

Chapter 8: Water cycle changes - Supplementary Material**Coordinating Lead Authors:**

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Notes:

TSU compiled version

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1 **8.SM.1 Data Table**

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3 **[START TABLE 8.SM.1 HERE]**

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5 **Table 8.SM.1:** Input Data Table. Input datasets and code used to create chapter figures.

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Figure number / Table number / Chapter section (for calculations)	Dataset / Code name	Type	Filename / Specificities	Licence type	Dataset / Code citation	Dataset / Code URL	Related publications / Software used
Figure 8.1		Schematic : Depiction of the water cycle based on previous assessments					(Trenberth et al., 2011; Rodell et al., 2015; Abbott et al., 2019) with minor adjustments for groundwater flows (Kwon et al., 2014; Zhou et al., 2019; Luijendijk et al., 2020), seasonal snow (Pulliajainen et al., 2020) and ocean precipitation and evaporation (Stephens et al., 2012; Allan et al., 2020; Gutenstein et al., 2020)

Figure 8.2		Schematic of the chapter structure and quick guide to the chapter content.				
Figure 8.3		Schematic representation of fast and slow responses of the atmospheric energy balance and global precipitation to radiative forcing				adapted from (Allan et al., 2020, Chapter 7 Figure 7.2 and Figure 8.1).
Figure 8.4	Historical (1995–2014) and SSP2-4.5 (2081–2100) CMIP6 simulations.					
Figure 8.5	GPCP/HadCRUTv4.6 High resolution models including regional climate models (RCM) and cloud resolving models (CRMs)					GCM experiments (Fläschner et al., 2016; Richardson et al., 2018; Samset et al., 2018; Pendergrass, 2020; Rehfeld et al., 2020) (GPCP/HadCRUTv

							4.6) (Adler et al., 2017; Allan et al., 2020). GCMs and a observationally constrained estimate (O’Gorman, 2012; Fischer and Knutti, 2015; Bao et al., 2017; Borodina et al., 2017) and estimates from observed changes (Westra et al., 2013; Fischer and Knutti, 2015; Donat et al., 2016; Borodina et al., 2017; Sun et al., 2020; Zeder and Fischer, 2020) and for hourly and sub-hourly extremes based on observed changes (Westra and Sisson, 2011; Westra et al., 2013; Barbero et al., 2017; Guerreiro et al., 2018) and high resolution models including regional climate models (RCM) and cloud resolving models
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							(CRMs) (Ban et al., 2015; Chan et al., 2016; Prein et al., 2017; Haerter and Schlemmer, 2018; Lenderink et al., 2019).
Figure 8.6		Schematic: Climatic drivers of drought					
Figure 8.7	GPCP GPCC CMIP6/DAMIP					https://psl.noaa.gov/data/gridded/data.gpcp.html https://psl.noaa.gov/data/gridded/data.gpcc.html https://esgf-node.llnl.gov/search/cmip6/	NCL
CMIP6 model data							
ACCESS-ESM1-5: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Ziehn et al., 2019a, 2020a, 2020c, 2020b)			
BCC-CSM2-MR: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Wu et al., 2018a, 2019b, 2019a, 2019c)			
CNRM-CM6-1: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Volodire, 2018a, 2019f, 2019e, 2019g)			
CanESM5: historical, hist-GHG, hist-aer, hist- nat	Input dataset			(Swart et al., 2019k, 2019j, 2019l, 2019h)			

Figure 8.8	FGOALS-g3: hist-GHG, hist-aer, hist-nat, historical	Input dataset		(Li, 2020b, 2020d, 2020a, 2020c)		
	HadGEM3-GC31-LL: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Jones, 2019a, 2019b, 2019c; Ridley et al., 2019a)		
	IPSL-CM6A-LR: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Boucher et al., 2018f, 2018d, 2018e, 2018b)		
	MIROC6: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Tatebe and Watanabe, 2018b; Shiogama, 2019a, 2019b, 2019c)		
	MRI-ESM2-0: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Yukimoto et al., 2019b, 2019f, 2019d, 2019e)		
	GLDAS CMIP6/DAMIP				https://disc.gsfc.nasa.gov/datasets?key=words=GLDAS https://esgf-node.llnl.gov/search/cmip6/	NCL
CMIP6 model data						
	ACCESS-ESM1-5: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Ziehn et al., 2019a, 2020a, 2020c, 2020b)		
	BCC-CSM2-MR: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Wu et al., 2018a, 2019b, 2019a, 2019c)		
	CNRM-CM6-1: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Volodioire, 2018a, 2019f, 2019e, 2019g)		
	CanESM5: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Swart et al., 2019k, 2019j, 2019l, 2019h)		

	FGOALS-g3: hist-GHG, hist-aer, hist-nat, historical	Input dataset		(Li, 2020b, 2020d, 2020a, 2020c)		
	HadGEM3-GC31-LL: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Jones, 2019a, 2019b, 2019c; Ridley et al., 2019a)		
	IPSL-CM6A-LR: historical, hist-GHG, hist-aer, hist-nat	Input dataset		(Boucher et al., 2018f, 2018d, 2018e, 2018b)		
	MIROC6: historical, hist-GHG, hist-aer, hist- nat	Input dataset		(Tatebe and Watanabe, 2018b; Shiogama, 2019a, 2019b, 2019c)		
	MRI-ESM2-0: historical, hist-GHG, hist-aer, hist- nat	Input dataset		(Yukimoto et al., 2019b, 2019f, 2019d, 2019e)		
Figure 8.9	CMIP6/DAMIP					(Bonfils et al., 2020).
Figure 8.10	GRACE Satellite observations					Rodell et al. (2018).
Figure 8.11	GPCP GPCC APHRO_MA_050deg_ V1101 APHRO_MA_050deg_ V1901 CMIP6/DAMIP	Regional shape file			https://psl.noaa.gov/ data/gridded/data. gpcp.html https://psl.noaa.gov/ data/gridded/data. gpcc.html https://climatedataguide.ucar.edu/climate-data/aphrodite-asian-precipitation-highly-resolved-observational-data-integration-towards	NCL

					https://esgf-node.llnl.gov/search/cmip6/	
CMIP6 model data						
ACCESS-ESM1-5: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Ziehn et al., 2019a, 2020a, 2020c, 2020b)		
BCC-CSM2-MR: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Wu et al., 2018a, 2019b, 2019a, 2019c)		
CNRM-CM6-1: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Volodire, 2018a, 2019f, 2019e, 2019g)		
CanESM5: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Swart et al., 2019k, 2019j, 2019l, 2019h)		
FGOALS-g3: hist-GHG, hist-aer, hist-nat, historical	Input dataset			(Li, 2020b, 2020d, 2020a, 2020c)		
HadGEM3-GC31-LL: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Jones, 2019a, 2019b, 2019c; Ridley et al., 2019a)		
IPSL-CM6A-LR: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Boucher et al., 2018f, 2018d, 2018e, 2018b)		
MIROC6: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Tatebe and Watanabe, 2018b; Shiogama, 2019a, 2019b, 2019c)		
MRI-ESM2-0: historical, hist-GHG, hist-aer, hist-nat	Input dataset			(Yukimoto et al., 2019b, 2019f, 2019d, 2019e)		
Figure 8.12	CFSR, ERA5, JRA55, ERA-I, MERRA2					(Tilinina et al., submitted).

