0 **(1.3)**	35.3 **(1.6)**	34.5 **(0.8)**	35.5 **(1.8)**	37.1 **(3.4)**
	DTR	Daily temperature range	°C	7.4	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.5 **(-8.9)**	1.3 **(-10.1)**	0.7 **(-10.7)**	2.3 **(-9.1)**	0.6 **(-10.8)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.3	36.9 **(25.6)**	62.9 **(51.6)**	78.5 **(67.2)**	44.7 **(33.4)**	81.1 **(69.8)**	99.3 **(88.0)**
	TX10p	Fraction of cool days	%	11.3	3.1 **(-8.2)**	1.2 **(-10.1)**	0.9 **(-10.4)**	2.4 **(-8.9)**	0.8 **(-10.5)**	0.6 **(-10.7)**
	TX90p	Fraction of hot days	%	11.4	35.6 **(24.2)**	63.4 **(52.0)**	78.4 **(67.0)**	45.8 **(34.4)**	79.1 **(67.7)**	97.7 **(86.3)**
	Duration									
	WSDI	Warm Spell Duration Index	days	8.9	166.1 **(157.2)**	365.0 **(356.1)**	365.0 **(356.1)**	252.6 **(243.7)**	365.0 **(356.1)**	365.0 **(356.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2450.7	2337.2 **(-113.5)**	2352.8 **(-97.9)**	2354.2 **(-96.5)**	2401.4 **(-49.3)**	2306.0 **(-144.7)**	2131.5 **(-319.2)**
	SDII	Average daily rainfall intensity	mm/day	11.0	10.5 **(-0.5)**	10.5 **(-0.5)**	10.6 **(-0.4)**	10.7 **(-0.3)**	10.4 **(-0.6)**	9.7 **(-1.3)**
	Rx1day	Maximum 1-day rainfall total	mm	93.9	86.7 **(-7.2)**	90.6 **(-3.3)**	92.6 **(-1.3)**	94.2 **(0.3)**	89.0 **(-4.9)**	81.8 **(-12.1)**
	Rx5day	Maximum 5-day rainfall total	mm	203.1	184.5 **(-18.6)**	191.8 **(-11.3)**	200.4 **(-2.7)**	192.7 **(-10.4)**	187.3 **(-15.8)**	181.6 **(-21.5)**
	P95	Rainfall on very wet days	mm	34.0	33.7 **(-0.3)**	33.2 **(-0.8)**	31.8 **(-2.2)**	34.0 **(0.0)**	31.2 **(-2.8)**	29.4 **(-4.6)**
	P99	Rainfall on extremely wet days	mm	66.9	64.0 **(-2.9)**	64.6 **(-2.3)**	64.9 **(-2.0)**	65.5 **(-1.4)**	59.2 **(-7.7)**	52.3 **(-14.6)**
	R95p	Total rainfall from very wet days	mm	588.7	545.2 **(-43.5)**	565.0 **(-23.7)**	555.8 **(-32.9)**	563.2 **(-25.5)**	505.6 **(-83.1)**	436.9 **(-151.8)**
	R99p	Total rainfall from extremely wet days	mm	193.8	169.6 **(-24.2)**	186.4 **(-7.4)**	190.0 **(-3.8)**	177.5 **(-16.3)**	165.6 **(-28.2)**	140.3 **(-53.5)**
	Frequency									
	P95d	Number of very wet days	days	11.1	10.7 **(-0.4)**	10.7 **(-0.4)**	10.2 **(-0.9)**	10.9 **(-0.2)**	9.7 **(-1.4)**	8.3 **(-2.8)**
	P99d	Number of extremely wet days	days	2.2	2.0 **(-0.2)**	2.1 **(-0.1)**	2.1 **(-0.1)**	2.1 **(-0.1)**	1.9 **(-0.3)**	1.5 **(-0.7)**
	Duration									
	CWD	Longest wet spelll	days	22.8	20.5 **(-2.3)**	21.8 **(-1.0)**	20.2 **(-2.6)**	21.5 **(-1.3)**	21.5 **(-1.3)**	21.8 **(-1.0)**
	CDD	Longest dry spell	days	13.9	14.1 **(0.2)**	12.7 **(-1.2)**	12.7 **(-1.2)**	13.7 **(-0.2)**	13.5 **(-0.4)**	13.6 **(-0.3)**

Cooler — Warmer

Drier — Wetter

Region VIII (Eastern Visayas)

Northern Samar

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.2	19.8 **(0.6)**	20.4 **(1.2)**	20.6 **(1.4)**	20.1 **(0.9)**	21.0 **(1.8)**	22.5 **(3.3)**
	TNm	Average night time temperature	°C	22.8	23.4 **(0.6)**	23.9 **(1.1)**	24.2 **(1.4)**	23.5 **(0.7)**	24.5 **(1.7)**	26.0 **(3.2)**
	TNx	Warmest night time temperature	°C	25.8	26.5 **(0.7)**	27.0 **(1.2)**	27.3 **(1.5)**	26.6 **(0.8)**	27.5 **(1.7)**	28.8 **(3.0)**
	TXn	Coldest day time temperature	°C	25.6	26.3 **(0.7)**	26.8 **(1.2)**	26.9 **(1.3)**	26.5 **(0.9)**	27.1 **(1.5)**	28.6 **(3.0)**
	TXm	Average day time temperature	°C	31.2	31.8 **(0.6)**	32.4 **(1.2)**	32.6 **(1.4)**	32.0 **(0.8)**	32.8 **(1.6)**	34.4 **(3.2)**
	TXx	Warmest day time temperature	°C	35.0	35.7 **(0.7)**	36.3 **(1.3)**	36.7 **(1.7)**	35.9 **(0.9)**	36.8 **(1.8)**	38.4 **(3.4)**
	DTR	Daily temperature range	°C	8.4	8.4 **(0.0)**	8.5 **(0.1)**	8.4 **(0.0)**	8.4 **(0.0)**	8.4 **(0.0)**	8.4 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.2	2.7 **(-8.5)**	1.3 **(-9.9)**	0.6 **(-10.6)**	2.3 **(-8.9)**	0.5 **(-10.7)**	0.2 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.3	35.4 **(24.1)**	56.9 **(45.6)**	68.7 **(57.4)**	42.0 **(30.7)**	76.1 **(64.8)**	97.4 **(86.1)**
	TX10p	Fraction of cool days	%	11.3	4.0 **(-7.3)**	1.5 **(-9.8)**	1.0 **(-10.3)**	3.0 **(-8.3)**	0.9 **(-10.4)**	0.5 **(-10.8)**
	TX90p	Fraction of hot days	%	11.4	31.2 **(19.8)**	51.1 **(39.7)**	63.9 **(52.5)**	38.8 **(27.4)**	68.9 **(57.5)**	91.5 **(80.1)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.9	78.1 **(73.2)**	171.5 **(166.6)**	269.8 **(264.9)**	110.3 **(105.4)**	291.6 **(286.7)**	365.0 **(360.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2971.7	2857.8 **(-113.9)**	2916.8 **(-54.9)**	2832.4 **(-139.3)**	2913.5 **(-58.2)**	2802.4 **(-169.3)**	2622.6 **(-349.1)**
	SDII	Average daily rainfall intensity	mm/day	13.7	13.3 **(-0.4)**	13.4 **(-0.3)**	13.1 **(-0.6)**	13.4 **(-0.3)**	13.0 **(-0.7)**	12.3 **(-1.4)**
	Rx1day	Maximum 1-day rainfall total	mm	128.3	114.4 **(-13.9)**	119.9 **(-8.4)**	135.5 **(7.2)**	122.1 **(-6.2)**	118.1 **(-10.2)**	137.7 **(9.4)**
	Rx5day	Maximum 5-day rainfall total	mm	276.5	254.8 **(-21.7)**	272.9 **(-3.6)**	296.3 **(19.8)**	258.5 **(-18.0)**	265.9 **(-10.6)**	281.1 **(4.6)**
	P95	Rainfall on very wet days	mm	46.7	46.0 **(-0.7)**	47.3 **(0.6)**	45.8 **(-0.9)**	46.8 **(0.1)**	44.9 **(-1.8)**	42.2 **(-4.5)**
	P99	Rainfall on extremely wet days	mm	91.4	89.3 **(-2.1)**	92.3 **(0.9)**	93.6 **(2.2)**	90.7 **(-0.7)**	87.0 **(-4.4)**	81.3 **(-10.1)**
	R95p	Total rainfall from very wet days	mm	806.4	763.1 **(-43.3)**	831.2 **(24.8)**	757.3 **(-49.1)**	764.6 **(-41.8)**	727.0 **(-79.4)**	663.0 **(-143.4)**
	R99p	Total rainfall from extremely wet days	mm	268.6	232.9 **(-35.7)**	277.3 **(8.7)**	297.4 **(28.8)**	249.8 **(-18.8)**	255.4 **(-13.2)**	251.1 **(-17.5)**
	Frequency									
	P95d	Number of very wet days	days	10.8	10.2 **(-0.6)**	10.9 **(0.1)**	9.9 **(-0.9)**	10.7 **(-0.1)**	10.0 **(-0.8)**	7.9 **(-2.9)**
	P99d	Number of extremely wet days	days	2.2	1.9 **(-0.3)**	2.2 **(0.0)**	2.2 **(0.0)**	2.1 **(-0.1)**	2.0 **(-0.2)**	1.7 **(-0.5)**
	Duration									
	CWD	Longest wet spelll	days	23.0	20.6 **(-2.4)**	22.7 **(-0.3)**	22.5 **(-0.5)**	23.0 **(0.0)**	21.9 **(-1.1)**	24.6 **(1.6)**
	CDD	Longest dry spell	days	15.9	15.8 **(-0.1)**	16.3 **(0.4)**	15.9 **(0.0)**	16.0 **(0.1)**	15.5 **(-0.4)**	15.0 **(-0.9)**

Cooler — Warmer

Drier — Wetter

Region VIII (Eastern Visayas)

Samar

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.2	19.9 **(0.7)**	20.6 **(1.4)**	20.8 **(1.6)**	20.3 **(1.1)**	21.2 **(2.0)**	22.8 **(3.6)**
	TNm	Average night time temperature	°C	22.8	23.5 **(0.7)**	24.0 **(1.2)**	24.2 **(1.4)**	23.6 **(0.8)**	24.5 **(1.7)**	26.0 **(3.2)**
	TNx	Warmest night time temperature	°C	26.1	26.8 **(0.7)**	27.3 **(1.2)**	27.6 **(1.5)**	26.9 **(0.8)**	27.8 **(1.7)**	29.1 **(3.0)**
	TXn	Coldest day time temperature	°C	25.4	25.9 **(0.5)**	26.6 **(1.2)**	26.7 **(1.3)**	26.2 **(0.8)**	27.0 **(1.6)**	28.4 **(3.0)**
	TXm	Average day time temperature	°C	31.1	31.7 **(0.6)**	32.3 **(1.2)**	32.5 **(1.4)**	31.9 **(0.8)**	32.7 **(1.6)**	34.3 **(3.2)**
	TXx	Warmest day time temperature	°C	34.6	35.1 **(0.5)**	35.7 **(1.1)**	36.2 **(1.6)**	35.4 **(0.8)**	36.3 **(1.7)**	38.0 **(3.4)**
	DTR	Daily temperature range	°C	8.2	8.2 **(0.0)**	8.3 **(0.1)**	8.3 **(0.1)**	8.2 **(0.0)**	8.2 **(0.0)**	8.3 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.8 **(-8.6)**	1.5 **(-9.9)**	0.8 **(-10.6)**	2.5 **(-8.9)**	0.7 **(-10.7)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.3	31.7 **(20.4)**	54.4 **(43.1)**	69.4 **(58.1)**	38.9 **(27.6)**	74.2 **(62.9)**	97.0 **(85.7)**
	TX10p	Fraction of cool days	%	11.4	4.2 **(-7.2)**	1.9 **(-9.5)**	1.4 **(-10.0)**	3.7 **(-7.7)**	1.2 **(-10.2)**	0.7 **(-10.7)**
	TX90p	Fraction of hot days	%	11.4	26.0 **(14.6)**	54.8 **(43.4)**	66.9 **(55.5)**	35.5 **(24.1)**	67.1 **(55.7)**	92.2 **(80.8)**
	Duration									
	WSDI	Warm Spell Duration Index	days	5.5	77.6 **(72.1)**	295.7 **(290.2)**	365.0 **(359.5)**	163.7 **(158.2)**	365.0 **(359.5)**	365.0 **(359.5)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2690.7	2592.2 **(-98.5)**	2622.5 **(-68.2)**	2573.1 **(-117.6)**	2639.0 **(-51.7)**	2545.1 **(-145.6)**	2362.5 **(-328.2)**
	SDII	Average daily rainfall intensity	mm/day	12.4	12.1 **(-0.3)**	12.0 **(-0.4)**	11.9 **(-0.5)**	12.1 **(-0.3)**	11.8 **(-0.6)**	11.1 **(-1.3)**
	Rx1day	Maximum 1-day rainfall total	mm	121.6	112.2 **(-9.4)**	118.4 **(-3.2)**	110.9 **(-10.7)**	113.4 **(-8.2)**	120.8 **(-0.8)**	125.6 **(4.0)**
	Rx5day	Maximum 5-day rainfall total	mm	240.3	235.2 **(-5.1)**	224.4 **(-15.9)**	234.8 **(-5.5)**	222.4 **(-17.9)**	242.0 **(1.7)**	234.2 **(-6.1)**
	P95	Rainfall on very wet days	mm	41.5	40.3 **(-1.2)**	41.5 **(0.0)**	40.1 **(-1.4)**	41.0 **(-0.5)**	39.4 **(-2.1)**	36.7 **(-4.8)**
	P99	Rainfall on extremely wet days	mm	85.4	83.2 **(-2.2)**	86.0 **(0.6)**	86.3 **(0.9)**	81.1 **(-4.3)**	79.1 **(-6.3)**	74.2 **(-11.2)**
	R95p	Total rainfall from very wet days	mm	731.7	698.5 **(-33.2)**	716.7 **(-15.0)**	718.3 **(-13.4)**	680.8 **(-50.9)**	690.0 **(-41.7)**	576.7 **(-155.0)**
	R99p	Total rainfall from extremely wet days	mm	248.4	233.4 **(-15.0)**	258.0 **(9.6)**	272.3 **(23.9)**	214.5 **(-33.9)**	229.9 **(-18.5)**	216.8 **(-31.6)**
	Frequency									
	P95d	Number of very wet days	days	10.8	10.2 **(-0.6)**	10.7 **(-0.1)**	10.2 **(-0.6)**	10.9 **(0.1)**	9.5 **(-1.3)**	8.4 **(-2.4)**
	P99d	Number of extremely wet days	days	2.2	2.1 **(-0.1)**	2.3 **(0.1)**	2.2 **(0.0)**	2.0 **(-0.2)**	2.0 **(-0.2)**	1.7 **(-0.5)**
	Duration									
	CWD	Longest wet spelll	days	21.0	20.1 **(-0.9)**	20.1 **(-0.9)**	19.4 **(-1.6)**	19.9 **(-1.1)**	19.3 **(-1.7)**	19.9 **(-1.1)**
	CDD	Longest dry spell	days	12.9	12.0 **(-0.9)**	12.7 **(-0.2)**	12.7 **(-0.2)**	12.3 **(-0.6)**	12.1 **(-0.8)**	11.8 **(-1.1)**

Cooler — Warmer

Drier — Wetter

Region VIII (Eastern Visayas)

Southern Leyte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	20.0	20.8 **(0.8)**	21.3 **(1.3)**	21.5 **(1.5)**	20.9 **(0.9)**	21.8 **(1.8)**	23.2 **(3.2)**
	TNm	Average night time temperature	°C	22.9	23.5 **(0.6)**	23.9 **(1.0)**	24.2 **(1.3)**	23.6 **(0.7)**	24.4 **(1.5)**	25.9 **(3.0)**
	TNx	Warmest night time temperature	°C	25.6	26.3 **(0.7)**	26.7 **(1.1)**	26.9 **(1.3)**	26.3 **(0.7)**	27.2 **(1.6)**	28.6 **(3.0)**
	TXn	Coldest day time temperature	°C	24.9	25.6 **(0.7)**	26.2 **(1.3)**	26.3 **(1.4)**	25.7 **(0.8)**	26.5 **(1.6)**	28.0 **(3.1)**
	TXm	Average day time temperature	°C	30.3	30.9 **(0.6)**	31.4 **(1.1)**	31.7 **(1.4)**	31.0 **(0.7)**	31.9 **(1.6)**	33.4 **(3.1)**
	TXx	Warmest day time temperature	°C	33.6	34.2 **(0.6)**	34.8 **(1.2)**	35.1 **(1.5)**	34.4 **(0.8)**	35.3 **(1.7)**	36.9 **(3.3)**
	DTR	Daily temperature range	°C	7.4	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**	7.4 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.2 **(-9.2)**	0.9 **(-10.5)**	0.5 **(-10.9)**	1.7 **(-9.7)**	0.4 **(-11.0)**	0.2 **(-11.2)**
	TN90p	Fraction of warm nights	%	11.3	44.9 **(33.6)**	72.7 **(61.4)**	85.2 **(73.9)**	51.5 **(40.2)**	86.0 **(74.7)**	99.8 **(88.5)**
	TX10p	Fraction of cool days	%	11.3	1.8 **(-9.5)**	0.6 **(-10.7)**	0.5 **(-10.8)**	1.4 **(-9.9)**	0.4 **(-10.9)**	0.3 **(-11.0)**
	TX90p	Fraction of hot days	%	11.6	44.9 **(33.3)**	72.8 **(61.2)**	86.0 **(74.4)**	53.3 **(41.7)**	86.8 **(75.2)**	99.8 **(88.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.4	83.6 **(79.2)**	202.4 **(198.0)**	242.6 **(238.2)**	123.1 **(118.7)**	248.9 **(244.5)**	309.4 **(305.0)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2672.7	2560.2 **(-112.5)**	2556.7 **(-116.0)**	2549.8 **(-122.9)**	2605.2 **(-67.5)**	2556.0 **(-116.7)**	2415.0 **(-257.7)**
	SDII	Average daily rainfall intensity	mm/day	11.6	11.4 **(-0.2)**	11.1 **(-0.5)**	11.2 **(-0.4)**	11.3 **(-0.3)**	11.1 **(-0.5)**	10.6 **(-1.0)**
	Rx1day	Maximum 1-day rainfall total	mm	97.8	92.6 **(-5.2)**	91.5 **(-6.3)**	96.8 **(-1.0)**	93.1 **(-4.7)**	83.2 **(-14.6)**	80.0 **(-17.8)**
	Rx5day	Maximum 5-day rainfall total	mm	216.1	194.1 **(-22.0)**	199.6 **(-16.5)**	205.6 **(-10.5)**	195.7 **(-20.4)**	181.5 **(-34.6)**	191.6 **(-24.5)**
	P95	Rainfall on very wet days	mm	35.0	35.5 **(0.5)**	35.2 **(0.2)**	32.6 **(-2.4)**	34.8 **(-0.2)**	33.4 **(-1.6)**	30.3 **(-4.7)**
	P99	Rainfall on extremely wet days	mm	63.6	63.4 **(-0.2)**	59.4 **(-4.2)**	59.6 **(-4.0)**	63.8 **(0.2)**	59.5 **(-4.1)**	53.5 **(-10.1)**
	R95p	Total rainfall from very wet days	mm	602.6	603.1 **(0.5)**	539.3 **(-63.3)**	545.9 **(-56.7)**	569.9 **(-32.7)**	551.1 **(-51.5)**	438.6 **(-164.0)**
	R99p	Total rainfall from extremely wet days	mm	197.8	182.8 **(-15.0)**	165.9 **(-31.9)**	175.7 **(-22.1)**	186.2 **(-11.6)**	166.1 **(-31.7)**	156.7 **(-41.1)**
	Frequency									
	P95d	Number of very wet days	days	11.3	11.5 **(0.2)**	11.2 **(-0.1)**	10.1 **(-1.2)**	11.0 **(-0.3)**	9.8 **(-1.5)**	8.1 **(-3.2)**
	P99d	Number of extremely wet days	days	2.3	2.2 **(-0.1)**	2.0 **(-0.3)**	2.1 **(-0.2)**	2.3 **(0.0)**	2.0 **(-0.3)**	1.7 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	25.8	23.7 **(-2.1)**	25.3 **(-0.5)**	23.7 **(-2.1)**	23.8 **(-2.0)**	24.8 **(-1.0)**	25.3 **(-0.5)**
	CDD	Longest dry spell	days	14.5	14.3 **(-0.2)**	12.9 **(-1.6)**	13.9 **(-0.6)**	14.0 **(-0.5)**	13.9 **(-0.6)**	14.5 **(0.0)**