Figure 8.13	ACCESS-CM2: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Dix et al., 2019d, 2019a, 2019e, 2019b, 2019c)		
	ACCESS-ESM1-5: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Ziehn et al., 2019a, 2019e, 2019d, 2019b, 2019c)		
	AWI-CM-1-1-MR: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Semmler et al., 2018c, 2018d, 2018a, 2018b, 2019)		
	BCC-CSM2-MR: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Wu et al., 2018a, 2018b, Xin et al., 2019a, 2019c, 2019b)		
	BCC-ESM1: piControl	Input dataset		(Zhang et al., 2018)		
	CAMS-CSM1-0: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Rong, 2019d, 2019e, 2019b, 2019f, 2019c)		
	CAS-ESM2-0: piControl	Input dataset		(Chai, 2020)		
	CESM2: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019j, 2019m, 2019l, 2019k; Danabasoglu et al., 2019)		
	CESM2-FV2: piControl	Input dataset		(Danabasoglu, 2019a)		
	CESM2-WACCM: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019d, 2019e, 2019f, 2019h, 2019g)		
	CESM2-WACCM-FV2: piControl	Input dataset		(Danabasoglu, 2019b)		
	CIESM: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Huang, 2019a, 2019c, 2019b, 2020b, 2020a)		
	CMCC-CM2-SR5: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Lovato and Peano, 2020b, 2020c, 2020a, 2020d, 2020e)		

	CNRM-CM6-1: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Voldoire, 2018b, 2018a, 2019j, 2019i, 2019h)		
	CNRM-CM6-1-HR: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Voldoire, 2019a, 2019d, 2019b, 2019c, 2020)		
	CNRM-ESM2-1: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Seferian, 2018b, 2018c, Voldoire, 2019m, 2019l, 2019k)		
	CanESM5: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Swart et al., 2019n, 2019i, 2019o, 2019m, 2019h)		
	CanESM5-CanOE: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Swart et al., 2019f, 2019e, 2019d, 2019c, 2019b)		
	E3SM-1-0: piControl	Input dataset		(Bader et al., 2018)		
	EC-Earth3: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(EC-Earth Consortium (EC-Earth), 2019g, 2019j, 2019h, 2019k, 2019i)		
	EC-Earth3-AerChem: piControl	Input dataset		(EC-Earth Consortium (EC-Earth), 2020a)		
	EC-Earth3-LR: piControl	Input dataset		(EC-Earth Consortium (EC-Earth), 2019a)		
	EC-Earth3-Veg: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(EC-Earth Consortium (EC-Earth), 2019e, 2019c, 2019f, 2019d, 2019b)		
	EC-Earth3-Veg-LR: piControl	Input dataset		(EC-Earth Consortium (EC-Earth), 2020c)		
	FGOALS-f3-L: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Yu, 2019e, 2019c, 2019a, 2019d, 2019b)		
	FGOALS-g3: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Li, 2019f, 2019e, 2019b, 2019c, 2019d)		

	FIO-ESM-2-0: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Song et al., 2019e, 2019b, 2019d, 2019c, 2019a)		
	GFDL-CM4: historical, piControl, ssp245, ssp585	Input dataset		(Guo et al., 2018e, 2018d, 2018b, 2018c)		
	GFDL-ESM4: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(John et al., 2018a, 2018b, 2018c, Krasting et al., 2018b, 2018c)		
	GISS-E2-1-G: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(NASA Goddard Institute for Space Studies (NASA/GISS), 2018c, 2018b, 2020a, 2020c, 2020b)		
	GISS-E2-1-H: piControl	Input dataset		(NASA Goddard Institute for Space Studies (NASA/GISS), 2018d)		
	HadGEM3-GC31-LL: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Ridley et al., 2018, 2019a, Good, 2019, 2020a, 2020b)		
	HadGEM3-GC31-MM: historical, piControl, ssp126, ssp585	Input dataset		(Ridley et al., 2019c, 2019b, Jackson, 2020b, 2020a)		
	INM-CM4-8: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Volodin et al., 2019d, 2019b, 2019c, 2019f, 2019e)		
	INM-CM5-0: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Volodin et al., 2019j, 2019k, 2019i, 2019h, 2019l)		
	IPSL-CM5A2-INCA: historical, ssp126	Input dataset		(Boucher et al., 2020a, 2020b)		
	IPSL-CM6A-LR: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Boucher et al., 2018c, 2018b, 2019a, 2019b, 2019c)		
	KACE-1-0-G: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Byun et al., 2019b, 2019f, 2019c, 2019e, 2019a)		

	MCM-UA-1-0: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Stouffer, 2019f, 2019b, 2019c, 2019e, 2019d)		
	MIROC-ES2L: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Hajima et al., 2019b, 2019c, Tachiiri et al., 2019b, 2019c, 2019a)		
	MIROC6: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Tatebe and Watanabe, 2018b, 2018c, Shiogama et al., 2019c, 2019a, 2019b)		
	MPI-ESM-1-2-HAM: piControl	Input dataset		(Neubauer et al., 2019)		
	MPI-ESM1-2-HR: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Jungclaus et al., 2019b, 2019a, Schupfner et al., 2019a, 2019b, 2019c)		
	MPI-ESM1-2-LR: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Wieners et al., 2019b, 2019a, 2019c, 2019d, 2019e)		
	MPI-ESM2-0: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Yukimoto et al., 2019c, 2019g, 2019b, 2019h, 2019i)		
	NESM3: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Cao, 2019b, 2019c, 2019a, Cao and Wang, 2019c, 2019b)		
	NorCPM1: piControl	Input datasetInpu t dataset		(Bethke et al., 2019)		
	NorESM1-F: piControl	Input dataset		(Guo et al., 2019)		
	NorESM2-LM: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Seland et al., 2019d, 2019e, 2019c, 2019b, 2019a)		
	NorESM2-MM: historical, piControl, ssp126, ssp245, ssp585	Input dataset		(Bentsen et al., 2019b, 2019c, 2019a, 2019e, 2019d)		

	SAM0-UNICON: piControl	Input dataset			(Park and Shin, 2019)		
	TaiESM1: historical, piControl, ssp585	Input dataset			(Lee and Liang, 2020b, 2020a, 2020c)		
	UKESM1-0-LL: historical, piControl, ssp126, ssp245, ssp585	Input dataset			(Good et al., 2019a, 2019c, 2019b, Tang et al., 2019b, 2019c)		
	Figure 8.13 Code	Code	Fig8-13.sh (compute and plot)			https://github.com/ senesis/some_chap 8_figures	CAMMAC (Sénési, 2020) CliMAF : (Sénési et al., 2021)
Figure 8.14	CMIP6 model data						
	ACCESS-CM2: historical, ssp245	Input dataset			(Dix et al., 2019d, 2019a)		
	ACCESS-ESM1-5: historical, ssp245	Input dataset			(Ziehn et al., 2019a, 2019d)		
	AWI-CM-1-1-MR: historical, ssp245	Input dataset			(Semmler et al., 2018d, 2018a)		
	BCC-CSM2-MR: historical, ssp245	Input dataset			(Wu et al., 2018a; Xin et al., 2019b)		
	CAMS-CSM1-0: historical, ssp245	Input dataset			(Rong, 2019e, 2019b)		
	CESM2: historical, ssp245	Input dataset			(Danabasoglu, 2019j, 2019l)		
	CESM2-WACCM: historical, ssp245	Input dataset			(Danabasoglu, 2019d, 2019g)		
	CIESM: historical, ssp245	Input dataset			(Huang, 2019a, 2020a)		
	CMCC-CM2-SR5: historical, ssp245	Input dataset			(Lovato and Peano, 2020a, 2020d)		

	Final Government Distribution	8.SM	IPCC AR6 WGI
CNRM-ESM2-1: historical, ssp245	Input dataset	(Seferian, 2018b; Volodire, 2019l)	
CanESM5: historical, ssp245	Input dataset	(Swart et al., 2019n, 2019h)	
CanESM5-CanOE: historical, ssp245	Input dataset	(Swart et al., 2019e, 2019b)	
EC-Earth3: historical, ssp245	Input dataset	(EC-Earth Consortium (EC-Earth), 2019g, 2019j)	
EC-Earth3-Veg: historical, ssp245	Input dataset	(EC-Earth Consortium (EC-Earth), 2019e, 2019b)	
FGOALS-f3-L: historical, ssp245	Input dataset	(Yu, 2019a, 2019d)	
FGOALS-g3: historical, ssp245	Input dataset	(Li, 2019e, 2019b)	
FIO-ESM-2-0: historical, ssp245	Input dataset	(Song et al., 2019d, 2019a)	
GFDL-CM4: historical, ssp245	Input dataset	(Guo et al., 2018d, 2018b)	
GFDL-ESM4: historical, ssp245	Input dataset	(John et al., 2018b; Krasting et al., 2018b)	
GISS-E2-1-G: historical, ssp245	Input dataset	(NASA Goddard Institute for Space Studies (NASA/GISS), 2018b, 2020b)	
HadGEM3-GC31-LL: historical, ssp245	Input dataset	(Good, 2019; Ridley et al., 2019a)	
IITM-ESM: historical, ssp245	Input dataset	(Raghavan and Panickal, 2019; Panickal and Narayanasetti, 2020b)	
INM-CM4-8: historical, ssp245	Input dataset	(Volodin et al., 2019b, 2019e)	
INM-CM5-0: historical, ssp245	Input dataset	(Volodin et al., 2019k, 2019h)	
IPSL-CM6A-LR: historical, ssp245	Input dataset	(Boucher et al., 2018b, 2019b)	
KACE-1-0-G: historical, ssp245	Input dataset	(Byun et al., 2019b, 2019e)	

	MCM-UA-1-0: historical, ssp245	Input dataset		(Stouffer, 2019b, 2019e)		
	MIROC-ES2L: historical, ssp245	Input dataset		(Hajima et al., 2019b; Tachiiri et al., 2019b)		
	MIROC6: historical, ssp245	Input dataset		(Tatebe and Watanabe, 2018b; Shiogama et al., 2019b)		
	MPI-ESM1-2-HR: historical, ssp245	Input dataset		(Jungclaus et al., 2019a; Schupfner et al., 2019b)		
	MPI-ESM1-2-LR: historical, ssp245	Input dataset		(Wieners et al., 2019a, 2019d)		
	MRI-ESM2-0: historical, ssp245	Input dataset		(Yukimoto et al., 2019b, 2019h)		
	NESM3: historical, ssp245	Input dataset		(Cao, 2019b; Cao and Wang, 2019b)		
	NorESM2-LM: historical, ssp245	Input dataset		(Selander et al., 2019d, 2019a)		
	NorESM2-MM: historical, ssp245	Input dataset		(Bentsen et al., 2019a, 2019d)		
	UKESM1-0-LL: historical, ssp245	Input dataset		(Good et al., 2019b; Tang et al., 2019b)		
	Figure 8.14 Code	Code	Fig8-14.sh (compute and plot)		https://github.com/ senesi/some_chap 8_figures	CAMMAC (Sénési, 2020) CliMAF : (Sénési et al., 2021)
Figure 8.15	CMIP6 model data					
	ACCESS-CM2: historical, ssp126, ssp245, ssp585	Input dataset		(Dix et al., 2019d, 2019a, 2019e, 2019c)		
	ACCESS-ESM1-5: historical, ssp126, ssp245, ssp585	Input dataset		(Ziehn et al., 2019a, 2019e, 2019d, 2019c)		
	BCC-CSM2-MR: historical, ssp126, ssp245, ssp585	Input dataset		(Wu et al., 2018a; Xin et al., 2019a, 2019c, 2019b)		

CAMS-CSM1-0: historical, ssp126, ssp245, ssp585	Input dataset		(Rong, 2019d, 2019e, 2019b, 2019f)		
CESM2-WACCM: historical, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019d, 2019f, 2019h, 2019g)		
CMCC-CM2-SR5: historical, ssp126, ssp245, ssp585	Input dataset		(Lovato and Peano, 2020c, 2020a, 2020d, 2020e)		
CNRM-CM6-1-HR: historical, ssp126, ssp585	Input dataset		(Volodire, 2018a, 2019j, 2019i, 2019h)		
			(Volodire, 2019a, 2019d, 2020)		
CNRM-ESM2-1: historical, ssp126, ssp245, ssp585	Input datasetInput dataset		(Seferian, 2018b; Volodire, 2019m, 2019l, 2019k)		
CanESM5: historical, ssp126, ssp245, ssp585	Input dataset		(Swart et al., 2019n, 2019o, 2019m, 2019h)		
EC-Earth3: historical, ssp126, ssp245, ssp585	Input dataset		(EC-Earth Consortium (EC-Earth), 2019g, 2019j, 2019k, 2019i)		
EC-Earth3-Veg: historical, ssp126, ssp245, ssp585	Input dataset		(EC-Earth Consortium (EC-Earth), 2019e, 2019f, 2019d, 2019b)		
FGOALS-g3: historical, ssp126, ssp245, ssp585	Input dataset		(Li, 2019f, 2019e, 2019b, 2019d)		
GFDL-CM4: historical, ssp245, ssp585	Input dataset		(Guo et al., 2018e, 2018d, 2018b)		
GFDL-ESM4: historical, ssp126, ssp245	Input dataset		(John et al., 2018a, 2018b; Krasting et al., 2018b)		
HadGEM3-GC31-LL: historical, ssp126, ssp245, ssp585	Input dataset		(Good, 2019, 2020a, 2020b; Ridley et al., 2019a)		
HadGEM3-GC31-MM: historical, ssp126, ssp585	Input dataset		(Ridley et al., 2019b; Jackson, 2020b, 2020a)		

IITM-ESM: historical, ssp126, ssp245, ssp585	Input dataset			(Raghavan and Panickal, 2019; Panickal and Narayanasetti, 2020b, 2020a, 2020c)		
INM-CM4-8: historical, ssp126, ssp245, ssp585	Input dataset			(Volodin et al., 2019d, 2019b, 2019f, 2019e)		
INM-CM5-0: historical, ssp126, ssp245, ssp585	Input dataset			(Volodin et al., 2019j, 2019k, 2019h, 2019l)		
IPSL-CM5A2-INCA: historical, ssp126	Input dataset			(Boucher et al., 2020a, 2020b)		
IPSL-CM6A-LR: historical, ssp126, ssp245, ssp585	Input dataset			(Boucher et al., 2018b, 2019a, 2019b, 2019c)		
KACE-1-0-G: historical, ssp126, ssp245, ssp585	Input dataset			(Byun et al., 2019b, 2019c, 2019e, 2019a)		
MIROC-ES2L: historical, ssp126, ssp245, ssp585	Input dataset			(Hajima et al., 2019b; Tachiiri et al., 2019b, 2019c, 2019a)		
MIROC6: historical, ssp126, ssp245, ssp585	Input dataset			(Tatebe and Watanabe, 2018b; Shiogama et al., 2019c, 2019a, 2019b)		
MPI-ESM1-2-HR: historical, ssp126, ssp245, ssp585	Input dataset			(Jungclaus et al., 2019a; Schupfner et al., 2019a, 2019b, 2019c)		
MPI-ESM1-2-LR: historical, ssp126, ssp245, ssp585	Input dataset			(Wieners et al., 2019a, 2019c, 2019d, 2019e)		
MRI-ESM2-0: historical, ssp126, ssp245, ssp585	Input dataset			(Yukimoto et al., 2019g, 2019b, 2019h, 2019i)		
NESM3: historical, ssp126, ssp245, ssp585	Input dataset			(Cao, 2019b, 2019c, 2019a; Cao and Wang, 2019b)		
NorESM2-LM: historical, ssp126, ssp245, ssp585	Input dataset			(Selander et al., 2019d, 2019e, 2019c, 2019a)		