Region IX (Zamboanga Peninsula)

Zamboanga del Norte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.8	19.4 **(0.6)**	20.1 **(1.3)**	20.4 **(1.6)**	19.7 **(0.9)**	20.7 **(1.9)**	22.5 **(3.7)**
	TNm	Average night time temperature	°C	21.8	22.4 **(0.6)**	22.9 **(1.1)**	23.2 **(1.4)**	22.5 **(0.7)**	23.4 **(1.6)**	25.0 **(3.2)**
	TNx	Warmest night time temperature	°C	24.6	25.2 **(0.6)**	25.7 **(1.1)**	25.9 **(1.3)**	25.3 **(0.7)**	26.2 **(1.6)**	27.7 **(3.1)**
	TXn	Coldest day time temperature	°C	25.6	26.4 **(0.8)**	26.8 **(1.2)**	27.0 **(1.4)**	26.4 **(0.8)**	27.3 **(1.7)**	28.7 **(3.1)**
	TXm	Average day time temperature	°C	30.4	30.9 **(0.5)**	31.5 **(1.1)**	31.8 **(1.4)**	31.1 **(0.7)**	32.0 **(1.6)**	33.7 **(3.3)**
	TXx	Warmest day time temperature	°C	33.8	34.4 **(0.6)**	35.1 **(1.3)**	35.4 **(1.6)**	34.7 **(0.9)**	35.6 **(1.8)**	37.5 **(3.7)**
	DTR	Daily temperature range	°C	8.6	8.5 **(-0.1)**	8.6 **(0.0)**	8.6 **(0.0)**	8.6 **(0.0)**	8.6 **(0.0)**	8.6 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	2.8 **(-8.8)**	1.4 **(-10.2)**	1.0 **(-10.6)**	2.7 **(-8.9)**	0.8 **(-10.8)**	0.7 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.4	32.2 **(20.8)**	57.4 **(46.0)**	75.0 **(63.6)**	38.3 **(26.9)**	78.4 **(67.0)**	98.9 **(87.5)**
	TX10p	Fraction of cool days	%	11.3	4.2 **(-7.1)**	2.0 **(-9.3)**	1.3 **(-10.0)**	3.3 **(-8.0)**	1.2 **(-10.1)**	0.6 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	25.2 **(13.7)**	52.8 **(41.3)**	64.7 **(53.2)**	37.3 **(25.8)**	67.9 **(56.4)**	92.4 **(80.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.1	22.9 **(20.8)**	106.0 **(103.9)**	166.6 **(164.5)**	55.2 **(53.1)**	197.0 **(194.9)**	344.3 **(342.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1555.8	1515.7 **(-40.1)**	1480.9 **(-74.9)**	1484.9 **(-70.9)**	1514.9 **(-40.9)**	1475.7 **(-80.1)**	1421.6 **(-134.2)**
	SDII	Average daily rainfall intensity	mm/day	8.6	8.4 **(-0.2)**	8.0 **(-0.6)**	8.1 **(-0.5)**	8.4 **(-0.2)**	8.0 **(-0.6)**	7.6 **(-1.0)**
	Rx1day	Maximum 1-day rainfall total	mm	53.9	51.4 **(-2.5)**	56.6 **(2.7)**	53.8 **(-0.1)**	55.1 **(1.2)**	52.8 **(-1.1)**	53.3 **(-0.6)**
	Rx5day	Maximum 5-day rainfall total	mm	124.8	121.8 **(-3.0)**	127.3 **(2.5)**	122.8 **(-2.0)**	125.3 **(0.5)**	121.9 **(-2.9)**	116.5 **(-8.3)**
	P95	Rainfall on very wet days	mm	25.4	25.0 **(-0.4)**	24.0 **(-1.4)**	24.5 **(-0.9)**	25.1 **(-0.3)**	24.4 **(-1.0)**	22.2 **(-3.2)**
	P99	Rainfall on extremely wet days	mm	42.2	40.4 **(-1.8)**	41.1 **(-1.1)**	40.3 **(-1.9)**	41.6 **(-0.6)**	40.3 **(-1.9)**	38.2 **(-4.0)**
	R95p	Total rainfall from very wet days	mm	325.3	303.7 **(-21.6)**	283.2 **(-42.1)**	280.1 **(-45.2)**	315.7 **(-9.6)**	285.6 **(-39.7)**	266.2 **(-59.1)**
	R99p	Total rainfall from extremely wet days	mm	99.8	86.8 **(-13.0)**	96.3 **(-3.5)**	89.4 **(-10.4)**	94.6 **(-5.2)**	89.0 **(-10.8)**	87.0 **(-12.8)**
	Frequency									
	P95d	Number of very wet days	days	8.9	8.4 **(-0.5)**	8.0 **(-0.9)**	7.9 **(-1.0)**	8.6 **(-0.3)**	8.1 **(-0.8)**	7.3 **(-1.6)**
	P99d	Number of extremely wet days	days	1.8	1.6 **(-0.2)**	1.7 **(-0.1)**	1.7 **(-0.1)**	1.7 **(-0.1)**	1.7 **(-0.1)**	1.5 **(-0.3)**
	Duration									
	CWD	Longest wet spelll	days	17.0	16.6 **(-0.4)**	17.1 **(0.1)**	16.3 **(-0.7)**	16.7 **(-0.3)**	16.2 **(-0.8)**	16.4 **(-0.6)**
	CDD	Longest dry spell	days	24.4	24.4 **(0.0)**	23.4 **(-1.0)**	23.8 **(-0.6)**	23.6 **(-0.8)**	22.4 **(-2.0)**	23.7 **(-0.7)**

Region IX (Zamboanga Peninsula)

Zamboanga del Sur

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.8	19.5 **(0.7)**	20.2 **(1.4)**	20.4 **(1.6)**	19.7 **(0.9)**	20.8 **(2.0)**	22.5 **(3.7)**
	TNm	Average night time temperature	°C	21.8	22.4 **(0.6)**	22.9 **(1.1)**	23.2 **(1.4)**	22.6 **(0.8)**	23.5 **(1.7)**	25.0 **(3.2)**
	TNx	Warmest night time temperature	°C	24.7	25.3 **(0.6)**	25.8 **(1.1)**	26.0 **(1.3)**	25.4 **(0.7)**	26.3 **(1.6)**	27.7 **(3.0)**
	TXn	Coldest day time temperature	°C	25.4	26.1 **(0.7)**	26.6 **(1.2)**	26.8 **(1.4)**	26.2 **(0.8)**	27.0 **(1.6)**	28.5 **(3.1)**
	TXm	Average day time temperature	°C	30.5	31.0 **(0.5)**	31.6 **(1.1)**	31.9 **(1.4)**	31.2 **(0.7)**	32.1 **(1.6)**	33.8 **(3.3)**
	TXx	Warmest day time temperature	°C	34.0	34.6 **(0.6)**	35.3 **(1.3)**	35.6 **(1.6)**	34.8 **(0.8)**	35.8 **(1.8)**	37.7 **(3.7)**
	DTR	Daily temperature range	°C	8.7	8.6 **(-0.1)**	8.7 **(0.0)**	8.7 **(0.0)**	8.7 **(0.0)**	8.6 **(-0.1)**	8.7 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	2.7 **(-8.8)**	1.4 **(-10.1)**	0.9 **(-10.6)**	2.6 **(-8.9)**	0.7 **(-10.8)**	0.6 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.4	33.4 **(22.0)**	59.0 **(47.6)**	75.4 **(64.0)**	39.6 **(28.2)**	78.8 **(67.4)**	98.8 **(87.4)**
	TX10p	Fraction of cool days	%	11.3	4.2 **(-7.1)**	1.8 **(-9.5)**	1.3 **(-10.0)**	3.3 **(-8.0)**	1.1 **(-10.2)**	0.6 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	27.1 **(15.6)**	52.6 **(41.1)**	65.9 **(54.4)**	36.5 **(25.0)**	67.3 **(55.8)**	93.9 **(82.4)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.3	34.4 **(32.1)**	147.5 **(145.2)**	240.8 **(238.5)**	67.4 **(65.1)**	272.3 **(270.0)**	365.0 **(362.7)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1472.2	1419.6 **(-52.6)**	1409.7 **(-62.5)**	1446.2 **(-26.0)**	1429.8 **(-42.4)**	1457.0 **(-15.2)**	1355.6 **(-116.6)**
	SDII	Average daily rainfall intensity	mm/day	8.4	8.1 **(-0.3)**	7.9 **(-0.5)**	8.1 **(-0.3)**	8.1 **(-0.3)**	8.1 **(-0.3)**	7.6 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	50.0	47.1 **(-2.9)**	50.2 **(0.2)**	49.7 **(-0.3)**	51.6 **(1.6)**	49.6 **(-0.4)**	50.9 **(0.9)**
	Rx5day	Maximum 5-day rainfall total	mm	116.6	113.7 **(-2.9)**	119.2 **(2.6)**	117.4 **(0.8)**	115.6 **(-1.0)**	115.9 **(-0.7)**	111.3 **(-5.3)**
	P95	Rainfall on very wet days	mm	23.9	23.3 **(-0.6)**	23.0 **(-0.9)**	23.3 **(-0.6)**	23.8 **(-0.1)**	23.0 **(-0.9)**	21.5 **(-2.4)**
	P99	Rainfall on extremely wet days	mm	39.7	37.9 **(-1.8)**	40.1 **(0.4)**	40.2 **(0.5)**	39.8 **(0.1)**	39.8 **(0.1)**	36.7 **(-3.0)**
	R95p	Total rainfall from very wet days	mm	293.7	275.6 **(-18.1)**	264.4 **(-29.3)**	282.2 **(-11.5)**	288.8 **(-4.9)**	290.3 **(-3.4)**	250.9 **(-42.8)**
	R99p	Total rainfall from extremely wet days	mm	90.1	77.0 **(-13.1)**	88.7 **(-1.4)**	94.2 **(4.1)**	91.3 **(1.2)**	90.1 **(0.0)**	82.9 **(-7.2)**
	Frequency									
	P95d	Number of very wet days	days	8.8	8.2 **(-0.6)**	8.0 **(-0.8)**	8.3 **(-0.5)**	8.5 **(-0.3)**	8.4 **(-0.4)**	7.3 **(-1.5)**
	P99d	Number of extremely wet days	days	1.7	1.5 **(-0.2)**	1.7 **(0.0)**	1.8 **(0.1)**	1.7 **(0.0)**	1.8 **(0.1)**	1.5 **(-0.2)**
	Duration									
	CWD	Longest wet spelll	days	16.7	16.6 **(-0.1)**	16.1 **(-0.6)**	15.7 **(-1.0)**	16.0 **(-0.7)**	15.9 **(-0.8)**	16.0 **(-0.7)**
	CDD	Longest dry spell	days	23.0	23.1 **(0.1)**	22.5 **(-0.5)**	22.0 **(-1.0)**	22.5 **(-0.5)**	21.8 **(-1.2)**	22.4 **(-0.6)**

Region IX(Zamboanga Peninsula)

Zamboanga Sibugay

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.8	20.5 **(0.7)**	21.1 **(1.3)**	21.4 **(1.6)**	20.6 **(0.8)**	21.7 **(1.9)**	23.4 **(3.6)**
	TNm	Average night time temperature	°C	22.7	23.4 **(0.7)**	23.9 **(1.2)**	24.2 **(1.5)**	23.5 **(0.8)**	24.4 **(1.7)**	26.0 **(3.3)**
	TNx	Warmest night time temperature	°C	25.5	26.1 **(0.6)**	26.5 **(1.0)**	26.8 **(1.3)**	26.2 **(0.7)**	27.0 **(1.5)**	28.4 **(2.9)**
	TXn	Coldest day time temperature	°C	26.5	27.2 **(0.7)**	27.6 **(1.1)**	27.9 **(1.4)**	27.2 **(0.7)**	28.1 **(1.6)**	29.6 **(3.1)**
	TXm	Average day time temperature	°C	31.2	31.8 **(0.6)**	32.4 **(1.2)**	32.7 **(1.5)**	32.0 **(0.8)**	32.9 **(1.7)**	34.6 **(3.4)**
	TXx	Warmest day time temperature	°C	34.7	35.2 **(0.5)**	35.9 **(1.2)**	36.3 **(1.6)**	35.5 **(0.8)**	36.5 **(1.8)**	38.3 **(3.6)**
	DTR	Daily temperature range	°C	8.5	8.4 **(-0.1)**	8.5 **(0.0)**	8.5 **(0.0)**	8.5 **(0.0)**	8.5 **(0.0)**	8.5 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.3 **(-9.1)**	1.0 **(-10.4)**	0.6 **(-10.8)**	2.2 **(-9.2)**	0.5 **(-10.9)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.4	32.4 **(21.0)**	57.3 **(45.9)**	76.8 **(65.4)**	39.8 **(28.4)**	80.3 **(68.9)**	99.3 **(87.9)**
	TX10p	Fraction of cool days	%	11.3	4.3 **(-7.0)**	1.8 **(-9.5)**	1.1 **(-10.2)**	3.4 **(-7.9)**	1.1 **(-10.2)**	0.6 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	24.8 **(13.3)**	51.0 **(39.5)**	61.8 **(50.3)**	37.4 **(25.9)**	69.5 **(58.0)**	94.8 **(83.3)**
	Duration									
	WSDI	Warm Spell Duration Index	days	1.8	18.4 **(16.6)**	79.2 **(77.4)**	137.6 **(135.8)**	45.9 **(44.1)**	168.5 **(166.7)**	267.2 **(265.4)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1366.8	1300.1 **(-66.7)**	1299.5 **(-67.3)**	1305.7 **(-61.1)**	1328.4 **(-38.4)**	1300.3 **(-66.5)**	1259.1 **(-107.7)**
	SDII	Average daily rainfall intensity	mm/day	7.6	7.4 **(-0.2)**	7.3 **(-0.3)**	7.3 **(-0.3)**	7.6 **(0.0)**	7.3 **(-0.3)**	6.7 **(-0.9)**
	Rx1day	Maximum 1-day rainfall total	mm	42.1	40.6 **(-1.5)**	43.9 **(1.8)**	40.4 **(-1.7)**	42.9 **(0.8)**	40.7 **(-1.4)**	41.4 **(-0.7)**
	Rx5day	Maximum 5-day rainfall total	mm	107.9	105.7 **(-2.2)**	111.6 **(3.7)**	111.4 **(3.5)**	108.3 **(0.4)**	106.3 **(-1.6)**	93.6 **(-14.3)**
	P95	Rainfall on very wet days	mm	21.3	20.7 **(-0.6)**	20.4 **(-0.9)**	20.7 **(-0.6)**	21.1 **(-0.2)**	20.4 **(-0.9)**	18.2 **(-3.1)**
	P99	Rainfall on extremely wet days	mm	34.0	32.8 **(-1.2)**	33.4 **(-0.6)**	32.5 **(-1.5)**	33.8 **(-0.2)**	32.8 **(-1.2)**	29.8 **(-4.2)**
	R95p	Total rainfall from very wet days	mm	262.2	238.0 **(-24.2)**	237.9 **(-24.3)**	246.4 **(-15.8)**	258.4 **(-3.8)**	247.9 **(-14.3)**	206.1 **(-56.1)**
	R99p	Total rainfall from extremely wet days	mm	80.5	72.0 **(-8.5)**	79.6 **(-0.9)**	73.4 **(-7.1)**	76.9 **(-3.6)**	77.5 **(-3.0)**	64.4 **(-16.1)**
	Frequency									
	P95d	Number of very wet days	days	8.8	8.3 **(-0.5)**	7.9 **(-0.9)**	8.4 **(-0.4)**	8.7 **(-0.1)**	8.2 **(-0.6)**	6.9 **(-1.9)**
	P99d	Number of extremely wet days	days	1.8	1.6 **(-0.2)**	1.8 **(0.0)**	1.6 **(-0.2)**	1.7 **(-0.1)**	1.7 **(-0.1)**	1.3 **(-0.5)**
	Duration									
	CWD	Longest wet spelll	days	17.8	17.2 **(-0.6)**	16.8 **(-1.0)**	16.3 **(-1.5)**	16.9 **(-0.9)**	16.7 **(-1.1)**	16.3 **(-1.5)**
	CDD	Longest dry spell	days	26.6	27.1 **(0.5)**	25.4 **(-1.2)**	26.8 **(0.2)**	26.6 **(0.0)**	26.0 **(-0.6)**	26.9 **(0.3)**