	NorESM2-MM: historical, ssp126, ssp245, ssp585	Input dataset		(Bentsen et al., 2019c, 2019a, 2019e, 2019d)		
	TaiESM1: historical, ssp585	Input dataset		(Lee and Liang, 2020a, 2020c)		
	UKESM1-0-LL: historical, ssp126, ssp245, ssp585	Input dataset		(Good et al., 2019a, 2019c, 2019b; Tang et al., 2019b)		
	Figure 8.15 Code	Code	Fig8-15.sh (compute) Fig8- 15_figure. sh (plot)		https://github.com/ senesis/some_chap 8_figures	CAMMAC :(Sénési, 2020) CliMAF : (Sénési et al., 2021)
Figure 8.16	CMIP6 model data					
	ACCESS-CM2: historical, ssp585	Input dataset		(Dix et al., 2019a, 2019e)		
	ACCESS-ESM1-5: historical, ssp585	Input dataset		(Ziehn et al., 2019a, 2019e)		
	AWI-CM-1-1-MR: historical, ssp585	Input dataset		(Semmler et al., 2018a, 2019)		
	BCC-CSM2-MR: historical, ssp585	Input dataset		(Wu et al., 2018a; Xin et al., 2019c)		
	CAMS-CSM1-0: historical, ssp585	Input dataset		(Rong, 2019b, 2019f)		
	CESM2: historical, ssp585	Input dataset		(Danabasoglu, 2019j, 2019m)		
	CESM2-WACCM: historical, ssp585	Input dataset		(Danabasoglu, 2019d, 2019h)		
	CIESM: historical, ssp585	Input dataset		(Huang, 2019a, 2020b)		
	CMCC-CM2-SR5: historical, ssp585	Input dataset		(Lovato and Peano, 2020a, 2020e)		
	CNRM-CM6-1: historical, ssp585	Input dataset		(Volodire, 2018a, 2019j)		

	Final Government Distribution	8.SM	IPCC AR6 WGI
CNRM-ESM2-1: historical, ssp585	Input dataset	(Voldoire, 2019a, 2019d) (Seferian, 2018b; Voldoire, 2019m)	
CanESM5: historical, ssp585	Input dataset	(Swart et al., 2019o, 2019h)	
CanESM5-CanOE: historical, ssp585	Input dataset	(Swart et al., 2019f, 2019b)	
EC-Earth3: historical, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019g, 2019k)	
EC-Earth3-Veg: historical, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019f, 2019b)	
EC-Earth3-Veg-LR: historical, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2020d, 2020b)	
FGOALS-f3-L: historical, ssp585	Input dataset	(Yu, 2019e, 2019a)	
FGOALS-g3: historical, ssp585	Input dataset	(Li, 2019f, 2019b)	
FIO-ESM-2-0: historical, ssp585	Input dataset	(Song et al., 2019e, 2019a)	
GFDL-CM4: historical, ssp585	Input dataset	(Guo et al., 2018e, 2018b)	
GFDL-ESM4: historical, ssp585	Input dataset	(John et al., 2018c; Krasting et al., 2018b)	
GISS-E2-1-G: historical, ssp585	Input dataset	(NASA Goddard Institute for Space Studies (NASA/GISS), 2018b, 2020c)	
HadGEM3-GC31-LL: historical, ssp585	Input dataset	(Ridley et al., 2019a; Good, 2020b)	
HadGEM3-GC31-MM: historical, ssp585	Input dataset	(Ridley et al., 2019b; Jackson, 2020b)	
IITM-ESM: historical, ssp585	Input dataset	(Raghavan and Panickal, 2019; Panickal and Narayanasetti, 2020c)	
INM-CM4-8: historical, ssp585	Input dataset	(Volodin et al., 2019b, 2019f)	

	Final Government Distribution	8.SM	IPCC AR6 WGI
INM-CM5-0: historical, ssp585	Input dataset	(Volodin et al., 2019h, 2019l)	
IPSL-CM6A-LR: historical, ssp585	Input dataset	(Boucher et al., 2018b, 2019c)	
KACE-1-0-G: historical, ssp585	Input dataset	(Byun et al., 2019c, 2019e)	
MCM-UA-1-0: historical, ssp585	Input dataset	(Stouffer, 2019f, 2019b)	
MIROC-ES2L: historical, ssp585	Input dataset	(Hajima et al., 2019b; Tachiiri et al., 2019c)	
MIROC6: historical, ssp585	Input dataset	(Tatebe and Watanabe, 2018b; Shiogama et al., 2019c)	
MPI-ESM1-2-HR: historical, ssp585	Input dataset	(Jungclaus et al., 2019a; Schupfner et al., 2019c)	
MPI-ESM1-2-LR: historical, ssp585	Input dataset	(Wieners et al., 2019a, 2019e)	
MRI-ESM2-0: historical, ssp585	Input dataset	(Yukimoto et al., 2019b, 2019i)	
NorESM3: historical, ssp585	Input dataset	(Cao, 2019c; Cao and Wang, 2019b)	
NorESM2-LM: historical, ssp585	Input dataset	(Seland et al., 2019e, 2019a)	
NorESM2-MM: historical, ssp585	Input dataset	(Bentsen et al., 2019a, 2019e)	
TaiESM1: historical, ssp585	Input dataset	(Lee and Liang, 2020a, 2020c)	
UKESM1-0-LL: historical, ssp585	Input dataset	(Good et al., 2019c; Tang et al., 2019b)	
Figure 8.16 Code	Code	Fig8-16.sh (compute and plot)	https://github.com/ senesis/some_chap 8_figures CAMMAC : (Sénési, 2020) CliMAF : (Sénési et al., 2021)
CMIP6 model data			

	Final Government Distribution	8.SM	IPCC AR6 WGI
Figure 8.17	ACCESS-CM2: historical, ssp126, ssp245, ssp585	Input dataset	(Dix et al., 2019d, 2019a, 2019e, 2019c)
	ACCESS-ESM1-5: historical, ssp126, ssp245, ssp585	Input dataset	(Ziehn et al., 2019a, 2019e, 2019d, 2019c)
	AWI-CM-1-1-MR: historical, ssp126, ssp245, ssp585	Input dataset	(Semmler et al., 2018c, 2018d, 2018a, 2019)
	BCC-CSM2-MR: historical, ssp126, ssp245, ssp585	Input dataset	(Wu et al., 2018a; Xin et al., 2019a, 2019c, 2019b)
	CAMS-CSM1-0: historical, ssp126, ssp245, ssp585	Input dataset	(Rong, 2019d, 2019e, 2019b, 2019f)
	CESM2: historical, ssp126, ssp245, ssp585	Input dataset	(Danabasoglu, 2019j, 2019m, 2019l, 2019k)
	CESM2-WACCM: historical, ssp126, ssp245, ssp585	Input dataset	(Danabasoglu, 2019d, 2019f, 2019h, 2019g)
	CMCC-CM2-SR5: historical, ssp126, ssp245, ssp585	Input dataset	(Lovato and Peano, 2020c, 2020a, 2020d, 2020e)
	CNRM-CM6-1: historical, ssp126, ssp245, ssp585	Input dataset	(Voldoire, 2018a, 2019j, 2019i, 2019h)
	CNRM-CM6-1-HR: historical, ssp126, ssp245, ssp585	Input dataset	(Voldoire, 2019a, 2019d, 2019c, 2020)
	CNRM-ESM2-1: historical, ssp126, ssp245, ssp585	Input dataset	(Seferian, 2018b; Voldoire, 2019m, 2019l, 2019k)
	CanESM5: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019n, 2019o, 2019m, 2019h)

	Final Government Distribution	8.SM	IPCC AR6 WGI
CanESM5-CanOE: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019f, 2019e, 2019d, 2019b)	
EC-Earth3: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019g, 2019j, 2019k, 2019i)	
EC-Earth3-Veg: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019e, 2019f, 2019d, 2019b)	
FGOALS-f3-L: historical, ssp126, ssp245, ssp585	Input dataset	(Yu, 2019e, 2019c, 2019a, 2019d)	
FGOALS-g3: historical, ssp126, ssp245, ssp585	Input dataset	(Li, 2019f, 2019e, 2019b, 2019d)	
FIO-ESM-2-0: historical, ssp126, ssp245, ssp585	Input dataset	(Song et al., 2019e, 2019d, 2019c, 2019a)	
GFDL-CM4: historical, ssp245, ssp585	Input dataset	(Guo et al., 2018e, 2018d, 2018b)	
GFDL-ESM4: historical, ssp126, ssp245, ssp585	Input dataset	(John et al., 2018a, 2018b, 2018c; Krasting et al., 2018b)	
GISS-E2-1-G: historical, ssp126, ssp245, ssp585	Input dataset	(NASA Goddard Institute for Space Studies (NASA/GISS), 2018b, 2020a, 2020c, 2020b)	
HadGEM3-GC31-LL: historical, ssp126, ssp245, ssp585	Input dataset	(Good, 2019, 2020a, 2020b; Ridley et al., 2019a)	
HadGEM3-GC31-MM: historical, ssp126, ssp585	Input dataset	(Ridley et al., 2019b; Jackson, 2020b, 2020a)	
IITM-ESM: historical, ssp126, ssp245, ssp585	Input dataset	(Raghavan and Panickal, 2019; Panickal and Narayanasetti, 2020b, 2020a, 2020c)	
INM-CM4-8: historical, ssp126, ssp245, ssp585	Input dataset	(Volodin et al., 2019d, 2019b, 2019f, 2019e)	

	INM-CM5-0: historical, ssp126, ssp245, ssp585	Input dataset		(Volodin et al., 2019j, 2019k, 2019h, 2019l)		
	IPSL-CM5A2-INCA: historical, ssp126	Input dataset		(Boucher et al., 2020a, 2020b)		
	IPSL-CM6A-LR: historical, ssp126, ssp245, ssp585	Input dataset		(Boucher et al., 2018b, 2019a, 2019b, 2019c)		
	KACE-1-0-G: historical, ssp126, ssp245, ssp585	Input dataset		(Byun et al., 2019b, 2019c, 2019e, 2019a)		
	MCM-UA-1-0: historical, ssp126, ssp245, ssp585	Input dataset		(Stouffer, 2019f, 2019b, 2019e, 2019d)		
	MIROC-ES2L: historical, ssp126, ssp245, ssp585	Input dataset		(Hajima et al., 2019b; Tachiiri et al., 2019b, 2019c, 2019a)		
	MIROC6: historical, ssp126, ssp245, ssp585	Input dataset		(Tatebe and Watanabe, 2018b; Shiogama et al., 2019c, 2019a, 2019b)		
	MPI-ESM1-2-HR: historical, ssp126, ssp245, ssp585	Input dataset		(Jungclaus et al., 2019a; Schupfner et al., 2019a, 2019b, 2019c)		
	MPI-ESM1-2-LR: historical, ssp126, ssp245, ssp585	Input dataset		(Wieners et al., 2019a, 2019c, 2019d, 2019e)		
	MRI-ESM2-0: historical, ssp126, ssp245, ssp585	Input dataset		(Yukimoto et al., 2019g, 2019b, 2019h, 2019i)		
	NESM3: historical, ssp126, ssp245, ssp585	Input dataset		(Cao, 2019b, 2019c, 2019a; Cao and Wang, 2019b)		
	NorESM2-LM: historical, ssp126, ssp245, ssp585	Input dataset		(Selander et al., 2019d, 2019e, 2019c, 2019a)		
	NorESM2-MM: historical, ssp126, ssp245, ssp585	Input dataset		(Bentsen et al., 2019c, 2019a, 2019e, 2019d)		

	TaiESM1: historical, ssp585	Input dataset		(Lee and Liang, 2020a, 2020c)		
	UKESM1-0-LL: historical, ssp126, ssp245, ssp585	Input dataset		(Good et al., 2019a, 2019c, 2019b; Tang et al., 2019b)		
	Figure 8.17 Code	Code	Fig8-17.sh (compute and plot)		https://github.com/senesis/some_chap_8_figures	CAMMAC : (Sénési et al., 2020) CliMAF : (Sénési et al., 2021)
Figure 8.18	CMIP6 model data					
	ACCESS-CM2: historical, ssp126, ssp245, ssp585	Input dataset		(Dix et al., 2019d, 2019a, 2019e, 2019c)		
	ACCESS-ESM1-5: historical, ssp126, ssp245, ssp585	Input dataset		(Ziehn et al., 2019a, 2019e, 2019d, 2019c)		
	BCC-CSM2-MR: historical, ssp126, ssp245, ssp585	Input dataset		(Wu et al., 2018a; Xin et al., 2019a, 2019c, 2019b)		
	CAMS-CSM1-0: historical, ssp126, ssp245, ssp585	Input dataset		(Rong, 2019d, 2019e, 2019b, 2019f)		
	CESM2: historical, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019j, 2019m, 2019l, 2019k)		
	CESM2-WACCM: historical, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019d, 2019f, 2019h, 2019g)		
	CIESM: historical, ssp126, ssp245, ssp585	Input dataset		(Huang, 2019a, 2019c, 2020b, 2020a)		
	CMCC-CM2-SR5: historical, ssp126, ssp245, ssp585	Input dataset		(Lovato and Peano, 2020c, 2020a, 2020d, 2020e)		
	CNRM-CM6-1: historical, ssp126, ssp245, ssp585	Input dataset		(Voltaire, 2018a, 2019j, 2019i, 2019h)		

	Final Government Distribution	8.SM	IPCC AR6 WGI
CNRM-CM6-1-HR: historical, ssp126, ssp245, ssp585	Input dataset	(Voldoire, 2019a, 2019d, 2019c, 2020)	
CNRM-ESM2-1: historical, ssp126, ssp245, ssp585	Input dataset	(Seferian, 2018b; Voldoire, 2019m, 2019l, 2019k)	
CanESM5: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019n, 2019o, 2019m, 2019h)	
CanESM5-CanOE: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019f, 2019e, 2019d, 2019b)	
EC-Earth3: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019g, 2019j, 2019k, 2019i)	
EC-Earth3-Veg: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019e, 2019f, 2019d, 2019b)	
FGOALS-f3-L: historical, ssp126, ssp245, ssp585	Input dataset Input dataset Input dataset	(Yu, 2019e, 2019c, 2019a, 2019d)	
FGOALS-g3: historical, ssp126, ssp245, ssp585	Input dataset	(Li, 2019f, 2019e, 2019b, 2019d)	
FIO-ESM-2-0: historical, ssp126, ssp245, ssp585	Input dataset	(Song et al., 2019e, 2019d, 2019c, 2019a)	
GFDL-CM4: historical, ssp245, ssp585	Input dataset	(Guo et al., 2018e, 2018d, 2018b)	
GISS-E2-1-G: historical, ssp126, ssp245, ssp585	Input dataset	(NASA Goddard Institute for Space Studies (NASA/GISS), 2018b, 2020a, 2020c, 2020b)	
HadGEM3-GC31-LL: historical, ssp126, ssp245, ssp585	Input dataset	(Good, 2019, 2020a, 2020b; Ridley et al., 2019a)	