Region X (Northern Mindanao)

Bukidnon

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	16.1	16.9 **(0.8)**	17.6 **(1.5)**	18.0 **(1.9)**	17.1 **(1.0)**	18.2 **(2.1)**	19.9 **(3.8)**
	TNm	Average night time temperature	°C	19.0	19.6 **(0.6)**	20.2 **(1.2)**	20.5 **(1.5)**	19.8 **(0.8)**	20.7 **(1.7)**	22.3 **(3.3)**
	TNx	Warmest night time temperature	°C	21.7	22.4 **(0.7)**	22.8 **(1.1)**	23.1 **(1.4)**	22.5 **(0.8)**	23.4 **(1.7)**	24.9 **(3.2)**
	TXn	Coldest day time temperature	°C	22.1	22.7 **(0.6)**	23.4 **(1.3)**	23.6 **(1.5)**	22.9 **(0.8)**	23.9 **(1.8)**	25.4 **(3.3)**
	TXm	Average day time temperature	°C	27.8	28.3 **(0.5)**	29.0 **(1.2)**	29.4 **(1.6)**	28.6 **(0.8)**	29.6 **(1.8)**	31.2 **(3.4)**
	TXx	Warmest day time temperature	°C	31.1	31.6 **(0.5)**	32.3 **(1.2)**	32.9 **(1.8)**	31.9 **(0.8)**	33.0 **(1.9)**	34.9 **(3.8)**
	DTR	Daily temperature range	°C	8.8	8.8 **(0.0)**	8.8 **(0.0)**	8.8 **(0.0)**	8.8 **(0.0)**	8.8 **(0.0)**	8.9 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.4 **(-8.0)**	1.7 **(-9.7)**	1.1 **(-10.3)**	3.1 **(-8.3)**	0.9 **(-10.5)**	0.6 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.3	32.9 **(21.6)**	58.2 **(46.9)**	70.9 **(59.6)**	40.0 **(28.7)**	76.0 **(64.7)**	96.7 **(85.4)**
	TX10p	Fraction of cool days	%	11.4	5.8 **(-5.6)**	2.4 **(-9.0)**	1.6 **(-9.8)**	4.2 **(-7.2)**	1.7 **(-9.7)**	0.8 **(-10.6)**
	TX90p	Fraction of hot days	%	11.4	22.5 **(11.1)**	42.7 **(31.3)**	53.1 **(41.7)**	29.2 **(17.8)**	54.1 **(42.7)**	83.3 **(71.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.9	20.6 **(17.7)**	72.6 **(69.7)**	117.1 **(114.2)**	41.2 **(38.3)**	153.8 **(150.9)**	365.0 **(362.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2085.8	1958.5 **(-127.3)**	1876.5 **(-209.3)**	1912.6 **(-173.2)**	2008.7 **(-77.1)**	1905.8 **(-180.0)**	1822.7 **(-263.1)**
	SDII	Average daily rainfall intensity	mm/day	10.1	9.6 **(-0.5)**	9.3 **(-0.8)**	9.6 **(-0.5)**	9.8 **(-0.3)**	9.4 **(-0.7)**	9.4 **(-0.7)**
	Rx1day	Maximum 1-day rainfall total	mm	58.7	58.7 **(0.0)**	58.4 **(-0.3)**	62.7 **(4.0)**	60.6 **(1.9)**	59.6 **(0.9)**	62.8 **(4.1)**
	Rx5day	Maximum 5-day rainfall total	mm	143.2	134.0 **(-9.2)**	134.8 **(-8.4)**	144.6 **(1.4)**	139.9 **(-3.3)**	142.1 **(-1.1)**	140.6 **(-2.6)**
	P95	Rainfall on very wet days	mm	28.6	27.2 **(-1.4)**	27.0 **(-1.6)**	27.2 **(-1.4)**	27.9 **(-0.7)**	27.1 **(-1.5)**	26.8 **(-1.8)**
	P99	Rainfall on extremely wet days	mm	46.0	44.8 **(-1.2)**	43.4 **(-2.6)**	45.8 **(-0.2)**	45.5 **(-0.5)**	44.5 **(-1.5)**	45.3 **(-0.7)**
	R95p	Total rainfall from very wet days	mm	401.9	355.0 **(-46.9)**	329.9 **(-72.0)**	355.1 **(-46.8)**	371.3 **(-30.6)**	336.7 **(-65.2)**	338.7 **(-63.2)**
	R99p	Total rainfall from extremely wet days	mm	115.2	108.2 **(-7.0)**	96.0 **(-19.2)**	110.8 **(-4.4)**	112.1 **(-3.1)**	103.2 **(-12.0)**	115.4 **(0.2)**
	Frequency									
	P95d	Number of very wet days	days	10.3	9.0 **(-1.3)**	8.4 **(-1.9)**	8.8 **(-1.5)**	9.8 **(-0.5)**	8.5 **(-1.8)**	8.5 **(-1.8)**
	P99d	Number of extremely wet days	days	2.1	2.0 **(-0.1)**	1.7 **(-0.4)**	1.9 **(-0.2)**	2.0 **(-0.1)**	1.8 **(-0.3)**	1.9 **(-0.2)**
	Duration									
	CWD	Longest wet spelll	days	19.8	18.2 **(-1.6)**	17.8 **(-2.0)**	17.5 **(-2.3)**	18.3 **(-1.5)**	18.3 **(-1.5)**	17.2 **(-2.6)**
	CDD	Longest dry spell	days	15.4	16.5 **(1.1)**	16.9 **(1.5)**	16.7 **(1.3)**	16.5 **(1.1)**	17.2 **(1.8)**	18.2 **(2.8)**

Cooler — Warmer

Drier — Wetter

Region X(Northern Mindanao)

Lanao del Norte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.5	19.2 **(0.7)**	19.8 **(1.3)**	20.1 **(1.6)**	19.4 **(0.9)**	20.4 **(1.9)**	22.0 **(3.5)**
	TNm	Average night time temperature	°C	21.2	21.9 **(0.7)**	22.3 **(1.1)**	22.7 **(1.5)**	22.0 **(0.8)**	22.9 **(1.7)**	24.4 **(3.2)**
	TNx	Warmest night time temperature	°C	23.8	24.4 **(0.6)**	24.9 **(1.1)**	25.1 **(1.3)**	24.5 **(0.7)**	25.3 **(1.5)**	26.7 **(2.9)**
	TXn	Coldest day time temperature	°C	25.0	25.7 **(0.7)**	26.2 **(1.2)**	26.4 **(1.4)**	25.8 **(0.8)**	26.6 **(1.6)**	28.1 **(3.1)**
	TXm	Average day time temperature	°C	30.0	30.5 **(0.5)**	31.1 **(1.1)**	31.5 **(1.5)**	30.7 **(0.7)**	31.6 **(1.6)**	33.3 **(3.3)**
	TXx	Warmest day time temperature	°C	33.2	33.8 **(0.6)**	34.5 **(1.3)**	34.8 **(1.6)**	34.0 **(0.8)**	35.0 **(1.8)**	36.8 **(3.6)**
	DTR	Daily temperature range	°C	8.8	8.7 **(-0.1)**	8.8 **(0.0)**	8.8 **(0.0)**	8.8 **(0.0)**	8.8 **(0.0)**	8.8 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	3.2 **(-8.3)**	1.5 **(-10.0)**	1.0 **(-10.5)**	2.4 **(-9.1)**	0.9 **(-10.6)**	0.7 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.5	34.7 **(23.2)**	59.5 **(48.0)**	73.6 **(62.1)**	41.0 **(29.5)**	78.0 **(66.5)**	98.7 **(87.2)**
	TX10p	Fraction of cool days	%	11.4	4.6 **(-6.8)**	2.1 **(-9.3)**	1.4 **(-10.0)**	3.6 **(-7.8)**	1.2 **(-10.2)**	0.6 **(-10.8)**
	TX90p	Fraction of hot days	%	11.6	25.8 **(14.2)**	47.6 **(36.0)**	61.9 **(50.3)**	33.4 **(21.8)**	65.0 **(53.4)**	90.2 **(78.6)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.0	44.3 **(40.3)**	181.0 **(177.0)**	307.8 **(303.8)**	84.6 **(80.6)**	337.0 **(333.0)**	365.0 **(361.0)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1749.6	1662.4 **(-87.2)**	1688.9 **(-60.7)**	1712.4 **(-37.2)**	1698.5 **(-51.1)**	1739.2 **(-10.4)**	1593.6 **(-156.0)**
	SDII	Average daily rainfall intensity	mm/day	8.7	8.4 **(-0.3)**	8.5 **(-0.2)**	8.8 **(0.1)**	8.6 **(-0.1)**	8.8 **(0.1)**	8.2 **(-0.5)**
	Rx1day	Maximum 1-day rainfall total	mm	46.4	43.2 **(-3.2)**	44.9 **(-1.5)**	46.6 **(0.2)**	45.4 **(-1.0)**	45.7 **(-0.7)**	46.8 **(0.4)**
	Rx5day	Maximum 5-day rainfall total	mm	116.9	112.1 **(-4.8)**	113.0 **(-3.9)**	113.5 **(-3.4)**	114.0 **(-2.9)**	112.9 **(-4.0)**	114.9 **(-2.0)**
	P95	Rainfall on very wet days	mm	24.5	23.3 **(-1.2)**	23.4 **(-1.1)**	24.8 **(0.3)**	23.9 **(-0.6)**	23.9 **(-0.6)**	22.6 **(-1.9)**
	P99	Rainfall on extremely wet days	mm	37.6	35.5 **(-2.1)**	36.4 **(-1.2)**	37.9 **(0.3)**	37.7 **(0.1)**	36.5 **(-1.1)**	36.9 **(-0.7)**
	R95p	Total rainfall from very wet days	mm	324.4	289.4 **(-35.0)**	307.2 **(-17.2)**	320.3 **(-4.1)**	306.3 **(-18.1)**	310.3 **(-14.1)**	290.9 **(-33.5)**
	R99p	Total rainfall from extremely wet days	mm	93.6	77.0 **(-16.6)**	87.8 **(-5.8)**	95.8 **(2.2)**	93.4 **(-0.2)**	88.3 **(-5.3)**	94.7 **(1.1)**
	Frequency									
	P95d	Number of very wet days	days	9.8	9.1 **(-0.7)**	9.5 **(-0.3)**	10.3 **(0.5)**	9.4 **(-0.4)**	9.5 **(-0.3)**	8.1 **(-1.7)**
	P99d	Number of extremely wet days	days	2.0	1.6 **(-0.4)**	1.9 **(-0.1)**	2.1 **(0.1)**	1.9 **(-0.1)**	1.8 **(-0.2)**	1.8 **(-0.2)**
	Duration									
	CWD	Longest wet spelll	days	19.4	17.3 **(-2.1)**	19.4 **(0.0)**	18.8 **(-0.6)**	18.8 **(-0.6)**	19.6 **(0.2)**	19.2 **(-0.2)**
	CDD	Longest dry spell	days	17.8	19.2 **(1.4)**	17.9 **(0.1)**	18.0 **(0.2)**	17.1 **(-0.7)**	17.1 **(-0.7)**	17.9 **(0.1)**

Region X (Northern Mindanao)

Misamis Occidental

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	16.8	17.4 **(0.6)**	18.3 **(1.5)**	18.5 **(1.7)**	17.8 **(1.0)**	18.7 **(1.9)**	20.6 **(3.8)**
	TNm	Average night time temperature	°C	19.6	20.3 **(0.7)**	20.8 **(1.2)**	21.1 **(1.5)**	20.4 **(0.8)**	21.4 **(1.8)**	23.0 **(3.4)**
	TNx	Warmest night time temperature	°C	22.4	23.1 **(0.7)**	23.6 **(1.2)**	23.8 **(1.4)**	23.2 **(0.8)**	24.1 **(1.7)**	25.6 **(3.2)**
	TXn	Coldest day time temperature	°C	23.6	24.4 **(0.8)**	24.9 **(1.3)**	25.0 **(1.4)**	24.4 **(0.8)**	25.3 **(1.7)**	26.7 **(3.1)**
	TXm	Average day time temperature	°C	28.5	29.1 **(0.6)**	29.7 **(1.2)**	30.0 **(1.5)**	29.3 **(0.8)**	30.2 **(1.7)**	31.8 **(3.3)**
	TXx	Warmest day time temperature	°C	31.8	32.5 **(0.7)**	33.1 **(1.3)**	33.4 **(1.6)**	32.6 **(0.8)**	33.6 **(1.8)**	35.6 **(3.8)**
	DTR	Daily temperature range	°C	8.9	8.8 **(-0.1)**	8.8 **(-0.1)**	8.8 **(-0.1)**	8.9 **(0.0)**	8.8 **(-0.1)**	8.8 **(-0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.6	3.1 **(-8.5)**	1.7 **(-9.9)**	1.2 **(-10.4)**	2.9 **(-8.7)**	1.1 **(-10.5)**	0.9 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.5	32.8 **(21.3)**	57.8 **(46.3)**	72.5 **(61.0)**	37.7 **(26.2)**	76.7 **(65.2)**	98.3 **(86.8)**
	TX10p	Fraction of cool days	%	11.4	5.3 **(-6.1)**	2.5 **(-8.9)**	1.6 **(-9.8)**	4.0 **(-7.4)**	1.6 **(-9.8)**	0.7 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	22.1 **(10.6)**	43.0 **(31.5)**	53.7 **(42.2)**	29.4 **(17.9)**	54.9 **(43.4)**	88.6 **(77.1)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.6	30.0 **(26.4)**	124.9 **(121.3)**	207.5 **(203.9)**	57.8 **(54.2)**	300.3 **(296.7)**	365.0 **(361.4)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1778.7	1742.8 **(-35.9)**	1807.5 **(28.8)**	1795.1 **(16.4)**	1750.2 **(-28.5)**	1812.8 **(34.1)**	1667.7 **(-111.0)**
	SDII	Average daily rainfall intensity	mm/day	9.0	9.0 **(0.0)**	8.8 **(-0.2)**	8.9 **(-0.1)**	9.0 **(0.0)**	9.0 **(0.0)**	8.4 **(-0.6)**
	Rx1day	Maximum 1-day rainfall total	mm	57.4	54.9 **(-2.5)**	58.1 **(0.7)**	58.8 **(1.4)**	59.7 **(2.3)**	62.4 **(5.0)**	60.2 **(2.8)**
	Rx5day	Maximum 5-day rainfall total	mm	126.4	127.6 **(1.2)**	126.7 **(0.3)**	130.2 **(3.8)**	131.3 **(4.9)**	128.9 **(2.5)**	122.9 **(-3.5)**
	P95	Rainfall on very wet days	mm	26.1	25.9 **(-0.2)**	25.4 **(-0.7)**	25.9 **(-0.2)**	26.1 **(0.0)**	25.8 **(-0.3)**	23.7 **(-2.4)**
	P99	Rainfall on extremely wet days	mm	42.3	42.9 **(0.6)**	42.0 **(-0.3)**	42.4 **(0.1)**	43.3 **(1.0)**	43.7 **(1.4)**	39.7 **(-2.6)**
	R95p	Total rainfall from very wet days	mm	360.8	348.4 **(-12.4)**	351.9 **(-8.9)**	364.2 **(3.4)**	365.8 **(5.0)**	371.1 **(10.3)**	304.1 **(-56.7)**
	R99p	Total rainfall from extremely wet days	mm	109.0	101.0 **(-8.0)**	109.4 **(0.4)**	112.4 **(3.4)**	115.6 **(6.6)**	123.4 **(14.4)**	104.6 **(-4.4)**
	Frequency									
	P95d	Number of very wet days	days	9.8	9.6 **(-0.2)**	9.5 **(-0.3)**	9.6 **(-0.2)**	9.9 **(0.1)**	10.0 **(0.2)**	8.3 **(-1.5)**
	P99d	Number of extremely wet days	days	1.9	1.9 **(0.0)**	1.9 **(0.0)**	1.9 **(0.0)**	2.1 **(0.2)**	2.2 **(0.3)**	1.8 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	18.7	18.4 **(-0.3)**	19.4 **(0.7)**	19.2 **(0.5)**	19.5 **(0.8)**	19.0 **(0.3)**	18.7 **(0.0)**
	CDD	Longest dry spell	days	17.9	18.6 **(0.7)**	17.3 **(-0.6)**	17.2 **(-0.7)**	18.0 **(0.1)**	17.3 **(-0.6)**	16.4 **(-1.5)**

Region X (Northern Mindanao)