	Final Government Distribution	8.SM	IPCC AR6 WGI
	HadGEM3-GC31-MM: historical, ssp126, ssp585	Input dataset	(Ridley et al., 2019b; Jackson, 2020b, 2020a)
	INM-CM4-8: historical, ssp126, ssp245, ssp585	Input dataset	(Volodin et al., 2019d, 2019b, 2019f, 2019e)
	INM-CM5-0: historical, ssp126, ssp245, ssp585	Input dataset	(Volodin et al., 2019j, 2019k, 2019h, 2019l)
	IPSL-CM6A-LR: historical, ssp126, ssp245, ssp585	Input dataset	(Boucher et al., 2020a, 2020b)
			(Boucher et al., 2018b, 2019a, 2019b, 2019c)
	KACE-1-0-G: historical, ssp126, ssp245, ssp585	Input datasetInpu t dataset	(Byun et al., 2019b, 2019c, 2019e, 2019a)
	MCM-UA-1-0: historical, ssp126, ssp245, ssp585	Input dataset	(Stouffer, 2019f, 2019b, 2019e, 2019d)
	MIROC-ES2L: historical, ssp126, ssp245, ssp585	Input dataset	(Hajima et al., 2019b; Tachiiri et al., 2019b, 2019c, 2019a)
	MIROC6: historical, ssp126, ssp245, ssp585	Input dataset	(Tatebe and Watanabe, 2018b; Shiogama et al., 2019c, 2019a, 2019b)
	MPI-ESM1-2-HR: historical, ssp126, ssp245, ssp585	Input dataset	(Jungclaus et al., 2019a; Schupfner et al., 2019a, 2019b, 2019c)
	MPI-ESM1-2-LR: historical, ssp126, ssp245, ssp585	Input dataset	(Wieners et al., 2019a, 2019c, 2019d, 2019e)
	MRI-ESM2-0: historical, ssp126, ssp245, ssp585	Input dataset	(Yukimoto et al., 2019g, 2019b, 2019h, 2019i)
	UKESM1-0-LL: historical, ssp126, ssp245, ssp585	Input dataset	(Good et al., 2019a, 2019c, 2019b; Tang et al., 2019b)

	Final Government Distribution	8.SM	IPCC AR6 WGI
	Figure 8.18 Code	Code	Fig8-18.sh (compute and plot)
			https://github.com/senesis/some_chap_8_figures
Figure 8.19	CMIP6 / SSP1.2-6 SSP2-4.5 SSP5-8.5		https://esgf-node.llnl.gov/search/cmip6/
Figure 8.20	Tree-ring reconstructed Palmer Drought Severity Index & NCAR CESM Last Millennium Ensemble from CMIP5		Morales et al., 2020; Palmer et al., 2015), Pederson et al., 2014; Hessl et al., 2018)
Figure 8.21	Schematic		
CMIP6 model data			
	BCC-CSM2-MR: historical, piControl, ssp585	Input dataset	(Wu et al., 2018a, 2018b, Xin et al., 2018, 2019c)
	CAMS-CSM1-0: historical, piControl, ssp585	Input dataset	(Rong, 2019b, 2019f, 2019a, 2019c)
	CESM2: historical, piControl, ssp585	Input dataset	(Danabasoglu, 2019i, 2019j, 2019m; Danabasoglu et al., 2019)
	CESM2-WACCM: historical, piControl, ssp585	Input dataset	(Danabasoglu, 2019d, 2019e, 2019h, 2019c)
	CNRM-ESM2-1: historical, piControl, ssp585	Input dataset	(Seferian, 2018a, 2018b, 2018c; Volodire, 2019m)
	CanESM5: historical, piControl, ssp585	Input dataset	(Swart et al., 2019i, 2019o, 2019g, 2019h)
	CanESM5-CanOE: historical, piControl, ssp585	Input dataset	(Swart et al., 2019f, 2019a, 2019c, 2019b)

	Final Government Distribution	8.SM	IPCC AR6 WGI
	FGOALS-g3: historical, piControl, ssp585	Input dataset	(Yu, 2018, 2019e, 2019a, 2019b)
	GFDL-CM4: historical, piControl, ssp585		(Li, 2019f, 2019b, 2019a, 2019c)
			(Guo et al., 2018e, 2018a, 2018b, 2018c)
	GFDL-ESM4: historical, piControl, ssp585	Input dataset Input dataset Input dataset	(John et al., 2018c; Krasting et al., 2018b, 2018a, 2018c)
	GISS-E2-1-G: historical, piControl, ssp585	Input dataset	(NASA Goddard Institute for Space Studies (NASA/GISS), 2018c, 2018a, 2018b, 2020c)
	INM-CM4-8: historical, piControl, ssp585	Input dataset	(Volodin et al., 2019b, 2019c, 2019a, 2019f)
	INM-CM5-0: historical, piControl, ssp585	Input dataset	(Volodin et al., 2019g, 2019i, 2019h, 2019l)
	IPSL-CM6A-LR: historical, piControl, ssp585	Input dataset	(Boucher et al., 2018a, 2018c, 2018b, 2019c)
	KACE-1-0-G: historical, piControl, ssp585	Input dataset	(Byun et al., 2019f, 2019c, 2019e, 2019d)
	MCM-UA-1-0: historical, piControl, ssp585	Input dataset	(Stouffer, 2019f, 2019b, 2019a, 2019c)
	MIROC-ES2L: historical, piControl, ssp585	Input dataset	(Hajima et al., 2019a, 2019b, 2019c; Tachiiri et al., 2019c)
	MPI-ESM1-2-HR: historical, piControl, ssp585	Input dataset	(Tatebe and Watanabe, 2018b, 2018a, 2018c; Shiogama et al., 2019c)
	MRI-ESM2-0: historical, piControl, ssp585		(Jungclaus et al., 2019b, 2019c, 2019a; Schupfner et al., 2019c)

					Final Government Distribution	8.SM	IPCC AR6 WGI
					(Yukimoto et al., 2019c, 2019a, 2019b, 2019i)		
	NESM3: historical, piControl, ssp585	Input dataset			(Cao, 2019c; Cao and Wang, 2019c, 2019a, 2019b)		
	UKESM1-0-LL: historical, piControl, ssp585	Input dataset			(Good et al., 2019c; Tang et al., 2019b, 2019c, 2019a)		
Figure 8.22	CMIP6 / SSP1.2-6 SSP2-4.5 SSP5-8.5					https://esgf-node.llnl.gov/search/cmip6/	
Figure 8.23	CMIP6 SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5					https://esgf-node.llnl.gov/search/cmip6/	(Lehner et al., 2020).
Figure 8.24	CESM1						(Deser et al., 2017)
Figure 8.25	ACCESS-CM2: historical, ssp585	Input dataset			(Dix et al., 2019a, 2019e)		
	ACCESS-ESM1-5: historical, ssp585	Input dataset			(Ziehn et al., 2019a, 2019e)		
	AWI-CM-1-1-MR: historical, ssp585	Input dataset			(Semmler et al., 2018a, 2019)		
	CESM2: historical, ssp585	Input dataset			(Danabasoglu, 2019j, 2019m)		
	CESM2-WACCM: historical, ssp585	Input dataset			(Danabasoglu, 2019d, 2019h)		
	CIESM: historical, ssp585	Input dataset			(Huang, 2019a, 2020b)		
	CMCC-CM2-SR5: historical, ssp585	Input dataset			(Lovato and Peano, 2020a, 2020e)		
	CNRM-CM6-1: historical, ssp585	Input dataset			(Volodioire, 2018a, 2019j)		

	Final Government Distribution	8.SM	IPCC AR6 WGI
	CNRM-CM6-1-HR: historical, ssp585	Input dataset	(Voldoire, 2019a, 2019d)
	CNRM-ESM2-1: historical, ssp585	Input dataset	(Seferian, 2018b; Voldoire, 2019m)
	CanESM5: historical, ssp585	Input dataset	(Swart et al., 2019o, 2019h)
	CanESM5-CanOE: historical, ssp585	Input dataset	(Swart et al., 2019f, 2019b)
	EC-Earth3: historical, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019g, 2019k)
	EC-Earth3-Veg: historical, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019f, 2019b)
	FGOALS-f3-L: historical, ssp585	Input dataset	(Yu, 2019e, 2019a)
	FIO-ESM-2-0: historical, ssp585	Input dataset	(Song et al., 2019e, 2019a)
	GFDL-CM4: historical, ssp585	Input dataset	(Guo et al., 2018e, 2018b)
	HadGEM3-GC31-LL: historical, ssp585	Input dataset	(Ridley et al., 2019a; Good, 2020b)
	HadGEM3-GC31-MM: historical, ssp585	Input dataset	(Ridley et al., 2019b; Jackson, 2020b)
	IPSL-CM6A-LR: historical, ssp585	Input dataset	(Boucher et al., 2018b, 2019c)
	KACE-1-0-G: historical, ssp585	Input dataset	(Byun et al., 2019c, 2019e)
	MCM-UA-1-0: historical, ssp585	Input dataset	(Stouffer, 2019f, 2019b)
	MRI-ESM2-0: historical, ssp585	Input dataset	(Yukimoto et al., 2019b, 2019i)
	NESM3: historical, ssp585	Input dataset	(Cao, 2019c; Cao and Wang, 2019b)
	TaiESM1: historical, ssp585	Input dataset	(Lee and Liang, 2020a, 2020c)

	Final Government Distribution		8.SM	IPCC AR6 WGI	
	UKESM1-0-LL: historical, ssp585	Input dataset		(Good et al., 2019c; Tang et al., 2019b)	
Figure 8.25	Figure 8.25 Code	Code	Fig8-25.sh (compute and plot)		https://github.com/ senesis/some_chap 8_figures CAMMAC (Sénési, 2020) CliMAF : (Sénési et al., 2021)
Figure 8.26	CMIP6 model data				
	ACCESS-CM2: historical, ssp126, ssp245, ssp585	Input dataset		(Dix et al., 2019d, 2019a, 2019e, 2019c)	
	ACCESS-ESM1-5: historical, ssp126, ssp245, ssp585	Input dataset		(Ziehn et al., 2019a, 2019e, 2019d, 2019c)	
	BCC-CSM2-MR: historical, ssp126, ssp245, ssp585	Input dataset		(Wu et al., 2018a; Xin et al., 2019a, 2019c, 2019b)	
	CAMS-CSM1-0: historical, ssp126, ssp245, ssp585	Input dataset		(Rong, 2019d, 2019e, 2019b, 2019f)	
	CESM2: historical, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019j, 2019m, 2019l, 2019k)	
	CESM2-WACCM: historical, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019d, 2019f, 2019h, 2019g)	
	CIESM: historical, ssp126, ssp245, ssp585	Input dataset		(Huang, 2019a, 2019c, 2020b, 2020a)	
	CMCC-CM2-SR5: historical, ssp126, ssp245, ssp585	Input dataset		(Lovato and Peano, 2020c, 2020a, 2020d, 2020e)	
	CNRM-CM6-1: historical, ssp126, ssp245, ssp585	Input dataset		(Voldoire, 2018a, 2019j, 2019i, 2019h)	
	CNRM-CM6-1-HR: historical, ssp126, ssp245, ssp585	Input dataset		(Voldoire, 2019a, 2019d, 2019c, 2020)	

	Final Government Distribution	8.SM	IPCC AR6 WGI
CNRM-ESM2-1: historical, ssp126, ssp245, ssp585	Input dataset	(Seferian, 2018b; Voldoire, 2019m, 2019l, 2019k)	
CanESM5: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019n, 2019o, 2019m, 2019h)	
CanESM5-CanOE: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019f, 2019e, 2019d, 2019b)	
EC-Earth3: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019g, 2019j, 2019k, 2019i)	
EC-Earth3-Veg: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019e, 2019f, 2019d, 2019b)	
FGOALS-f3-L: historical, ssp126, ssp245, ssp585	Input dataset	(Yu, 2019e, 2019c, 2019a, 2019d)	
FGOALS-g3: historical, ssp126, ssp245, ssp585	Input dataset	(Li, 2019f, 2019e, 2019b, 2019d)	
FIO-ESM-2-0: historical, ssp126, ssp245, ssp585	Input dataset	(Song et al., 2019e, 2019d, 2019c, 2019a)	
GFDL-CM4: historical, ssp245, ssp585	Input dataset	(Guo et al., 2018e, 2018d, 2018b)	
GISS-E2-1-G: historical, ssp126, ssp245, ssp585	Input dataset	(NASA Goddard Institute for Space Studies (NASA/GISS), 2018b, 2020a, 2020c, 2020b)	
HadGEM3-GC31-LL: historical, ssp126, ssp245, ssp585	Input dataset	(Good, 2019, 2020a, 2020b; Ridley et al., 2019a)	
HadGEM3-GC31-MM: historical, ssp126, ssp585	Input dataset	(Ridley et al., 2019b; Jackson, 2020b, 2020a)	
INM-CM4-8: historical, ssp126, ssp245, ssp585	Input dataset	(Volodin et al., 2019d, 2019b, 2019f, 2019e)	

	Final Government Distribution	8.SM	IPCC AR6 WGI
	INM-CM5-0: historical, ssp126, ssp245, ssp585	Input dataset	(Volodin et al., 2019j, 2019k, 2019h, 2019l)
	IPSL-CM5A2-INCA: historical, ssp126	Input dataset	(Boucher et al., 2020a, 2020b)
	IPSL-CM6A-LR: historical, ssp126, ssp245, ssp585	Input dataset	(Boucher et al., 2018b, 2019a, 2019b, 2019c)
	KACE-1-0-G: historical, ssp126, ssp245, ssp585	Input dataset	(Byun et al., 2019b, 2019c, 2019e, 2019a)
	MCM-UA-1-0: historical, ssp126, ssp245, ssp585	Input dataset	(Stouffer, 2019f, 2019b, 2019e, 2019d)
	MIROC-ES2L: historical, ssp126, ssp245, ssp585	Input dataset	(Hajima et al., 2019b; Tachiiri et al., 2019b, 2019c, 2019a)
	MIROC6: historical, ssp126, ssp245, ssp585	Input dataset	(Tatebe and Watanabe, 2018b; Shiogama et al., 2019c, 2019a, 2019b)
	MPI-ESM1-2-HR: historical, ssp126, ssp245, ssp585	Input dataset	(Jungclaus et al., 2019a; Schupfner et al., 2019a, 2019b, 2019c)
	MPI-ESM1-2-LR: historical, ssp126, ssp245, ssp585	Input dataset	(Wieners et al., 2019a, 2019c, 2019d, 2019e)
	MRI-ESM2-0: historical, ssp126, ssp245, ssp585	Input dataset	(Yukimoto et al., 2019g, 2019b, 2019h, 2019i)
	UKESM1-0-LL: historical, ssp126, ssp245, ssp585	Input dataset	(Good et al., 2019a, 2019c, 2019b; Tang et al., 2019b)
	Figure 8.26 Code	Code	https://github.com/senesi/some_chap_8_figures CAMMAC : (Sénési, 2020) CliMAF : (Sénési et al., 2021)
Figure 8.27	TraCE paleoclimate simulation, paleoclimate		(Liu et al., 2009)), (Liu et al., 2017b)).