Misamis Oriental

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.4	18.1 **(0.7)**	18.7 **(1.3)**	19.0 **(1.6)**	18.3 **(0.9)**	19.3 **(1.9)**	20.8 **(3.4)**
	TNm	Average night time temperature	°C	20.1	20.8 **(0.7)**	21.3 **(1.2)**	21.6 **(1.5)**	20.9 **(0.8)**	21.8 **(1.7)**	23.4 **(3.3)**
	TNx	Warmest night time temperature	°C	22.9	23.5 **(0.6)**	24.1 **(1.2)**	24.3 **(1.4)**	23.6 **(0.7)**	24.6 **(1.7)**	26.1 **(3.2)**
	TXn	Coldest day time temperature	°C	23.2	24.0 **(0.8)**	24.4 **(1.2)**	24.7 **(1.5)**	24.0 **(0.8)**	24.9 **(1.7)**	26.4 **(3.2)**
	TXm	Average day time temperature	°C	28.6	29.2 **(0.6)**	29.8 **(1.2)**	30.1 **(1.5)**	29.4 **(0.8)**	30.3 **(1.7)**	31.9 **(3.3)**
	TXx	Warmest day time temperature	°C	31.9	32.5 **(0.6)**	33.1 **(1.2)**	33.5 **(1.6)**	32.7 **(0.8)**	33.7 **(1.8)**	35.3 **(3.4)**
	DTR	Daily temperature range	°C	8.5	8.5 **(0.0)**	8.6 **(0.1)**	8.6 **(0.1)**	8.5 **(0.0)**	8.5 **(0.0)**	8.5 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	2.7 **(-8.6)**	1.3 **(-10.0)**	0.8 **(-10.5)**	2.3 **(-9.0)**	0.6 **(-10.7)**	0.5 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.4	35.8 **(24.4)**	62.6 **(51.2)**	76.2 **(64.8)**	43.6 **(32.2)**	80.3 **(68.9)**	98.3 **(86.9)**
	TX10p	Fraction of cool days	%	11.3	4.5 **(-6.8)**	1.7 **(-9.6)**	1.3 **(-10.0)**	3.3 **(-8.0)**	1.2 **(-10.1)**	0.7 **(-10.6)**
	TX90p	Fraction of hot days	%	11.4	25.5 **(14.1)**	46.9 **(35.5)**	61.3 **(49.9)**	32.4 **(21.0)**	61.6 **(50.2)**	90.6 **(79.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.4	29.6 **(26.2)**	100.4 **(97.0)**	173.4 **(170.0)**	48.4 **(45.0)**	181.2 **(177.8)**	365.0 **(361.6)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2411.6	2306.2 **(-105.4)**	2196.9 **(-214.7)**	2256.9 **(-154.7)**	2305.0 **(-106.6)**	2203.4 **(-208.2)**	2036.3 **(-375.3)**
	SDII	Average daily rainfall intensity	mm/day	11.3	10.9 **(-0.4)**	10.6 **(-0.7)**	10.8 **(-0.5)**	10.8 **(-0.5)**	10.5 **(-0.8)**	9.8 **(-1.5)**
	Rx1day	Maximum 1-day rainfall total	mm	69.6	67.3 **(-2.3)**	70.3 **(0.7)**	76.1 **(6.5)**	71.0 **(1.4)**	69.6 **(0.0)**	71.8 **(2.2)**
	Rx5day	Maximum 5-day rainfall total	mm	168.6	160.3 **(-8.3)**	164.6 **(-4.0)**	182.8 **(14.2)**	165.6 **(-3.0)**	171.6 **(3.0)**	176.1 **(7.5)**
	P95	Rainfall on very wet days	mm	32.3	31.4 **(-0.9)**	30.5 **(-1.8)**	30.9 **(-1.4)**	30.7 **(-1.6)**	30.2 **(-2.1)**	28.2 **(-4.1)**
	P99	Rainfall on extremely wet days	mm	52.6	50.9 **(-1.7)**	50.2 **(-2.4)**	50.4 **(-2.2)**	50.0 **(-2.6)**	50.4 **(-2.2)**	49.2 **(-3.4)**
	R95p	Total rainfall from very wet days	mm	477.4	442.3 **(-35.1)**	417.7 **(-59.7)**	447.0 **(-30.4)**	439.0 **(-38.4)**	422.9 **(-54.5)**	378.3 **(-99.1)**
	R99p	Total rainfall from extremely wet days	mm	142.8	125.6 **(-17.2)**	131.6 **(-11.2)**	140.4 **(-2.4)**	141.7 **(-1.1)**	136.2 **(-6.6)**	139.0 **(-3.8)**
	Frequency									
	P95d	Number of very wet days	days	10.6	9.8 **(-0.8)**	9.2 **(-1.4)**	9.5 **(-1.1)**	9.6 **(-1.0)**	9.1 **(-1.5)**	8.0 **(-2.6)**
	P99d	Number of extremely wet days	days	2.1	2.0 **(-0.1)**	1.9 **(-0.2)**	2.1 **(0.0)**	2.0 **(-0.1)**	2.0 **(-0.1)**	1.9 **(-0.2)**
	Duration									
	CWD	Longest wet spelll	days	21.2	19.0 **(-2.2)**	19.7 **(-1.5)**	19.6 **(-1.6)**	20.1 **(-1.1)**	20.6 **(-0.6)**	20.4 **(-0.8)**
	CDD	Longest dry spell	days	15.4	16.4 **(1.0)**	15.9 **(0.5)**	15.5 **(0.1)**	15.3 **(-0.1)**	15.7 **(0.3)**	17.5 **(2.1)**

Region XI (Davao Region)

Davao de Oro

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.5	19.4 **(0.9)**	20.1 **(1.6)**	20.3 **(1.8)**	19.7 **(1.2)**	20.6 **(2.1)**	22.4 **(3.9)**
	TNm	Average night time temperature	°C	21.5	22.1 **(0.6)**	22.7 **(1.2)**	23.0 **(1.5)**	22.3 **(0.8)**	23.3 **(1.8)**	24.8 **(3.3)**
	TNx	Warmest night time temperature	°C	24.1	24.8 **(0.7)**	25.2 **(1.1)**	25.5 **(1.4)**	24.9 **(0.8)**	25.7 **(1.6)**	27.2 **(3.1)**
	TXn	Coldest day time temperature	°C	23.4	24.0 **(0.6)**	24.6 **(1.2)**	24.8 **(1.4)**	24.2 **(0.8)**	25.0 **(1.6)**	26.6 **(3.2)**
	TXm	Average day time temperature	°C	29.8	30.4 **(0.6)**	31.0 **(1.2)**	31.4 **(1.6)**	30.6 **(0.8)**	31.5 **(1.7)**	33.2 **(3.4)**
	TXx	Warmest day time temperature	°C	33.1	33.7 **(0.6)**	34.5 **(1.4)**	34.9 **(1.8)**	33.9 **(0.8)**	35.0 **(1.9)**	36.8 **(3.7)**
	DTR	Daily temperature range	°C	8.3	8.3 **(0.0)**	8.4 **(0.1)**	8.4 **(0.1)**	8.4 **(0.1)**	8.3 **(0.0)**	8.3 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.8 **(-7.5)**	1.7 **(-9.6)**	1.0 **(-10.3)**	3.1 **(-8.2)**	1.0 **(-10.3)**	0.7 **(-10.6)**
	TN90p	Fraction of warm nights	%	11.2	32.3 **(21.1)**	56.3 **(45.1)**	69.9 **(58.7)**	37.5 **(26.3)**	75.7 **(64.5)**	97.4 **(86.2)**
	TX10p	Fraction of cool days	%	11.2	4.7 **(-6.5)**	1.9 **(-9.3)**	1.2 **(-10.0)**	3.5 **(-7.7)**	1.0 **(-10.2)**	0.6 **(-10.6)**
	TX90p	Fraction of hot days	%	11.5	20.4 **(8.9)**	39.8 **(28.3)**	49.4 **(37.9)**	28.2 **(16.7)**	48.8 **(37.3)**	81.4 **(69.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.0	15.2 **(13.2)**	56.0 **(54.0)**	88.2 **(86.2)**	27.1 **(25.1)**	96.6 **(94.6)**	302.9 **(300.9)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2416.7	2328.3 **(-88.4)**	2247.3 **(-169.4)**	2196.1 **(-220.6)**	2332.1 **(-84.6)**	2207.0 **(-209.7)**	1942.0 **(-474.7)**
	SDII	Average daily rainfall intensity	mm/day	11.2	10.9 **(-0.3)**	10.6 **(-0.6)**	10.7 **(-0.5)**	10.9 **(-0.3)**	10.7 **(-0.5)**	10.2 **(-1.0)**
	Rx1day	Maximum 1-day rainfall total	mm	85.8	78.9 **(-6.9)**	81.5 **(-4.3)**	88.8 **(3.0)**	91.0 **(5.2)**	84.7 **(-1.1)**	81.8 **(-4.0)**
	Rx5day	Maximum 5-day rainfall total	mm	196.5	188.7 **(-7.8)**	191.8 **(-4.7)**	201.3 **(4.8)**	195.7 **(-0.8)**	196.3 **(-0.2)**	192.4 **(-4.1)**
	P95	Rainfall on very wet days	mm	33.9	33.0 **(-0.9)**	32.9 **(-1.0)**	32.6 **(-1.3)**	33.4 **(-0.5)**	32.8 **(-1.1)**	32.4 **(-1.5)**
	P99	Rainfall on extremely wet days	mm	59.0	55.6 **(-3.4)**	57.1 **(-1.9)**	57.0 **(-2.0)**	58.1 **(-0.9)**	58.6 **(-0.4)**	57.0 **(-2.0)**
	R95p	Total rainfall from very wet days	mm	533.0	503.3 **(-29.7)**	475.0 **(-58.0)**	490.5 **(-42.5)**	497.0 **(-36.0)**	491.4 **(-41.6)**	444.3 **(-88.7)**
	R99p	Total rainfall from extremely wet days	mm	167.1	151.5 **(-15.6)**	146.3 **(-20.8)**	163.5 **(-3.6)**	160.2 **(-6.9)**	163.4 **(-3.7)**	150.4 **(-16.7)**
	Frequency									
	P95d	Number of very wet days	days	10.6	9.9 **(-0.7)**	9.5 **(-1.1)**	9.1 **(-1.5)**	10.0 **(-0.6)**	9.3 **(-1.3)**	8.2 **(-2.4)**
	P99d	Number of extremely wet days	days	2.1	1.9 **(-0.2)**	1.8 **(-0.3)**	1.9 **(-0.2)**	2.0 **(-0.1)**	2.0 **(-0.1)**	1.8 **(-0.3)**
	Duration									
	CWD	Longest wet spelll	days	21.0	20.0 **(-1.0)**	18.4 **(-2.6)**	19.0 **(-2.0)**	20.1 **(-0.9)**	17.8 **(-3.2)**	16.0 **(-5.0)**
	CDD	Longest dry spell	days	13.7	14.0 **(0.3)**	15.5 **(1.8)**	14.8 **(1.1)**	15.1 **(1.4)**	15.1 **(1.4)**	15.8 **(2.1)**

Cooler — Warmer

Drier — Wetter

Region XI (Davao Region)

Davao del Norte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.4	20.2 **(0.8)**	21.0 **(1.6)**	21.3 **(1.9)**	20.5 **(1.1)**	21.6 **(2.2)**	23.3 **(3.9)**
	TNm	Average night time temperature	°C	22.3	22.9 **(0.6)**	23.5 **(1.2)**	23.8 **(1.5)**	23.1 **(0.8)**	24.0 **(1.7)**	25.7 **(3.4)**
	TNx	Warmest night time temperature	°C	24.9	25.5 **(0.6)**	26.0 **(1.1)**	26.3 **(1.4)**	25.6 **(0.7)**	26.5 **(1.6)**	28.0 **(3.1)**
	TXn	Coldest day time temperature	°C	24.4	25.0 **(0.6)**	25.6 **(1.2)**	25.9 **(1.5)**	25.2 **(0.8)**	26.1 **(1.7)**	27.5 **(3.1)**
	TXm	Average day time temperature	°C	30.6	31.1 **(0.5)**	31.7 **(1.1)**	32.2 **(1.6)**	31.3 **(0.7)**	32.3 **(1.7)**	34.0 **(3.4)**
	TXx	Warmest day time temperature	°C	33.8	34.4 **(0.6)**	35.1 **(1.3)**	35.5 **(1.7)**	34.6 **(0.8)**	35.6 **(1.8)**	37.5 **(3.7)**
	DTR	Daily temperature range	°C	8.3	8.3 **(0.0)**	8.3 **(0.0)**	8.3 **(0.0)**	8.3 **(0.0)**	8.2 **(-0.1)**	8.3 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.7 **(-7.6)**	1.6 **(-9.7)**	0.9 **(-10.4)**	3.0 **(-8.3)**	0.9 **(-10.4)**	0.7 **(-10.6)**
	TN90p	Fraction of warm nights	%	11.2	35.3 **(24.1)**	62.4 **(51.2)**	75.2 **(64.0)**	42.8 **(31.6)**	81.9 **(70.7)**	99.1 **(87.9)**
	TX10p	Fraction of cool days	%	11.3	6.1 **(-5.2)**	2.8 **(-8.5)**	1.9 **(-9.4)**	4.6 **(-6.7)**	1.8 **(-9.5)**	0.7 **(-10.6)**
	TX90p	Fraction of hot days	%	11.5	21.8 **(10.3)**	42.8 **(31.3)**	54.8 **(43.3)**	30.8 **(19.3)**	53.5 **(42.0)**	81.9 **(70.4)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.4	12.8 **(10.4)**	44.3 **(41.9)**	74.6 **(72.2)**	30.6 **(28.2)**	95.0 **(92.6)**	249.6 **(247.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2116.6	2018.3 **(-98.3)**	1968.8 **(-147.8)**	1950.4 **(-166.2)**	2045.2 **(-71.4)**	1930.7 **(-185.9)**	1845.2 **(-271.4)**
	SDII	Average daily rainfall intensity	mm/day	10.4	9.9 **(-0.5)**	9.6 **(-0.8)**	9.7 **(-0.7)**	10.0 **(-0.4)**	9.5 **(-0.9)**	9.1 **(-1.3)**
	Rx1day	Maximum 1-day rainfall total	mm	73.5	69.7 **(-3.8)**	70.8 **(-2.7)**	71.2 **(-2.3)**	77.6 **(4.1)**	73.8 **(0.3)**	70.9 **(-2.6)**
	Rx5day	Maximum 5-day rainfall total	mm	161.0	153.8 **(-7.2)**	155.4 **(-5.6)**	154.4 **(-6.6)**	162.1 **(1.1)**	160.2 **(-0.8)**	154.4 **(-6.6)**
	P95	Rainfall on very wet days	mm	30.6	28.9 **(-1.7)**	28.3 **(-2.3)**	28.6 **(-2.0)**	29.0 **(-1.6)**	28.2 **(-2.4)**	26.8 **(-3.8)**
	P99	Rainfall on extremely wet days	mm	52.0	48.2 **(-3.8)**	47.7 **(-4.3)**	48.3 **(-3.7)**	49.6 **(-2.4)**	48.6 **(-3.4)**	46.7 **(-5.3)**
	R95p	Total rainfall from very wet days	mm	444.2	390.1 **(-54.1)**	369.8 **(-74.4)**	382.6 **(-61.6)**	398.5 **(-45.7)**	366.8 **(-77.4)**	325.1 **(-119.1)**
	R99p	Total rainfall from extremely wet days	mm	138.8	115.7 **(-23.1)**	107.0 **(-31.8)**	114.0 **(-24.8)**	127.4 **(-11.4)**	118.3 **(-20.5)**	108.9 **(-29.9)**
	Frequency									
	P95d	Number of very wet days	days	10.1	8.7 **(-1.4)**	8.4 **(-1.7)**	8.5 **(-1.6)**	9.1 **(-1.0)**	8.2 **(-1.9)**	7.3 **(-2.8)**
	P99d	Number of extremely wet days	days	2.1	1.7 **(-0.4)**	1.7 **(-0.4)**	1.7 **(-0.4)**	1.7 **(-0.4)**	1.7 **(-0.4)**	1.6 **(-0.5)**
	Duration									
	CWD	Longest wet spelll	days	18.7	16.3 **(-2.4)**	16.6 **(-2.1)**	16.9 **(-1.8)**	17.9 **(-0.8)**	17.0 **(-1.7)**	17.6 **(-1.1)**
	CDD	Longest dry spell	days	14.1	13.5 **(-0.6)**	14.0 **(-0.1)**	15.0 **(0.9)**	14.0 **(-0.1)**	13.8 **(-0.3)**	15.0 **(0.9)**

Region XI (Davao Region)

Davao del Sur

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.8	18.6 **(0.8)**	19.4 **(1.6)**	19.6 **(1.8)**	18.9 **(1.1)**	19.9 **(2.1)**	21.6 **(3.8)**
	TNm	Average night time temperature	°C	20.3	21.0 **(0.7)**	21.5 **(1.2)**	21.9 **(1.6)**	21.1 **(0.8)**	22.1 **(1.8)**	23.7 **(3.4)**
	TNx	Warmest night time temperature	°C	22.5	23.1 **(0.6)**	23.6 **(1.1)**	23.9 **(1.4)**	23.3 **(0.8)**	24.1 **(1.6)**	25.7 **(3.2)**
	TXn	Coldest day time temperature	°C	23.8	24.4 **(0.6)**	25.0 **(1.2)**	25.3 **(1.5)**	24.6 **(0.8)**	25.5 **(1.7)**	26.9 **(3.1)**
	TXm	Average day time temperature	°C	29.4	29.9 **(0.5)**	30.6 **(1.2)**	31.0 **(1.6)**	30.2 **(0.8)**	31.1 **(1.7)**	32.7 **(3.3)**
	TXx	Warmest day time temperature	°C	32.8	33.4 **(0.6)**	34.0 **(1.2)**	34.5 **(1.7)**	33.6 **(0.8)**	34.6 **(1.8)**	36.4 **(3.6)**
	DTR	Daily temperature range	°C	9.1	9.0 **(-0.1)**	9.0 **(-0.1)**	9.0 **(-0.1)**	9.1 **(0.0)**	9.0 **(-0.1)**	9.0 **(-0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.0 **(-8.4)**	1.4 **(-10.0)**	0.9 **(-10.5)**	2.6 **(-8.8)**	0.8 **(-10.6)**	0.6 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.4	34.1 **(22.7)**	64.2 **(52.8)**	77.8 **(66.4)**	43.7 **(32.3)**	82.3 **(70.9)**	99.6 **(88.2)**
	TX10p	Fraction of cool days	%	11.4	4.8 **(-6.6)**	2.4 **(-9.0)**	1.5 **(-9.9)**	3.7 **(-7.7)**	1.4 **(-10.0)**	0.7 **(-10.7)**
	TX90p	Fraction of hot days	%	11.6	23.0 **(11.4)**	42.2 **(30.6)**	56.4 **(44.8)**	29.5 **(17.9)**	55.7 **(44.1)**	87.2 **(75.6)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.7	22.8 **(19.1)**	78.3 **(74.6)**	133.6 **(129.9)**	39.3 **(35.6)**	143.9 **(140.2)**	334.9 **(331.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1381.1	1342.6 **(-38.5)**	1299.6 **(-81.5)**	1286.2 **(-94.9)**	1346.9 **(-34.2)**	1326.2 **(-54.9)**	1284.8 **(-96.3)**
	SDII	Average daily rainfall intensity	mm/day	7.8	7.6 **(-0.2)**	7.3 **(-0.5)**	7.3 **(-0.5)**	7.6 **(-0.2)**	7.4 **(-0.4)**	7.0 **(-0.8)**
	Rx1day	Maximum 1-day rainfall total	mm	53.0	53.6 **(0.6)**	51.9 **(-1.1)**	51.6 **(-1.4)**	54.9 **(1.9)**	52.4 **(-0.6)**	51.1 **(-1.9)**
	Rx5day	Maximum 5-day rainfall total	mm	101.7	101.8 **(0.1)**	98.9 **(-2.8)**	97.6 **(-4.1)**	102.2 **(0.5)**	103.6 **(1.9)**	95.2 **(-6.5)**
	P95	Rainfall on very wet days	mm	22.9	22.1 **(-0.8)**	21.6 **(-1.3)**	21.6 **(-1.3)**	22.6 **(-0.3)**	21.4 **(-1.5)**	21.0 **(-1.9)**
	P99	Rainfall on extremely wet days	mm	39.9	39.2 **(-0.7)**	38.1 **(-1.8)**	37.8 **(-2.1)**	39.8 **(-0.1)**	38.9 **(-1.0)**	36.2 **(-3.7)**
	R95p	Total rainfall from very wet days	mm	296.7	274.2 **(-22.5)**	268.0 **(-28.7)**	255.5 **(-41.2)**	285.9 **(-10.8)**	277.5 **(-19.2)**	255.1 **(-41.6)**
	R99p	Total rainfall from extremely wet days	mm	91.5	87.9 **(-3.6)**	83.6 **(-7.9)**	86.2 **(-5.3)**	90.2 **(-1.3)**	89.3 **(-2.2)**	80.6 **(-10.9)**
	Frequency									
	P95d	Number of very wet days	days	8.8	8.0 **(-0.8)**	7.7 **(-1.1)**	7.3 **(-1.5)**	8.5 **(-0.3)**	7.8 **(-1.0)**	7.2 **(-1.6)**
	P99d	Number of extremely wet days	days	1.8	1.7 **(-0.1)**	1.6 **(-0.2)**	1.6 **(-0.2)**	1.8 **(0.0)**	1.7 **(-0.1)**	1.5 **(-0.3)**
	Duration									
	CWD	Longest wet spelll	days	15.1	15.1 **(0.0)**	14.8 **(-0.3)**	15.6 **(0.5)**	15.0 **(-0.1)**	15.6 **(0.5)**	16.5 **(1.4)**
	CDD	Longest dry spell	days	17.1	17.0 **(-0.1)**	16.7 **(-0.4)**	18.2 **(1.1)**	17.9 **(0.8)**	16.4 **(-0.7)**	16.6 **(-0.5)**

Cooler — Warmer

Drier — Wetter

Region XI (Davao Region)

Davao Oriental

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.4	18.2 **(0.8)**	18.8 **(1.4)**	19.1 **(1.7)**	18.4 **(1.0)**	19.4 **(2.0)**	21.0 **(3.6)**
	TNm	Average night time temperature	°C	20.2	20.8 **(0.6)**	21.4 **(1.2)**	21.7 **(1.5)**	21.0 **(0.8)**	21.9 **(1.7)**	23.5 **(3.3)**
	TNx	Warmest night time temperature	°C	22.7	23.3 **(0.6)**	23.8 **(1.1)**	24.0 **(1.3)**	23.5 **(0.8)**	24.2 **(1.5)**	25.7 **(3.0)**
	TXn	Coldest day time temperature	°C	22.5	23.2 **(0.7)**	23.7 **(1.2)**	24.0 **(1.5)**	23.3 **(0.8)**	24.1 **(1.6)**	25.7 **(3.2)**
	TXm	Average day time temperature	°C	28.8	29.3 **(0.5)**	29.9 **(1.1)**	30.2 **(1.4)**	29.6 **(0.8)**	30.4 **(1.6)**	32.1 **(3.3)**
	TXx	Warmest day time temperature	°C	32.1	32.6 **(0.5)**	33.4 **(1.3)**	33.6 **(1.5)**	32.8 **(0.7)**	33.9 **(1.8)**	35.4 **(3.3)**
	DTR	Daily temperature range	°C	8.5	8.6 **(0.1)**	8.5 **(0.0)**	8.5 **(0.0)**	8.6 **(0.1)**	8.5 **(0.0)**	8.5 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.4 **(-8.0)**	1.5 **(-9.9)**	1.0 **(-10.4)**	2.8 **(-8.6)**	0.9 **(-10.5)**	0.6 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.4	32.4 **(21.0)**	58.3 **(46.9)**	73.5 **(62.1)**	39.6 **(28.2)**	78.4 **(67.0)**	98.8 **(87.4)**
	TX10p	Fraction of cool days	%	11.2	3.8 **(-7.4)**	1.6 **(-9.6)**	0.9 **(-10.3)**	2.8 **(-8.4)**	0.9 **(-10.3)**	0.5 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	23.8 **(12.3)**	41.5 **(30.0)**	51.1 **(39.6)**	31.6 **(20.1)**	52.9 **(41.4)**	87.3 **(75.8)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.0	15.7 **(13.7)**	54.8 **(52.8)**	87.0 **(85.0)**	29.9 **(27.9)**	96.4 **(94.4)**	263.2 **(261.2)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	2337.9	2318.4 **(-19.5)**	2239.8 **(-98.1)**	2189.8 **(-148.1)**	2276.5 **(-61.4)**	2199.7 **(-138.2)**	2022.5 **(-315.4)**
	SDII	Average daily rainfall intensity	mm/day	10.8	10.6 **(-0.2)**	10.4 **(-0.4)**	10.2 **(-0.6)**	10.5 **(-0.3)**	10.2 **(-0.6)**	9.5 **(-1.3)**
	Rx1day	Maximum 1-day rainfall total	mm	82.1	76.9 **(-5.2)**	74.5 **(-7.6)**	76.7 **(-5.4)**	80.2 **(-1.9)**	77.4 **(-4.7)**	70.5 **(-11.6)**
	Rx5day	Maximum 5-day rainfall total	mm	190.8	183.9 **(-6.9)**	183.3 **(-7.5)**	183.2 **(-7.6)**	183.7 **(-7.1)**	188.3 **(-2.5)**	179.4 **(-11.4)**
	P95	Rainfall on very wet days	mm	32.4	31.8 **(-0.6)**	31.6 **(-0.8)**	31.1 **(-1.3)**	31.3 **(-1.1)**	31.9 **(-0.5)**	30.2 **(-2.2)**
	P99	Rainfall on extremely wet days	mm	56.6	54.6 **(-2.0)**	53.0 **(-3.6)**	53.5 **(-3.1)**	54.0 **(-2.6)**	54.4 **(-2.2)**	49.0 **(-7.6)**
	R95p	Total rainfall from very wet days	mm	516.8	489.0 **(-27.8)**	469.9 **(-46.9)**	487.1 **(-29.7)**	477.3 **(-39.5)**	495.6 **(-21.2)**	404.7 **(-112.1)**
	R99p	Total rainfall from extremely wet days	mm	161.4	142.3 **(-19.1)**	139.9 **(-21.5)**	142.2 **(-19.2)**	139.0 **(-22.4)**	151.6 **(-9.8)**	121.6 **(-39.8)**
	Frequency									
	P95d	Number of very wet days	days	10.7	10.3 **(-0.4)**	9.8 **(-0.9)**	9.6 **(-1.1)**	10.2 **(-0.5)**	10.4 **(-0.3)**	9.2 **(-1.5)**
	P99d	Number of extremely wet days	days	2.1	1.9 **(-0.2)**	1.9 **(-0.2)**	1.9 **(-0.2)**	1.9 **(-0.2)**	2.0 **(-0.1)**	1.6 **(-0.5)**
	Duration									
	CWD	Longest wet spelll	days	20.4	20.3 **(-0.1)**	19.7 **(-0.7)**	19.9 **(-0.5)**	20.0 **(-0.4)**	19.6 **(-0.8)**	20.3 **(-0.1)**
	CDD	Longest dry spell	days	13.3	13.5 **(0.2)**	12.5 **(-0.8)**	13.2 **(-0.1)**	13.1 **(-0.2)**	12.8 **(-0.5)**	12.8 **(-0.5)**

Cooler — Warmer

Drier — Wetter

Region XII (SOCCSKSARGEN)

Sarangani

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.9	18.8 **(0.9)**	19.4 **(1.5)**	19.8 **(1.9)**	19.0 **(1.1)**	20.1 **(2.2)**	21.8 **(3.9)**
	TNm	Average night time temperature	°C	20.5	21.1 **(0.6)**	21.7 **(1.2)**	22.0 **(1.5)**	21.3 **(0.8)**	22.2 **(1.7)**	23.8 **(3.3)**
	TNx	Warmest night time temperature	°C	22.6	23.1 **(0.5)**	23.6 **(1.0)**	23.9 **(1.3)**	23.3 **(0.7)**	24.1 **(1.5)**	25.5 **(2.9)**
	TXn	Coldest day time temperature	°C	24.7	25.3 **(0.6)**	25.9 **(1.2)**	26.2 **(1.5)**	25.5 **(0.8)**	26.4 **(1.7)**	27.8 **(3.1)**
	TXm	Average day time temperature	°C	30.0	30.5 **(0.5)**	31.2 **(1.2)**	31.5 **(1.5)**	30.8 **(0.8)**	31.7 **(1.7)**	33.4 **(3.4)**
	TXx	Warmest day time temperature	°C	33.5	34.1 **(0.6)**	34.7 **(1.2)**	35.1 **(1.6)**	34.2 **(0.7)**	35.3 **(1.8)**	37.0 **(3.5)**
	DTR	Daily temperature range	°C	9.5	9.5 **(0.0)**	9.5 **(0.0)**	9.5 **(0.0)**	9.6 **(0.1)**	9.5 **(0.0)**	9.6 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	2.9 **(-8.6)**	1.5 **(-10.0)**	1.0 **(-10.5)**	2.6 **(-8.9)**	0.9 **(-10.6)**	0.7 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.5	34.3 **(22.8)**	60.8 **(49.3)**	77.4 **(65.9)**	39.2 **(27.7)**	81.2 **(69.7)**	99.3 **(87.8)**
	TX10p	Fraction of cool days	%	11.5	4.4 **(-7.1)**	1.9 **(-9.6)**	1.1 **(-10.4)**	2.9 **(-8.6)**	1.0 **(-10.5)**	0.7 **(-10.8)**
	TX90p	Fraction of hot days	%	11.6	21.9 **(10.3)**	43.5 **(31.9)**	54.3 **(42.7)**	28.6 **(17.0)**	57.0 **(45.4)**	92.6 **(81.0)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.9	28.0 **(24.1)**	95.3 **(91.4)**	181.0 **(177.1)**	38.2 **(34.3)**	175.9 **(172.0)**	336.3 **(332.4)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1120.0	1090.2 **(-29.8)**	1078.6 **(-41.4)**	1040.4 **(-79.6)**	1075.3 **(-44.7)**	1063.1 **(-56.9)**	939.6 **(-180.4)**
	SDII	Average daily rainfall intensity	mm/day	7.0	6.9 **(-0.1)**	6.7 **(-0.3)**	6.6 **(-0.4)**	6.8 **(-0.2)**	6.6 **(-0.4)**	6.0 **(-1.0)**
	Rx1day	Maximum 1-day rainfall total	mm	51.7	49.8 **(-1.9)**	51.3 **(-0.4)**	46.5 **(-5.2)**	51.7 **(0.0)**	48.0 **(-3.7)**	51.1 **(-0.6)**
	Rx5day	Maximum 5-day rainfall total	mm	85.4	83.3 **(-2.1)**	89.8 **(4.4)**	77.0 **(-8.4)**	84.1 **(-1.3)**	81.1 **(-4.3)**	78.4 **(-7.0)**
	P95	Rainfall on very wet days	mm	22.5	22.1 **(-0.4)**	21.9 **(-0.6)**	21.0 **(-1.5)**	21.8 **(-0.7)**	22.0 **(-0.5)**	20.1 **(-2.4)**
	P99	Rainfall on extremely wet days	mm	39.0	37.8 **(-1.2)**	36.8 **(-2.2)**	35.3 **(-3.7)**	37.2 **(-1.8)**	36.9 **(-2.1)**	33.6 **(-5.4)**
	R95p	Total rainfall from very wet days	mm	261.1	245.2 **(-15.9)**	248.6 **(-12.5)**	225.5 **(-35.6)**	231.0 **(-30.1)**	235.0 **(-26.1)**	205.6 **(-55.5)**
	R99p	Total rainfall from extremely wet days	mm	80.1	72.5 **(-7.6)**	75.8 **(-4.3)**	60.1 **(-20.0)**	73.4 **(-6.7)**	69.2 **(-10.9)**	59.1 **(-21.0)**
	Frequency									
	P95d	Number of very wet days	days	8.0	7.4 **(-0.6)**	7.4 **(-0.6)**	6.3 **(-1.7)**	7.1 **(-0.9)**	7.4 **(-0.6)**	5.8 **(-2.2)**
	P99d	Number of extremely wet days	days	1.6	1.5 **(-0.1)**	1.4 **(-0.2)**	1.2 **(-0.4)**	1.4 **(-0.2)**	1.4 **(-0.2)**	1.1 **(-0.5)**
	Duration									
	CWD	Longest wet spelll	days	12.8	11.9 **(-0.9)**	12.1 **(-0.7)**	12.0 **(-0.8)**	12.3 **(-0.5)**	12.1 **(-0.7)**	11.4 **(-1.4)**
	CDD	Longest dry spell	days	20.2	21.0 **(0.8)**	19.3 **(-0.9)**	21.6 **(1.4)**	21.2 **(1.0)**	19.5 **(-0.7)**	19.7 **(-0.5)**

Region XII (SOCCSKSARGEN)

South Cotabato

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	17.6	18.4 **(0.8)**	19.2 **(1.6)**	19.5 **(1.9)**	18.7 **(1.1)**	19.7 **(2.1)**	21.6 **(4.0)**
	TNm	Average night time temperature	°C	19.9	20.6 **(0.7)**	21.1 **(1.2)**	21.4 **(1.5)**	20.7 **(0.8)**	21.6 **(1.7)**	23.3 **(3.4)**
	TNx	Warmest night time temperature	°C	21.7	22.3 **(0.6)**	22.8 **(1.1)**	23.1 **(1.4)**	22.4 **(0.7)**	23.3 **(1.6)**	24.7 **(3.0)**
	TXn	Coldest day time temperature	°C	24.4	25.0 **(0.6)**	25.6 **(1.2)**	26.0 **(1.6)**	25.2 **(0.8)**	26.1 **(1.7)**	27.6 **(3.2)**
	TXm	Average day time temperature	°C	29.5	30.0 **(0.5)**	30.7 **(1.2)**	31.0 **(1.5)**	30.3 **(0.8)**	31.2 **(1.7)**	32.9 **(3.4)**
	TXx	Warmest day time temperature	°C	32.7	33.2 **(0.5)**	33.9 **(1.2)**	34.3 **(1.6)**	33.4 **(0.7)**	34.4 **(1.7)**	36.4 **(3.7)**
	DTR	Daily temperature range	°C	9.6	9.6 **(0.0)**	9.6 **(0.0)**	9.6 **(0.0)**	9.6 **(0.0)**	9.6 **(0.0)**	9.6 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	3.1 **(-8.4)**	1.5 **(-10.0)**	1.0 **(-10.5)**	2.9 **(-8.6)**	0.9 **(-10.6)**	0.7 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.6	31.8 **(20.2)**	56.0 **(44.4)**	72.7 **(61.1)**	36.9 **(25.3)**	76.3 **(64.7)**	98.5 **(86.9)**
	TX10p	Fraction of cool days	%	11.5	5.1 **(-6.4)**	2.3 **(-9.2)**	1.4 **(-10.1)**	3.7 **(-7.8)**	1.4 **(-10.1)**	0.8 **(-10.7)**
	TX90p	Fraction of hot days	%	11.7	22.4 **(10.7)**	42.6 **(30.9)**	51.8 **(40.1)**	28.5 **(16.8)**	55.2 **(43.5)**	89.9 **(78.2)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.9	31.3 **(26.4)**	97.2 **(92.3)**	171.8 **(166.9)**	41.9 **(37.0)**	188.6 **(183.7)**	365.0 **(360.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1108.8	1058.8 **(-50.0)**	1057.0 **(-51.8)**	1018.7 **(-90.1)**	1063.7 **(-45.1)**	1023.5 **(-85.3)**	938.1 **(-170.7)**
	SDII	Average daily rainfall intensity	mm/day	6.8	6.8 **(0.0)**	6.5 **(-0.3)**	6.4 **(-0.4)**	6.6 **(-0.2)**	6.5 **(-0.3)**	6.1 **(-0.7)**
	Rx1day	Maximum 1-day rainfall total	mm	45.4	46.9 **(1.5)**	46.6 **(1.2)**	44.2 **(-1.2)**	44.4 **(-1.0)**	45.2 **(-0.2)**	43.7 **(-1.7)**
	Rx5day	Maximum 5-day rainfall total	mm	80.7	82.0 **(1.3)**	83.2 **(2.5)**	79.5 **(-1.2)**	79.5 **(-1.2)**	79.7 **(-1.0)**	78.7 **(-2.0)**
	P95	Rainfall on very wet days	mm	20.8	20.2 **(-0.6)**	20.0 **(-0.8)**	19.7 **(-1.1)**	20.4 **(-0.4)**	19.9 **(-0.9)**	19.2 **(-1.6)**
	P99	Rainfall on extremely wet days	mm	35.3	35.1 **(-0.2)**	34.4 **(-0.9)**	33.0 **(-2.3)**	33.3 **(-2.0)**	33.3 **(-2.0)**	31.7 **(-3.6)**
	R95p	Total rainfall from very wet days	mm	239.8	220.6 **(-19.2)**	221.3 **(-18.5)**	206.9 **(-32.9)**	213.8 **(-26.0)**	218.3 **(-21.5)**	196.1 **(-43.7)**
	R99p	Total rainfall from extremely wet days	mm	71.4	68.4 **(-3.0)**	74.0 **(2.6)**	68.1 **(-3.3)**	62.3 **(-9.1)**	66.1 **(-5.3)**	60.3 **(-11.1)**
	Frequency									
	P95d	Number of very wet days	days	8.1	7.5 **(-0.6)**	7.5 **(-0.6)**	6.9 **(-1.2)**	7.5 **(-0.6)**	7.2 **(-0.9)**	6.5 **(-1.6)**
	P99d	Number of extremely wet days	days	1.7	1.6 **(-0.1)**	1.5 **(-0.2)**	1.4 **(-0.3)**	1.4 **(-0.3)**	1.5 **(-0.2)**	1.2 **(-0.5)**
	Duration									
	CWD	Longest wet spelll	days	13.9	13.5 **(-0.4)**	12.3 **(-1.6)**	13.3 **(-0.6)**	13.8 **(-0.1)**	12.7 **(-1.2)**	11.7 **(-2.2)**
	CDD	Longest dry spell	days	20.3	21.1 **(0.8)**	21.0 **(0.7)**	21.9 **(1.6)**	22.1 **(1.8)**	20.3 **(0.0)**	20.3 **(0.0)**

Cooler — Warmer

Drier — Wetter

Region XII (SOCCSKSARGEN)