	proxy &doubling of CO ₂ experiment					
Figure Box8-1	CMIP6 DAMIP GPCC, CRU GEBA				https://esgf-node.llnl.gov/search/obs4mips/ https://psl.noaa.gov/data/gridded/ta.gpcp.html https://crudata.uea.ac.uk/cru/data/hrg/cru_ts_4.04/ge/	(Huffman et al., 1997, 2009, Adler et al., 2003, 2016) (Harris et al., 2014) Storelvmo et al (2018)
Figure Box8-2	Schematic					(Wang et al., 2013)
CMIP6 model data						
Figure Box8-2-f1	ACCESS-CM2: historical, ssp126, ssp245, ssp585	Input dataset		(Dix et al., 2019d, 2019a, 2019e, 2019c)		
	ACCESS-ESM1-5: historical, ssp126, ssp245, ssp585	Input dataset		(Ziehn et al., 2019a, 2019e, 2019d, 2019c)		
	AWI-CM-1-1-MR: historical, ssp126, ssp245, ssp585	Input dataset		(Semmler et al., 2018c, 2018d, 2018a, 2019)		
	BCC-CSM2-MR: historical, ssp126, ssp245, ssp585	Input dataset		(Wu et al., 2018a; Xin et al., 2019a, 2019c, 2019b)		
	CAMS-CSM1-0: historical, ssp126, ssp245, ssp585	Input dataset		(Rong, 2019d, 2019e, 2019b, 2019f)		
	CESM2: historical, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019j, 2019m, 2019l, 2019k)		
	CESM2-WACCM: historical, ssp126, ssp245, ssp585	Input dataset		(Danabasoglu, 2019d, 2019f, 2019h, 2019g)		

	Final Government Distribution	8.SM	IPCC AR6 WGI
CIESM: historical, ssp126, ssp245, ssp585	Input dataset	(Huang, 2019a, 2019c, 2020b, 2020a)	
CMCC-CM2-SR5: historical, ssp126, ssp245, ssp585	Input dataset	(Lovato and Peano, 2020c, 2020a, 2020d, 2020e)	
CNRM-CM6-1: historical, ssp126, ssp245, ssp585	Input dataset	(Volodire, 2018a, 2019j, 2019i, 2019h)	
CNRM-CM6-1-HR: historical, ssp126, ssp245, ssp585	Input dataset	(Volodire, 2019a, 2019d, 2019c, 2020)	
CNRM-ESM2-1: historical, ssp126, ssp245, ssp585	Input dataset	(Seferian, 2018b; Volodire, 2019m, 2019l, 2019k)	
CanESM5: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019n, 2019o, 2019m, 2019h)	
CanESM5-CanOE: historical, ssp126, ssp245, ssp585	Input dataset	(Swart et al., 2019f, 2019e, 2019d, 2019b)	
EC-Earth3: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019g, 2019j, 2019k, 2019i)	
EC-Earth3-Veg: historical, ssp126, ssp245, ssp585	Input dataset	(EC-Earth Consortium (EC-Earth), 2019e, 2019f, 2019d, 2019b)	
FGOALS-f3-L: historical, ssp126, ssp245, ssp585	Input dataset	(Yu, 2019e, 2019c, 2019a, 2019d)	
FGOALS-g3: historical, ssp126, ssp245, ssp585	Input dataset	(Li, 2019f, 2019e, 2019b, 2019d)	
FIO-ESM-2-0: historical, ssp126, ssp245, ssp585	Input dataset	(Song et al., 2019e, 2019d, 2019c, 2019a)	
GFDL-CM4: historical, ssp245, ssp585	Input dataset	(Guo et al., 2018e, 2018d, 2018b)	

	GFDL-ESM4: historical, ssp126, ssp245, ssp585	Input dataset		(John et al., 2018a, 2018b, 2018c; Krasting et al., 2018b)		
	GISS-E2-1-G: historical, ssp126, ssp245, ssp585	Input dataset		(NASA Goddard Institute for Space Studies (NASA/GISS), 2018b, 2020a, 2020c, 2020b)		
	HadGEM3-GC31-LL: historical, ssp126, ssp245, ssp585	Input dataset		(Good, 2019, 2020a, 2020b; Ridley et al., 2019a)		
	HadGEM3-GC31-MM: historical, ssp126, ssp585	Input dataset		(Ridley et al., 2019b; Jackson, 2020b, 2020a)		
	IITM-ESM: historical, ssp126, ssp245, ssp585	Input dataset		(Raghavan and Panickal, 2019; Panickal and Narayanasetti, 2020b, 2020a, 2020c)		
	INM-CM4-8: historical, ssp126, ssp245, ssp585	Input dataset		(Volodin et al., 2019d, 2019b, 2019f, 2019e)		
	INM-CM5-0: historical, ssp126, ssp245, ssp585	Input dataset		(Volodin et al., 2019j, 2019k, 2019h, 2019l)		
	IPSL-CM5A2-INCA: historical, ssp126	Input dataset		(Boucher et al., 2020a, 2020b)		
	IPSL-CM6A-LR: historical, ssp126, ssp245, ssp585	Input dataset		(Boucher et al., 2018b, 2019a, 2019b, 2019c)		
	KACE-1-0-G: historical, ssp126, ssp245, ssp585	Input dataset		(Byun et al., 2019b, 2019c, 2019e, 2019a)		
	MCM-UA-1-0: historical, ssp126, ssp245, ssp585	Input dataset		(Stouffer, 2019f, 2019b, 2019e, 2019d)		
	MIROC-ES2L: historical, ssp126, ssp245, ssp585	Input dataset		(Hajima et al., 2019b; Tachiiri et al., 2019b, 2019c, 2019a)		
	MIROC6: historical, ssp126, ssp245, ssp585	Input dataset		(Tatebe and Watanabe, 2018b; Shiogama et al., 2019c, 2019a, 2019b)		

	Final Government Distribution	8.SM	IPCC AR6 WGI
MPI-ESM1-2-HR: historical, ssp126, ssp245, ssp585	Input dataset	(Jungclaus et al., 2019a; Schupfner et al., 2019a, 2019b, 2019c)	
MPI-ESM1-2-LR: historical, ssp126, ssp245, ssp585	Input dataset	(Wieners et al., 2019a, 2019c, 2019d, 2019e)	
MRI-ESM2-0: historical, ssp126, ssp245, ssp585	Input dataset	(Yukimoto et al., 2019g, 2019b, 2019h, 2019i)	
NESM3: historical, ssp126, ssp245, ssp585	Input dataset	(Cao, 2019b, 2019c, 2019a; Cao and Wang, 2019b)	
NorESM2-LM: historical, ssp245	Input dataset	(Seland et al., 2019d, 2019a)	
NorESM2-MM: historical, ssp126, ssp245, ssp585	Input dataset	(Bentsen et al., 2019c, 2019a, 2019e, 2019d)	
TaiESM1: historical, ssp585	Input dataset	(Lee and Liang, 2020a, 2020c)	
UKESM1-0-LL: historical, ssp126, ssp245, ssp585	Input dataset	(Good et al., 2019a, 2019c, 2019b; Tang et al., 2019b)	
Figure Box8-2-f1 Code	Code	FigBox8-2-f1.sh (compute and plot)	https://github.com/ senesis/some_chap 8_figures CAMMAC : (Sénési et al., 2020) CliMAF : (Sénési et al., 2021)
FAQ8.1, Figure 1:	Schematic	Schematic summarizing the influence of land cover and land use change on regional water cycle	

	Final Government Distribution	8.SM	IPCC AR6 WGI
FAQ8.2, Figure 1:	Schematic	Schematic illustrating factors important in determining changes in heavy precipitation and flooding.	
FAQ8.3, Figure 1:	Schematic	Drought .	
Table 8.1	Table 8.1 code	Code	https://github.com/senesis/some_chap8_figures CAMMAC : (Sénési, 2020) CliMAF : (Sénési et al., 2021)
Table 8.2	Table 8.2 code	Code	https://github.com/senesis/some_chap8_figures CAMMAC : (Sénési, 2020) CliMAF : (Sénési et al., 2021)

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2 [END TABLE 8.SM.1 HERE]
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