Sultan Kudarat

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	18.3	19.2 **(0.9)**	19.9 **(1.6)**	20.3 **(2.0)**	19.4 **(1.1)**	20.5 **(2.2)**	22.4 **(4.1)**
	TNm	Average night time temperature	°C	20.5	21.2 **(0.7)**	21.8 **(1.3)**	22.1 **(1.6)**	21.3 **(0.8)**	22.3 **(1.8)**	23.9 **(3.4)**
	TNx	Warmest night time temperature	°C	22.3	22.9 **(0.6)**	23.4 **(1.1)**	23.7 **(1.4)**	23.1 **(0.8)**	23.9 **(1.6)**	25.4 **(3.1)**
	TXn	Coldest day time temperature	°C	25.1	25.8 **(0.7)**	26.3 **(1.2)**	26.7 **(1.6)**	25.9 **(0.8)**	26.8 **(1.7)**	28.3 **(3.2)**
	TXm	Average day time temperature	°C	29.9	30.5 **(0.6)**	31.1 **(1.2)**	31.5 **(1.6)**	30.7 **(0.8)**	31.6 **(1.7)**	33.3 **(3.4)**
	TXx	Warmest day time temperature	°C	33.0	33.5 **(0.5)**	34.2 **(1.2)**	34.6 **(1.6)**	33.8 **(0.8)**	34.8 **(1.8)**	36.8 **(3.8)**
	DTR	Daily temperature range	°C	9.4	9.3 **(-0.1)**	9.4 **(0.0)**	9.4 **(0.0)**	9.4 **(0.0)**	9.3 **(-0.1)**	9.4 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.5	3.1 **(-8.4)**	1.5 **(-10.0)**	1.1 **(-10.4)**	3.1 **(-8.4)**	0.9 **(-10.6)**	0.7 **(-10.8)**
	TN90p	Fraction of warm nights	%	11.5	30.5 **(19.0)**	53.9 **(42.4)**	69.7 **(58.2)**	35.9 **(24.4)**	74.2 **(62.7)**	97.7 **(86.2)**
	TX10p	Fraction of cool days	%	11.5	5.3 **(-6.2)**	2.8 **(-8.7)**	1.6 **(-9.9)**	4.0 **(-7.5)**	1.5 **(-10.0)**	0.7 **(-10.8)**
	TX90p	Fraction of hot days	%	11.6	22.9 **(11.3)**	39.4 **(27.8)**	49.2 **(37.6)**	28.0 **(16.4)**	51.8 **(40.2)**	87.3 **(75.7)**
	Duration									
	WSDI	Warm Spell Duration Index	days	4.7	34.6 **(29.9)**	107.1 **(102.4)**	145.7 **(141.0)**	51.3 **(46.6)**	186.7 **(182.0)**	365.0 **(360.3)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1191.6	1116.1 **(-75.5)**	1113.5 **(-78.1)**	1098.6 **(-93.0)**	1148.2 **(-43.4)**	1127.3 **(-64.3)**	1042.7 **(-148.9)**
	SDII	Average daily rainfall intensity	mm/day	6.2	6.1 **(-0.1)**	5.9 **(-0.3)**	6.0 **(-0.2)**	6.1 **(-0.1)**	5.9 **(-0.3)**	5.7 **(-0.5)**
	Rx1day	Maximum 1-day rainfall total	mm	33.3	33.1 **(-0.2)**	33.5 **(0.2)**	34.5 **(1.2)**	33.5 **(0.2)**	33.0 **(-0.3)**	33.4 **(0.1)**
	Rx5day	Maximum 5-day rainfall total	mm	75.4	76.5 **(1.1)**	76.4 **(1.0)**	74.4 **(-1.0)**	74.0 **(-1.4)**	72.8 **(-2.6)**	76.1 **(0.7)**
	P95	Rainfall on very wet days	mm	17.2	16.8 **(-0.4)**	16.6 **(-0.6)**	16.4 **(-0.8)**	17.2 **(0.0)**	16.4 **(-0.8)**	16.0 **(-1.2)**
	P99	Rainfall on extremely wet days	mm	26.9	26.5 **(-0.4)**	26.1 **(-0.8)**	26.5 **(-0.4)**	26.9 **(0.0)**	26.0 **(-0.9)**	25.4 **(-1.5)**
	R95p	Total rainfall from very wet days	mm	221.3	212.7 **(-8.6)**	203.7 **(-17.6)**	194.0 **(-27.3)**	211.6 **(-9.7)**	196.2 **(-25.1)**	187.2 **(-34.1)**
	R99p	Total rainfall from extremely wet days	mm	62.4	61.0 **(-1.4)**	61.1 **(-1.3)**	61.3 **(-1.1)**	58.2 **(-4.2)**	55.2 **(-7.2)**	55.2 **(-7.2)**
	Frequency									
	P95d	Number of very wet days	days	9.6	8.8 **(-0.8)**	8.6 **(-1.0)**	8.1 **(-1.5)**	9.0 **(-0.6)**	8.4 **(-1.2)**	7.8 **(-1.8)**
	P99d	Number of extremely wet days	days	1.9	1.9 **(0.0)**	1.8 **(-0.1)**	1.8 **(-0.1)**	1.8 **(-0.1)**	1.7 **(-0.2)**	1.6 **(-0.3)**
	Duration									
	CWD	Longest wet spelll	days	18.0	17.1 **(-0.9)**	16.4 **(-1.6)**	16.5 **(-1.5)**	17.1 **(-0.9)**	16.7 **(-1.3)**	16.1 **(-1.9)**
	CDD	Longest dry spell	days	16.9	17.3 **(0.4)**	17.2 **(0.3)**	18.4 **(1.5)**	18.1 **(1.2)**	17.7 **(0.8)**	16.7 **(-0.2)**

Region XII (SOCCSKSARGEN)

Cotabato

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.2	20.1 **(0.9)**	20.8 **(1.6)**	21.2 **(2.0)**	20.3 **(1.1)**	21.5 **(2.3)**	23.4 **(4.2)**
	TNm	Average night time temperature	°C	21.8	22.4 **(0.6)**	23.0 **(1.2)**	23.3 **(1.5)**	22.5 **(0.7)**	23.5 **(1.7)**	25.2 **(3.4)**
	TNx	Warmest night time temperature	°C	24.1	24.7 **(0.6)**	25.2 **(1.1)**	25.5 **(1.4)**	24.9 **(0.8)**	25.7 **(1.6)**	27.3 **(3.2)**
	TXn	Coldest day time temperature	°C	25.2	25.7 **(0.5)**	26.3 **(1.1)**	26.6 **(1.4)**	26.0 **(0.8)**	26.8 **(1.6)**	28.3 **(3.1)**
	TXm	Average day time temperature	°C	30.7	31.2 **(0.5)**	31.8 **(1.1)**	32.3 **(1.6)**	31.4 **(0.7)**	32.4 **(1.7)**	34.1 **(3.4)**
	TXx	Warmest day time temperature	°C	34.0	34.5 **(0.5)**	35.3 **(1.3)**	35.8 **(1.8)**	34.7 **(0.7)**	36.0 **(2.0)**	37.8 **(3.8)**
	DTR	Daily temperature range	°C	8.9	8.9 **(0.0)**	8.9 **(0.0)**	8.9 **(0.0)**	8.9 **(0.0)**	8.8 **(-0.1)**	8.9 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.2	2.9 **(-8.3)**	1.3 **(-9.9)**	0.9 **(-10.3)**	2.8 **(-8.4)**	0.8 **(-10.4)**	0.5 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.3	34.3 **(23.0)**	63.3 **(52.0)**	75.9 **(64.6)**	41.5 **(30.2)**	81.6 **(70.3)**	99.3 **(88.0)**
	TX10p	Fraction of cool days	%	11.3	6.4 **(-4.9)**	3.2 **(-8.1)**	1.9 **(-9.4)**	4.8 **(-6.5)**	1.9 **(-9.4)**	0.8 **(-10.5)**
	TX90p	Fraction of hot days	%	11.5	21.5 **(10.0)**	40.6 **(29.1)**	52.5 **(41.0)**	28.7 **(17.2)**	50.2 **(38.7)**	81.3 **(69.8)**
	Duration									
	WSDI	Warm Spell Duration Index	days	3.2	20.6 **(17.4)**	72.7 **(69.5)**	132.2 **(129.0)**	48.5 **(45.3)**	163.2 **(160.0)**	365.0 **(361.8)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1463.5	1375.5 **(-88.0)**	1344.6 **(-118.9)**	1395.7 **(-67.8)**	1390.9 **(-72.6)**	1378.9 **(-84.6)**	1336.8 **(-126.7)**
	SDII	Average daily rainfall intensity	mm/day	7.3	6.9 **(-0.4)**	6.8 **(-0.5)**	6.9 **(-0.4)**	6.9 **(-0.4)**	6.9 **(-0.4)**	6.7 **(-0.6)**
	Rx1day	Maximum 1-day rainfall total	mm	38.2	37.2 **(-1.0)**	37.6 **(-0.6)**	40.5 **(2.3)**	38.4 **(0.2)**	38.8 **(0.6)**	41.8 **(3.6)**
	Rx5day	Maximum 5-day rainfall total	mm	92.6	91.0 **(-1.6)**	89.6 **(-3.0)**	94.9 **(2.3)**	90.0 **(-2.6)**	93.7 **(1.1)**	94.1 **(1.5)**
	P95	Rainfall on very wet days	mm	19.7	18.5 **(-1.2)**	18.2 **(-1.5)**	18.7 **(-1.0)**	18.6 **(-1.1)**	18.7 **(-1.0)**	18.2 **(-1.5)**
	P99	Rainfall on extremely wet days	mm	31.0	30.0 **(-1.0)**	29.1 **(-1.9)**	29.9 **(-1.1)**	29.7 **(-1.3)**	29.3 **(-1.7)**	30.4 **(-0.6)**
	R95p	Total rainfall from very wet days	mm	263.5	229.0 **(-34.5)**	222.7 **(-40.8)**	236.6 **(-26.9)**	231.8 **(-31.7)**	233.1 **(-30.4)**	240.6 **(-22.9)**
	R99p	Total rainfall from extremely wet days	mm	74.6	67.9 **(-6.7)**	62.9 **(-11.7)**	68.6 **(-6.0)**	70.5 **(-4.1)**	70.3 **(-4.3)**	79.0 **(4.4)**
	Frequency									
	P95d	Number of very wet days	days	9.9	8.4 **(-1.5)**	8.3 **(-1.6)**	8.7 **(-1.2)**	8.8 **(-1.1)**	8.7 **(-1.2)**	8.6 **(-1.3)**
	P99d	Number of extremely wet days	days	2.0	1.8 **(-0.2)**	1.7 **(-0.3)**	1.7 **(-0.3)**	1.8 **(-0.2)**	1.8 **(-0.2)**	1.9 **(-0.1)**
	Duration									
	CWD	Longest wet spelll	days	19.0	17.5 **(-1.5)**	17.8 **(-1.2)**	17.7 **(-1.3)**	18.2 **(-0.8)**	18.6 **(-0.4)**	17.8 **(-1.2)**
	CDD	Longest dry spell	days	15.4	15.9 **(0.5)**	15.8 **(0.4)**	15.5 **(0.1)**	15.3 **(-0.1)**	15.2 **(-0.2)**	14.8 **(-0.6)**

Region XIII (Caraga)
Agusan del Norte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.6	20.3 **(0.7)**	20.9 **(1.3)**	21.3 **(1.7)**	20.6 **(1.0)**	21.5 **(1.9)**	23.3 **(3.7)**
	TNm	Average night time temperature	°C	22.4	23.0 **(0.6)**	23.6 **(1.2)**	23.8 **(1.4)**	23.2 **(0.8)**	24.1 **(1.7)**	25.6 **(3.2)**
	TNx	Warmest night time temperature	°C	25.1	25.7 **(0.6)**	26.2 **(1.1)**	26.5 **(1.4)**	25.8 **(0.7)**	26.7 **(1.6)**	28.2 **(3.1)**
	TXn	Coldest day time temperature	°C	24.5	25.2 **(0.7)**	25.8 **(1.3)**	26.1 **(1.6)**	25.4 **(0.9)**	26.2 **(1.7)**	27.6 **(3.1)**
	TXm	Average day time temperature	°C	30.3	30.9 **(0.6)**	31.5 **(1.2)**	31.8 **(1.5)**	31.1 **(0.8)**	32.0 **(1.7)**	33.6 **(3.3)**
	TXx	Warmest day time temperature	°C	33.6	34.3 **(0.7)**	34.8 **(1.2)**	35.2 **(1.6)**	34.4 **(0.8)**	35.5 **(1.9)**	37.1 **(3.5)**
	DTR	Daily temperature range	°C	7.9	7.9 **(0.0)**	7.9 **(0.0)**	8.0 **(0.1)**	7.9 **(0.0)**	7.9 **(0.0)**	8.0 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	2.7 **(-8.6)**	1.4 **(-9.9)**	0.8 **(-10.5)**	2.5 **(-8.8)**	0.6 **(-10.7)**	0.4 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.4	32.9 **(21.5)**	59.7 **(48.3)**	74.6 **(63.2)**	38.9 **(27.5)**	79.5 **(68.1)**	97.9 **(86.5)**
	TX10p	Fraction of cool days	%	11.3	4.6 **(-6.7)**	2.0 **(-9.3)**	1.3 **(-10.0)**	3.4 **(-7.9)**	1.2 **(-10.1)**	0.6 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	23.2 **(11.7)**	44.8 **(33.3)**	60.7 **(49.2)**	33.4 **(21.9)**	59.6 **(48.1)**	89.3 **(77.8)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.7	28.7 **(26.0)**	86.1 **(83.4)**	175.8 **(173.1)**	44.8 **(42.1)**	153.5 **(150.8)**	365.0 **(362.3)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	3094.7	2968.6 **(-126.1)**	2856.1 **(-238.6)**	2778.1 **(-316.6)**	2990.9 **(-103.8)**	2817.8 **(-276.9)**	2350.4 **(-744.3)**
	SDII	Average daily rainfall intensity	mm/day	13.9	13.4 **(-0.5)**	13.0 **(-0.9)**	12.7 **(-1.2)**	13.3 **(-0.6)**	12.8 **(-1.1)**	10.7 **(-3.2)**
	Rx1day	Maximum 1-day rainfall total	mm	100.4	91.2 **(-9.2)**	99.7 **(-0.7)**	106.7 **(6.3)**	101.5 **(1.1)**	97.2 **(-3.2)**	86.7 **(-13.7)**
	Rx5day	Maximum 5-day rainfall total	mm	247.5	241.9 **(-5.6)**	235.0 **(-12.5)**	268.5 **(21.0)**	257.3 **(9.8)**	245.9 **(-1.6)**	219.4 **(-28.1)**
	P95	Rainfall on very wet days	mm	42.7	41.8 **(-0.9)**	41.6 **(-1.1)**	37.8 **(-4.9)**	40.4 **(-2.3)**	38.6 **(-4.1)**	31.7 **(-11.0)**
	P99	Rainfall on extremely wet days	mm	73.3	65.4 **(-7.9)**	69.3 **(-4.0)**	71.0 **(-2.3)**	71.9 **(-1.4)**	67.6 **(-5.7)**	57.7 **(-15.6)**
	R95p	Total rainfall from very wet days	mm	685.8	614.0 **(-71.8)**	606.5 **(-79.3)**	576.8 **(-109.0)**	640.6 **(-45.2)**	596.8 **(-89.0)**	432.2 **(-253.6)**
	R99p	Total rainfall from extremely wet days	mm	209.3	171.5 **(-37.8)**	195.5 **(-13.8)**	210.1 **(0.8)**	209.9 **(0.6)**	184.7 **(-24.6)**	125.3 **(-84.0)**
	Frequency									
	P95d	Number of very wet days	days	11.1	10.2 **(-0.9)**	9.9 **(-1.2)**	8.6 **(-2.5)**	10.1 **(-1.0)**	9.6 **(-1.5)**	7.1 **(-4.0)**
	P99d	Number of extremely wet days	days	2.2	1.8 **(-0.4)**	2.0 **(-0.2)**	2.1 **(-0.1)**	2.1 **(-0.1)**	1.8 **(-0.4)**	1.3 **(-0.9)**
	Duration									
	CWD	Longest wet spelll	days	21.9	20.2 **(-1.7)**	19.8 **(-2.1)**	19.3 **(-2.6)**	21.5 **(-0.4)**	20.8 **(-1.1)**	18.0 **(-3.9)**
	CDD	Longest dry spell	days	13.8	14.4 **(0.6)**	13.9 **(0.1)**	14.9 **(1.1)**	13.9 **(0.1)**	14.1 **(0.3)**	15.0 **(1.2)**

Region XIII (Caraga)

Agusan del Sur

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.4	20.1 **(0.7)**	21.0 **(1.6)**	21.1 **(1.7)**	20.5 **(1.1)**	21.4 **(2.0)**	23.3 **(3.9)**
	TNm	Average night time temperature	°C	22.3	23.0 **(0.7)**	23.5 **(1.2)**	23.8 **(1.5)**	23.1 **(0.8)**	24.0 **(1.7)**	25.6 **(3.3)**
	TNx	Warmest night time temperature	°C	25.1	25.7 **(0.6)**	26.2 **(1.1)**	26.4 **(1.3)**	25.8 **(0.7)**	26.8 **(1.7)**	28.1 **(3.0)**
	TXn	Coldest day time temperature	°C	24.1	24.9 **(0.8)**	25.4 **(1.3)**	25.7 **(1.6)**	24.9 **(0.8)**	25.9 **(1.8)**	27.2 **(3.1)**
	TXm	Average day time temperature	°C	30.4	31.0 **(0.6)**	31.6 **(1.2)**	32.0 **(1.6)**	31.2 **(0.8)**	32.1 **(1.7)**	33.7 **(3.3)**
	TXx	Warmest day time temperature	°C	33.7	34.3 **(0.6)**	35.1 **(1.4)**	35.3 **(1.6)**	34.6 **(0.9)**	35.7 **(2.0)**	37.4 **(3.7)**
	DTR	Daily temperature range	°C	8.1	8.1 **(0.0)**	8.2 **(0.1)**	8.1 **(0.0)**	8.1 **(0.0)**	8.1 **(0.0)**	8.1 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.2	3.4 **(-7.8)**	1.7 **(-9.5)**	0.9 **(-10.3)**	3.1 **(-8.1)**	0.7 **(-10.5)**	0.5 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.2	32.5 **(21.3)**	60.2 **(49.0)**	73.1 **(61.9)**	39.0 **(27.8)**	78.4 **(67.2)**	97.6 **(86.4)**
	TX10p	Fraction of cool days	%	11.2	5.2 **(-6.0)**	2.2 **(-9.0)**	1.5 **(-9.7)**	3.8 **(-7.4)**	1.4 **(-9.8)**	0.6 **(-10.6)**
	TX90p	Fraction of hot days	%	11.4	20.0 **(8.6)**	38.5 **(27.1)**	49.1 **(37.7)**	27.8 **(16.4)**	47.2 **(35.8)**	79.8 **(68.4)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.0	11.6 **(9.6)**	37.2 **(35.2)**	61.3 **(59.3)**	20.6 **(18.6)**	61.3 **(59.3)**	196.1 **(194.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	3069.4	2974.8 **(-94.6)**	2865.6 **(-203.8)**	2893.6 **(-175.8)**	2989.5 **(-79.9)**	2828.1 **(-241.3)**	2588.1 **(-481.3)**
	SDII	Average daily rainfall intensity	mm/day	13.7	13.4 **(-0.3)**	13.2 **(-0.5)**	13.1 **(-0.6)**	13.4 **(-0.3)**	12.6 **(-1.1)**	11.4 **(-2.3)**
	Rx1day	Maximum 1-day rainfall total	mm	101.2	101.8 **(0.6)**	98.0 **(-3.2)**	106.5 **(5.3)**	104.9 **(3.7)**	98.1 **(-3.1)**	88.0 **(-13.2)**
	Rx5day	Maximum 5-day rainfall total	mm	246.9	248.1 **(1.2)**	235.4 **(-11.5)**	254.4 **(7.5)**	249.4 **(2.5)**	244.5 **(-2.4)**	223.0 **(-23.9)**
	P95	Rainfall on very wet days	mm	42.0	40.7 **(-1.3)**	40.6 **(-1.4)**	39.8 **(-2.2)**	40.4 **(-1.6)**	39.3 **(-2.7)**	33.7 **(-8.3)**
	P99	Rainfall on extremely wet days	mm	71.5	71.0 **(-0.5)**	68.3 **(-3.2)**	68.9 **(-2.6)**	70.1 **(-1.4)**	65.9 **(-5.6)**	53.1 **(-18.4)**
	R95p	Total rainfall from very wet days	mm	674.2	649.1 **(-25.1)**	632.1 **(-42.1)**	643.6 **(-30.6)**	650.2 **(-24.0)**	585.3 **(-88.9)**	430.5 **(-243.7)**
	R99p	Total rainfall from extremely wet days	mm	207.4	202.2 **(-5.2)**	182.2 **(-25.2)**	201.9 **(-5.5)**	197.1 **(-10.3)**	181.3 **(-26.1)**	117.2 **(-90.2)**
	Frequency									
	P95d	Number of very wet days	days	11.1	10.4 **(-0.7)**	10.5 **(-0.6)**	9.9 **(-1.2)**	10.5 **(-0.6)**	9.2 **(-1.9)**	7.5 **(-3.6)**
	P99d	Number of extremely wet days	days	2.2	2.2 **(0.0)**	1.9 **(-0.3)**	2.0 **(-0.2)**	2.1 **(-0.1)**	1.9 **(-0.3)**	1.2 **(-1.0)**
	Duration									
	CWD	Longest wet spelll	days	21.5	20.6 **(-0.9)**	21.5 **(0.0)**	20.1 **(-1.4)**	21.2 **(-0.3)**	21.3 **(-0.2)**	21.8 **(0.3)**
	CDD	Longest dry spell	days	12.8	12.9 **(0.1)**	12.3 **(-0.5)**	12.9 **(0.1)**	12.6 **(-0.2)**	12.0 **(-0.8)**	13.0 **(0.2)**

Cooler Warmer

Drier Wetter

Region XIII (Caraga)
Surigao del Norte

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.8	20.6 **(0.8)**	21.0 **(1.2)**	21.3 **(1.5)**	20.7 **(0.9)**	21.6 **(1.8)**	23.1 **(3.3)**
	TNm	Average night time temperature	°C	22.7	23.4 **(0.7)**	23.9 **(1.2)**	24.1 **(1.4)**	23.5 **(0.8)**	24.4 **(1.7)**	25.9 **(3.2)**
	TNx	Warmest night time temperature	°C	25.6	26.3 **(0.7)**	26.8 **(1.2)**	27.1 **(1.5)**	26.4 **(0.8)**	27.3 **(1.7)**	28.6 **(3.0)**
	TXn	Coldest day time temperature	°C	24.8	25.5 **(0.7)**	26.0 **(1.2)**	26.1 **(1.3)**	25.5 **(0.7)**	26.4 **(1.6)**	27.7 **(2.9)**
	TXm	Average day time temperature	°C	30.4	31.0 **(0.6)**	31.5 **(1.1)**	31.8 **(1.4)**	31.1 **(0.7)**	32.1 **(1.7)**	33.5 **(3.1)**
	TXx	Warmest day time temperature	°C	33.9	34.5 **(0.6)**	35.1 **(1.2)**	35.4 **(1.5)**	34.7 **(0.8)**	35.6 **(1.7)**	37.1 **(3.2)**
	DTR	Daily temperature range	°C	7.7	7.6 **(-0.1)**	7.7 **(0.0)**	7.7 **(0.0)**	7.7 **(0.0)**	7.7 **(0.0)**	7.7 **(0.0)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	2.5 **(-8.9)**	1.0 **(-10.4)**	0.7 **(-10.7)**	2.0 **(-9.4)**	0.6 **(-10.8)**	0.4 **(-11.0)**
	TN90p	Fraction of warm nights	%	11.6	41.1 **(29.5)**	64.3 **(52.7)**	78.0 **(66.4)**	47.9 **(36.3)**	82.2 **(70.6)**	99.6 **(88.0)**
	TX10p	Fraction of cool days	%	11.3	2.8 **(-8.5)**	0.9 **(-10.4)**	0.6 **(-10.7)**	1.6 **(-9.7)**	0.7 **(-10.6)**	0.4 **(-10.9)**
	TX90p	Fraction of hot days	%	11.5	35.7 **(24.2)**	63.4 **(51.9)**	76.6 **(65.1)**	47.3 **(35.8)**	79.4 **(67.9)**	98.4 **(86.9)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.6	36.8 **(34.2)**	93.6 **(91.0)**	141.0 **(138.4)**	61.7 **(59.1)**	136.7 **(134.1)**	181.7 **(179.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	3312.9	3159.0 **(-153.9)**	3171.3 **(-141.6)**	3153.5 **(-159.4)**	3258.6 **(-54.3)**	3175.7 **(-137.2)**	2778.9 **(-534.0)**
	SDII	Average daily rainfall intensity	mm/day	14.7	14.2 **(-0.5)**	14.0 **(-0.7)**	14.0 **(-0.7)**	14.4 **(-0.3)**	14.0 **(-0.7)**	12.4 **(-2.3)**
	Rx1day	Maximum 1-day rainfall total	mm	127.1	127.3 **(0.2)**	130.6 **(3.5)**	131.5 **(4.4)**	136.4 **(9.3)**	131.9 **(4.8)**	107.5 **(-19.6)**
	Rx5day	Maximum 5-day rainfall total	mm	289.5	298.6 **(9.1)**	284.6 **(-4.9)**	334.5 **(45.0)**	287.1 **(-2.4)**	295.1 **(5.6)**	270.7 **(-18.8)**
	P95	Rainfall on very wet days	mm	47.8	46.8 **(-1.0)**	46.6 **(-1.2)**	45.0 **(-2.8)**	46.9 **(-0.9)**	44.8 **(-3.0)**	38.9 **(-8.9)**
	P99	Rainfall on extremely wet days	mm	86.2	81.4 **(-4.8)**	82.6 **(-3.6)**	85.2 **(-1.0)**	82.9 **(-3.3)**	83.9 **(-2.3)**	71.2 **(-15.0)**
	R95p	Total rainfall from very wet days	mm	805.9	749.2 **(-56.7)**	760.1 **(-45.8)**	739.5 **(-66.4)**	768.4 **(-37.5)**	775.2 **(-30.7)**	599.4 **(-206.5)**
	R99p	Total rainfall from extremely wet days	mm	258.7	248.0 **(-10.7)**	246.0 **(-12.7)**	261.7 **(3.0)**	274.1 **(15.4)**	267.5 **(8.8)**	177.4 **(-81.3)**
	Frequency									
	P95d	Number of very wet days	days	11.2	10.6 **(-0.6)**	10.4 **(-0.8)**	9.6 **(-1.6)**	10.6 **(-0.6)**	10.1 **(-1.1)**	8.0 **(-3.2)**
	P99d	Number of extremely wet days	days	2.3	2.1 **(-0.2)**	2.1 **(-0.2)**	2.3 **(0.0)**	2.1 **(-0.2)**	2.3 **(0.0)**	1.7 **(-0.6)**
	Duration									
	CWD	Longest wet spelll	days	22.1	20.3 **(-1.8)**	21.1 **(-1.0)**	19.9 **(-2.2)**	20.9 **(-1.2)**	21.5 **(-0.6)**	21.0 **(-1.1)**
	CDD	Longest dry spell	days	13.2	13.2 **(0.0)**	13.8 **(0.6)**	13.3 **(0.1)**	13.5 **(0.3)**	12.6 **(-0.6)**	12.8 **(-0.4)**

Region XIII (Caraga)

Surigao del Sur

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.1	19.7 **(0.6)**	20.4 **(1.3)**	20.7 **(1.6)**	20.0 **(0.9)**	20.9 **(1.8)**	22.6 **(3.5)**
	TNm	Average night time temperature	°C	22.2	22.8 **(0.6)**	23.3 **(1.1)**	23.6 **(1.4)**	22.9 **(0.7)**	23.8 **(1.6)**	25.4 **(3.2)**
	TNx	Warmest night time temperature	°C	25.0	25.7 **(0.7)**	26.1 **(1.1)**	26.4 **(1.4)**	25.8 **(0.8)**	26.7 **(1.7)**	28.2 **(3.2)**
	TXn	Coldest day time temperature	°C	23.8	24.5 **(0.7)**	24.9 **(1.1)**	25.3 **(1.5)**	24.6 **(0.8)**	25.5 **(1.7)**	26.7 **(2.9)**
	TXm	Average day time temperature	°C	30.2	30.8 **(0.6)**	31.3 **(1.1)**	31.7 **(1.5)**	31.0 **(0.8)**	31.9 **(1.7)**	33.4 **(3.2)**
	TXx	Warmest day time temperature	°C	33.7	34.3 **(0.6)**	35.0 **(1.3)**	35.2 **(1.5)**	34.6 **(0.9)**	35.6 **(1.9)**	37.2 **(3.5)**
	DTR	Daily temperature range	°C	8.0	8.0 **(0.0)**	8.0 **(0.0)**	8.0 **(0.0)**	8.0 **(0.0)**	7.9 **(-0.1)**	7.9 **(-0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	3.3 **(-8.0)**	1.5 **(-9.8)**	0.8 **(-10.5)**	2.7 **(-8.6)**	0.7 **(-10.6)**	0.4 **(-10.9)**
	TN90p	Fraction of warm nights	%	11.2	33.7 **(22.5)**	59.1 **(47.9)**	72.5 **(61.3)**	39.5 **(28.3)**	78.1 **(66.9)**	98.2 **(87.0)**
	TX10p	Fraction of cool days	%	11.2	3.8 **(-7.4)**	1.5 **(-9.7)**	1.0 **(-10.2)**	2.8 **(-8.4)**	0.9 **(-10.3)**	0.5 **(-10.7)**
	TX90p	Fraction of hot days	%	11.5	24.4 **(12.9)**	44.8 **(33.3)**	59.0 **(47.5)**	34.8 **(23.3)**	60.9 **(49.4)**	91.2 **(79.7)**
	Duration									
	WSDI	Warm Spell Duration Index	days	1.7	14.7 **(13.0)**	44.1 **(42.4)**	77.0 **(75.3)**	29.3 **(27.6)**	90.9 **(89.2)**	189.4 **(187.7)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	3525.5	3451.0 **(-74.5)**	3317.9 **(-207.6)**	3348.2 **(-177.3)**	3475.9 **(-49.6)**	3334.6 **(-190.9)**	3005.9 **(-519.6)**
	SDII	Average daily rainfall intensity	mm/day	15.4	15.3 **(-0.1)**	14.7 **(-0.7)**	14.8 **(-0.6)**	15.2 **(-0.2)**	14.5 **(-0.9)**	12.7 **(-2.7)**
	Rx1day	Maximum 1-day rainfall total	mm	125.0	123.3 **(-1.7)**	130.3 **(5.3)**	127.6 **(2.6)**	133.9 **(8.9)**	125.8 **(0.8)**	99.0 **(-26.0)**
	Rx5day	Maximum 5-day rainfall total	mm	299.1	315.0 **(15.9)**	297.2 **(-1.9)**	319.7 **(20.6)**	307.3 **(8.2)**	302.2 **(3.1)**	249.4 **(-49.7)**
	P95	Rainfall on very wet days	mm	49.2	48.2 **(-1.0)**	48.1 **(-1.1)**	45.2 **(-4.0)**	48.5 **(-0.7)**	45.2 **(-4.0)**	38.8 **(-10.4)**
	P99	Rainfall on extremely wet days	mm	86.7	87.0 **(0.3)**	85.3 **(-1.4)**	78.5 **(-8.2)**	85.9 **(-0.8)**	76.1 **(-10.6)**	56.8 **(-29.9)**
	R95p	Total rainfall from very wet days	mm	823.5	809.5 **(-14.0)**	777.9 **(-45.6)**	725.4 **(-98.1)**	814.5 **(-9.0)**	714.1 **(-109.4)**	465.0 **(-358.5)**
	R99p	Total rainfall from extremely wet days	mm	258.4	255.5 **(-2.9)**	262.1 **(3.7)**	240.5 **(-17.9)**	279.6 **(21.2)**	231.0 **(-27.4)**	124.5 **(-133.9)**
	Frequency									
	P95d	Number of very wet days	days	11.4	10.8 **(-0.6)**	10.8 **(-0.6)**	10.0 **(-1.4)**	10.8 **(-0.6)**	9.8 **(-1.6)**	7.2 **(-4.2)**
	P99d	Number of extremely wet days	days	2.3	2.3 **(0.0)**	2.1 **(-0.2)**	1.9 **(-0.4)**	2.2 **(-0.1)**	1.9 **(-0.4)**	1.1 **(-1.2)**
	Duration									
	CWD	Longest wet spelll	days	21.6	21.1 **(-0.5)**	20.9 **(-0.7)**	20.9 **(-0.7)**	21.3 **(-0.3)**	21.3 **(-0.3)**	22.1 **(0.5)**
	CDD	Longest dry spell	days	12.2	12.9 **(0.7)**	12.4 **(0.2)**	12.7 **(0.5)**	12.3 **(0.1)**	12.0 **(-0.2)**	11.4 **(-0.8)**

Cooler — Warmer

Drier — Wetter

Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)

Maguindanao

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	19.6	20.5 (**0.9**)	21.2 (**1.6**)	21.6 (**2.0**)	20.7 (**1.1**)	21.8 (**2.2**)	23.8 (**4.2**)
	TNm	Average night time temperature	°C	21.9	22.6 (**0.7**)	23.2 (**1.3**)	23.5 (**1.6**)	22.7 (**0.8**)	23.7 (**1.8**)	25.3 (**3.4**)
	TNx	Warmest night time temperature	°C	24.1	24.6 (**0.5**)	25.1 (**1.0**)	25.4 (**1.3**)	24.8 (**0.7**)	25.6 (**1.5**)	27.1 (**3.0**)
	TXn	Coldest day time temperature	°C	25.9	26.5 (**0.6**)	27.0 (**1.1**)	27.3 (**1.4**)	26.7 (**0.8**)	27.5 (**1.6**)	28.9 (**3.0**)
	TXm	Average day time temperature	°C	31.0	31.5 (**0.5**)	32.1 (**1.1**)	32.6 (**1.6**)	31.7 (**0.7**)	32.6 (**1.6**)	34.4 (**3.4**)
	TXx	Warmest day time temperature	°C	34.2	34.7 (**0.5**)	35.4 (**1.2**)	36.0 (**1.8**)	34.9 (**0.7**)	36.1 (**1.9**)	37.9 (**3.7**)
	DTR	Daily temperature range	°C	9.0	9.0 (**0.0**)	9.0 (**0.0**)	9.0 (**0.0**)	9.0 (**0.0**)	8.9 (**-0.1**)	9.0 (**0.0**)
	Frequency									
	TN10p	Fraction of cold nights	%	11.3	2.9 (**-8.4**)	1.3 (**-10.0**)	0.9 (**-10.4**)	2.9 (**-8.4**)	0.7 (**-10.6**)	0.5 (**-10.8**)
	TN90p	Fraction of warm nights	%	11.3	31.4 (**20.1**)	57.0 (**45.7**)	70.0 (**58.7**)	37.6 (**26.3**)	76.3 (**65.0**)	99.3 (**88.0**)
	TX10p	Fraction of cool days	%	11.4	6.2 (**-5.2**)	3.3 (**-8.1**)	2.1 (**-9.3**)	5.0 (**-6.4**)	1.9 (**-9.5**)	0.8 (**-10.6**)
	TX90p	Fraction of hot days	%	11.5	21.2 (**9.7**)	37.5 (**26.0**)	50.6 (**39.1**)	26.1 (**14.6**)	50.4 (**38.9**)	81.8 (**70.3**)
	Duration									
	WSDI	Warm Spell Duration Index	days	3.2	20.2 (**17.0**)	66.7 (**63.5**)	110.4 (**107.2**)	35.7 (**32.5**)	140.7 (**137.5**)	365.0 (**361.8**)
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1331.8	1236.6 (**-95.2**)	1255.4 (**-76.4**)	1275.6 (**-56.2**)	1293.2 (**-38.6**)	1260.4 (**-71.4**)	1261.1 (**-70.7**)
	SDII	Average daily rainfall intensity	mm/day	6.6	6.2 (**-0.4**)	6.2 (**-0.4**)	6.5 (**-0.1**)	6.5 (**-0.1**)	6.3 (**-0.3**)	6.1 (**-0.5**)
	Rx1day	Maximum 1-day rainfall total	mm	31.6	30.1 (**-1.5**)	31.1 (**-0.5**)	33.8 (**2.2**)	31.8 (**0.2**)	31.9 (**0.3**)	32.2 (**0.6**)
	Rx5day	Maximum 5-day rainfall total	mm	82.8	80.3 (**-2.5**)	81.3 (**-1.5**)	85.7 (**2.9**)	80.0 (**-2.8**)	81.3 (**-1.5**)	81.9 (**-0.9**)
	P95	Rainfall on very wet days	mm	18.1	17.4 (**-0.7**)	17.2 (**-0.9**)	17.4 (**-0.7**)	17.7 (**-0.4**)	17.2 (**-0.9**)	17.3 (**-0.8**)
	P99	Rainfall on extremely wet days	mm	26.8	25.6 (**-1.2**)	25.9 (**-0.9**)	26.6 (**-0.2**)	25.4 (**-1.4**)	25.9 (**-0.9**)	25.5 (**-1.3**)
	R95p	Total rainfall from very wet days	mm	233.1	204.7 (**-28.4**)	207.3 (**-25.8**)	221.1 (**-12.0**)	216.7 (**-16.4**)	198.8 (**-34.3**)	207.1 (**-26.0**)
	R99p	Total rainfall from extremely wet days	mm	63.5	53.0 (**-10.5**)	59.8 (**-3.7**)	66.4 (**2.9**)	54.7 (**-8.8**)	57.3 (**-6.2**)	62.8 (**-0.7**)
	Frequency									
	P95d	Number of very wet days	days	9.9	8.9 (**-1.0**)	8.7 (**-1.2**)	9.4 (**-0.5**)	9.5 (**-0.4**)	8.6 (**-1.3**)	8.6 (**-1.3**)
	P99d	Number of extremely wet days	days	2.0	1.7 (**-0.3**)	1.9 (**-0.1**)	1.9 (**-0.1**)	1.7 (**-0.3**)	1.8 (**-0.2**)	1.9 (**-0.1**)
	Duration									
	CWD	Longest wet spelll	days	19.1	17.8 (**-1.3**)	18.9 (**-0.2**)	18.5 (**-0.6**)	18.5 (**-0.6**)	19.0 (**-0.1**)	18.8 (**-0.3**)
	CDD	Longest dry spell	days	15.7	15.6 (**-0.1**)	15.2 (**-0.5**)	16.4 (**0.7**)	15.2 (**-0.5**)	16.0 (**0.3**)	15.5 (**-0.2**)

Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)

Lanao del Sur

Extremes Index				Baseline Value	Moderate Emission (RCP4.5)			High Emission (RCP8.5)		
Type	Code	Description	Unit		Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)	Early (2020-2039)	Mid (2046-2065)	Late (2080-2099)
Temperature	**Magnitude**									
	TNn	Coldest night time temperature	°C	15.6	16.3 **(0.7)**	17.0 **(1.4)**	17.2 **(1.6)**	16.5 **(0.9)**	17.6 **(2.0)**	19.2 **(3.6)**
	TNm	Average night time temperature	°C	18.5	19.1 **(0.6)**	19.6 **(1.1)**	19.9 **(1.4)**	19.2 **(0.7)**	20.2 **(1.7)**	21.7 **(3.2)**
	TNx	Warmest night time temperature	°C	21.2	21.8 **(0.6)**	22.3 **(1.1)**	22.5 **(1.3)**	21.9 **(0.7)**	22.8 **(1.6)**	24.2 **(3.0)**
	TXn	Coldest day time temperature	°C	22.2	22.9 **(0.7)**	23.5 **(1.3)**	23.7 **(1.5)**	23.0 **(0.8)**	23.9 **(1.7)**	25.4 **(3.2)**
	TXm	Average day time temperature	°C	27.6	28.1 **(0.5)**	28.7 **(1.1)**	29.1 **(1.5)**	28.3 **(0.7)**	29.2 **(1.6)**	31.0 **(3.4)**
	TXx	Warmest day time temperature	°C	30.9	31.5 **(0.6)**	32.2 **(1.3)**	32.6 **(1.7)**	31.7 **(0.8)**	32.7 **(1.8)**	34.6 **(3.7)**
	DTR	Daily temperature range	°C	9.1	9.1 **(0.0)**	9.1 **(0.0)**	9.2 **(0.1)**	9.1 **(0.0)**	9.1 **(0.0)**	9.2 **(0.1)**
	Frequency									
	TN10p	Fraction of cold nights	%	11.4	3.0 **(-8.4)**	1.5 **(-9.9)**	1.0 **(-10.4)**	2.9 **(-8.5)**	0.9 **(-10.5)**	0.7 **(-10.7)**
	TN90p	Fraction of warm nights	%	11.4	34.4 **(23.0)**	59.6 **(48.2)**	73.5 **(62.1)**	39.0 **(27.6)**	77.3 **(65.9)**	97.8 **(86.4)**
	TX10p	Fraction of cool days	%	11.4	5.3 **(-6.1)**	2.6 **(-8.8)**	1.6 **(-9.8)**	4.1 **(-7.3)**	1.5 **(-9.9)**	0.8 **(-10.6)**
	TX90p	Fraction of hot days	%	11.6	23.7 **(12.1)**	42.3 **(30.7)**	56.0 **(44.4)**	30.1 **(18.5)**	56.9 **(45.3)**	87.9 **(76.3)**
	Duration									
	WSDI	Warm Spell Duration Index	days	2.9	27.5 **(24.6)**	113.4 **(110.5)**	169.6 **(166.7)**	53.4 **(50.5)**	188.2 **(185.3)**	365.0 **(362.1)**
Precipitation	**Magnitude**									
	PRCPTOT	Total wet-day rainfall	mm	1716.0	1600.9 **(-115.1)**	1615.4 **(-100.6)**	1689.1 **(-26.9)**	1653.1 **(-62.9)**	1669.6 **(-46.4)**	1684.9 **(-31.1)**
	SDII	Average daily rainfall intensity	mm/day	8.8	8.4 **(-0.4)**	8.3 **(-0.5)**	8.8 **(0.0)**	8.6 **(-0.2)**	8.7 **(-0.1)**	8.9 **(0.1)**
	Rx1day	Maximum 1-day rainfall total	mm	44.6	44.2 **(-0.4)**	44.2 **(-0.4)**	48.0 **(3.4)**	46.4 **(1.8)**	45.7 **(1.1)**	49.0 **(4.4)**
	Rx5day	Maximum 5-day rainfall total	mm	111.4	110.9 **(-0.5)**	106.1 **(-5.3)**	117.3 **(5.9)**	110.2 **(-1.2)**	111.1 **(-0.3)**	118.7 **(7.3)**
	P95	Rainfall on very wet days	mm	24.4	22.7 **(-1.7)**	22.8 **(-1.6)**	24.6 **(0.2)**	23.5 **(-0.9)**	24.1 **(-0.3)**	24.6 **(0.2)**
	P99	Rainfall on extremely wet days	mm	37.3	35.3 **(-2.0)**	35.9 **(-1.4)**	38.9 **(1.6)**	36.6 **(-0.7)**	38.0 **(0.7)**	38.5 **(1.2)**
	R95p	Total rainfall from very wet days	mm	312.8	265.4 **(-47.4)**	271.7 **(-41.1)**	313.1 **(0.3)**	290.9 **(-21.9)**	312.3 **(-0.5)**	309.8 **(-3.0)**
	R99p	Total rainfall from extremely wet days	mm	85.8	72.5 **(-13.3)**	75.9 **(-9.9)**	102.0 **(16.2)**	83.3 **(-2.5)**	92.2 **(6.4)**	96.9 **(11.1)**
	Frequency									
	P95d	Number of very wet days	days	9.6	8.3 **(-1.3)**	8.4 **(-1.2)**	9.4 **(-0.2)**	8.9 **(-0.7)**	9.3 **(-0.3)**	9.1 **(-0.5)**
	P99d	Number of extremely wet days	days	1.9	1.6 **(-0.3)**	1.7 **(-0.2)**	2.2 **(0.3)**	1.8 **(-0.1)**	2.0 **(0.1)**	2.1 **(0.2)**
	Duration									
	CWD	Longest wet spelll	days	18.2	17.3 **(-0.9)**	16.6 **(-1.6)**	17.3 **(-0.9)**	17.4 **(-0.8)**	16.6 **(-1.6)**	16.4 **(-1.8)**
	CDD	Longest dry spell	days	17.2	16.9 **(-0.3)**	17.8 **(0.6)**	17.6 **(0.4)**	17.8 **(0.6)**	17.8 **(0.6)**	19.2 **(2.0)**

Cooler — Warmer

Drier — Wetter

Annex B: Observed Historical Extremes

A note on the use of station record extreme values as baseline:

As explained in Section 2, the baseline values of the climate extremes indices presented in these tables are climatological values (i.e. averaged over the 20-year base period and over the grid points within the provincial boundaries). Thus, these baseline values are considered moderate extremes and do not reflect the most extreme values recorded at observation stations.

Some local government units with observation stations within their geographical boundaries may opt to use the extreme values recorded at these stations as their baseline value. One possible reason for using recorded extreme values would be to facilitate risk communication. For example, "Ondoy-level rainfall" or "Yolanda-like typhoon" would evoke vivid memories which could spur officials and citizens into action to "prepare for the worst". A possible disadvantage of this approach however is that the adaptation options become limited towards preparing for the rare extreme event, and LGUs then fail to address the more frequent, less extreme but equally devastating events (e.g. perennial road flooding caused by afternoon thunderstorms).

In any case, if an LGU chooses to use these record extremes as their baseline, they should keep in mind that such record value **occurred once within the observation period** and were **recorded only at that particular location** and thus do not necessarily represent the climatic extremes of the whole province. These extreme records likewise only provide the magnitude of the temperature and rainfall extremes and cannot provide additional information such as the frequency and duration of such extremes.

Thus only the values for minimum daily temperature minimum (TNn), maximum daily temperature maximum (TXx) and maximum 1-day rainfall total (Rx1day) are available, users will have to add the station data in Table B.1 to the projected change (item c.ii) in the provincial tables to calculate the projected values for TNn, TNx and Rx1day. For reference purposes, the extreme values recorded at observation stations are listed in Table B.1 and the locations of the corresponding DOST-PAGASA stations are shown in Figure B.1.

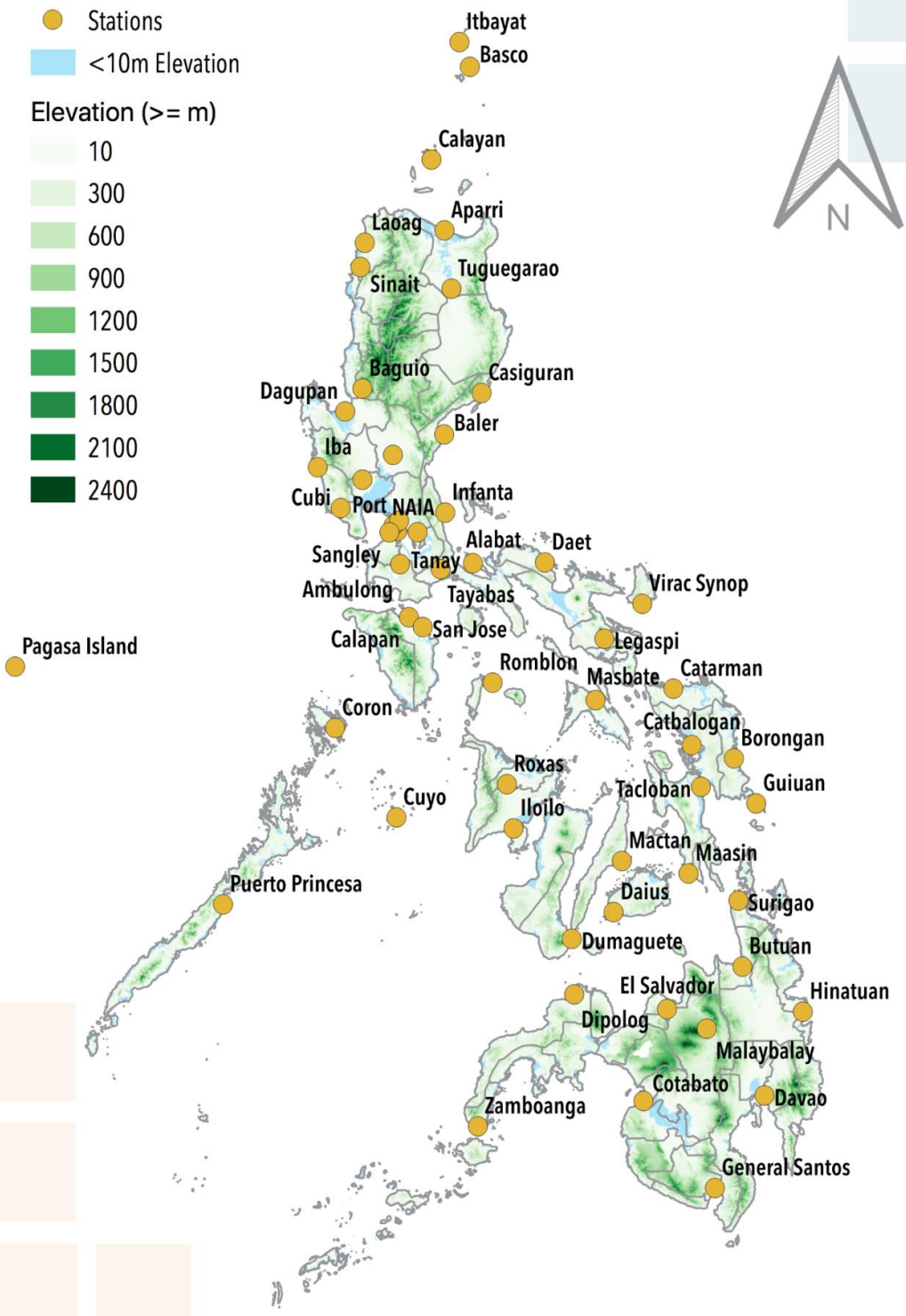
Table B.1. Record temperature and rainfall extremes at DOST-PAGASA stations

Region	Administrative Province	Station Name	Period Covered	TXx (°C)	TNn (°C)	Rx1day (mm)
I	Ilocos Norte	Laoag City	1907-2018	41.8	11.1	564.2
	Ilocos Sur	Sinait	1903-2018	38.8	13.5	594.1
	Pangasinan	Dagupan City	1903-2018	39.9	14.3	722.6
CAR	Benguet	Baguio City	1902-2018	30.4	6.3	1085.8
II	Batanes	Basco	1903-2018	32.8	11.5	616.4
	Batanes	Itbayat	1971-2018	37.0	10.7	572.3
	Cagayan	Aparri	1903-2018	39.0	13.7	453.1
	Cagayan	Calayan	1919-2018	37.8	13.9	522.2
	Cagayan	Tuguegarao	1902-2018	42.2	12.0	349.7
III	Aurora	Baler	1949-2018	41.2	14.3	675.6
	Aurora	Casiguran	1919-2018	39.2	10.5	402.6
	Pampanga	Clark	1997-2018	37.2	15.8	274.5
	Nueva Ecija	Cabanatuan	1919-2018	40.4	13.7	297.2
	Zambales	Iba	1903-2018	38.8	11.0	623.7
	Zambales	Cubi Pt., Subic Bay	1994-2018	39.2	17.5	436.4
IV-A	Batangas	Ambulong	1919-2018	38.8	16.0	499.2
	Cavite	Sangley Point	1974-2018	38.5	18.0	475.4
	Quezon	Alabat	1952-2018	37.8	17.0	673.0
	Quezon	Infanta	1949-2018	38.1	16.4	339.0
	Quezon	Tayabas	1970-2018	36.0	16.8	557.7
	Rizal	Tanay	2000-2018	34.0	13.0	331.8
IV-B	Occidental Mindoro	San Jose	1980-2018	38.5	15.4	286.7
	Oriental Mindoro	Calapan	1919-2018	37.6	14.0	277.4
	Palawan	Coron	1949-2018	37.6	12.2	317.6
	Palawan	Cuyo	1902-2018	37.2	19.0	294.4
	Palawan	Pagasa Island	1972-2008	36.0	17.0	316.6
	Palawan	Puerto Princesa	1949-2018	36.4	16.2	269.3
	Romblon	Romblon	1904-2018	38.2	15.6	385.8
NCR	Metro Manila	NAIA (MIA)	1947-2018	38.2	14.6	472.4
	Metro Manila	Port Area (MCO)	1865-2018	38.6	14.5	403.1
	Metro Manila	Science Garden	1961-2018	38.5	14.9	455.0

Table B.1. Record temperature and rainfall extremes at DOST-PAGASA stations (con't)

Region	Administrative Province	Station Name	Period Covered	TXx (°C)	TNn (°C)	Rx1day (mm)
V	Albay	Legaspi	1902-2018	37.7	13.9	484.6
	Camarines Norte	Daet	1920-2018	37.2	15.1	507.5
	Catanduanes	Virac Synop	1908-2018	37.8	15.6	494.2
	Masbate	Masbate	1907-2018	37.5	16.1	603.5
VI	Capiz	Roxas City	1903-2018	38.1	16.4	370.2
	Iloilo	Iloilo City	1903-2010	39.0	16.5	319.8
VII	Bohol	Dauis	1903-2018	37.2	16.2	229.1
	Cebu	Mactan	1972-2018	37.0	19.8	276.1
	Negros Oriental	Dumaguete	1910-2018	37.4	18.0	208.3
VIII	Eastern Samar	Borongan	1949-2018	37.8	16.1	427.8
	Eastern Samar	Guiuan	1973-2018	37.6	18.0	780.4
	Leyte	Tacloban	1903-2018	38.0	17.5	325.9
	Northern Samar	Catarman	1919-2018	38.0	16.9	485.8
	Southern Leyte	Maasin	1973-2018	37.8	18.0	281.9
	Western Samar	Catbalogan	1919-2018	38.0	16.1	387.9
IX	Zamboanga Del Norte	Dipolog	1949-2018	37.2	17.0	295.8
	Zamboanga del Sur	Zamboanga	1902-2018	37.0	15.6	199.1
X	Bukidnon	Malaybalay	1949-2018	36.2	10.0	195.9
	Misamis Oriental	El Salvador	1977-2018	38.4	16.1	237.1
XI	Davao Del Sur	Davao	1902-2018	37.3	16.1	242.6
XII	South Cotabato	General Santos	1949-2018	39.0	16.9	189.5
CARAGA	Agusan Del Norte	Butuan	1980-2018	37.8	17.5	271.6
	Surigao Del Sur	Hinatuan	1949-2018	37.0	17.2	375.5
	Surigao Del Norte	Surigao	1902-2018	37.5	18.2	566.4
BARMM	Maguindanao	Cotabato	1986-2018	38.1	18.9	201.7

Figure B.1. Location of DOST-PAGASA stations with recorded temperature and rainfall extremes



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