Catalogue of available datasets through the DAI website

Data Access Integration :

http://quebec.ccsn.ca/

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TABLE OF CONTENTS

1 OBSERVATIONS from EC

The National Climate Data and Information Archive, operated and maintained by the Environment Canada (EC), contains over 100 years of official climate and weather observations at a number of sites in Canada. The archive[1] consists of a database of monthly, daily and hourly weather observations, including temperature, precipitation, air pressure, wind speed, and cloud types, as well as notes on the occurrence of thunderstorms, hail, fog and other types of weather.

[1] LIST OF ATMOSPHERIC VARIABLES DEPENDS ON SELECTED REGION

2 CLIMATE MODELS

2.1 GLOBAL CLIMATE MODELS [GCM]

Table 2.1 : List of simulations available from several GCMs over Noth America only: version, domain and spatial resolution, GHG and Aerosol (A) evolution, and time window.

Model	Experiment	Domain & Resolution	GES + A Evolution	Time Window
HadCM3	1st member TAR (IPCC, 2001)	Global T42: 96 x 73 pts (2.50°lat x 3.75°lon)	SRES A2a	1990-Jan to 2099-Dec
			SRES B2a	
ECHAM4/OPYC3	1st member TAR (IPCC, 2001)	Global T42: 128 x 64 pts (2.81°lat x 3.81°lon)	IS92a	1960-Jan to 1990-Dec
			SRES A2	1991-Jan to 2100-Dec
			SRES B2	
CGCM2	1st member TAR (IPCC, 2001)	Global Gaussien: 48 x 96 pts (~3.75°lat x 3.75°lon)	Control	1961-Jan to 1989-Dec
			SRES A2	1990-Jan to 2100-Dec
CGCM3.1	4th member AR4 (IPCC, 2007)	Global Gaussien: 48 x 96 pts (~3.75°lat x 3.75°lon)	Control	1961-Jan to 2000-Dec
			SRES A2	2001-Jan to 2100-Dec

Table 2.2 : List of variables[2] at daily frequency issued from the GCMs given in tab. 2.1.

Variable	Unit	Level(s)	Frequency	Simulation
Minimum Temperature	K	2 m	daily	HadCM3, ECHAM4, CGCM2, CGCM3.1
Maximum Temperature	K			
Accumulated Precipitation	mm	surface		

[2] Temperature (minimum and maximum) at 2 m and wind components at 10 m are computed from prognostic variables at the lowest model level, and therefore represent diagnostic variables.

2.2 REGIONAL CLIMATE MODELS [RCM]

2.2.1 Canadian RCM

Table 2.3 : List of the RCMs simulations : versions, domain and resolution, driving oceanic and atmospheric data, Green-House-Gases (GHG) and Aerosols (A) evolution, and time window.

	Model Version	Domain & Resolution[3]	Driving atmospheric & oceanic data	GHG+A evolution	Time Window
aba	Canadian RCM v3.6.3	AMNO 45 km & 29L	NCEP & AMIP02	-	1960-dec to 1999-dec
abb			CGCM2 3rd member (6h)	Observed	1960-dec to 1990-dec
abd			ERA40 & AMIP02	-	1960-dec to 1990-dec
abe			CGCM2 3rd member (6h)	SRES A2	2040-dec to 2070-dec
abf	Canadian RCM v3.7.1	AMNO 45 km & 29L	NCEP & AMIP02	-	1960-dec to 1990-dec
abg			ERA40 & AMIP02		1960-dec to 1990-dec
abi			CGCM2 3rd member (6h)	Observed	1960-dec to 1990-dec
abj			CGCM2 3rd member (6h)	SRES A2	2040-dec to 2070-dec
acu	Canadian RCM v4.1.1	QC 45 km & 29L	CGCM3 4th member (6h)	Obs + SRES A2	1960-dec to 2100-nov
acy			ERA40 & AMIP02	-	1960-dec to 2002-jul
acw		AMNO 45 km & 29L	ERA40 (6h) & AMIP03		1960-dec to 2002-jul
ade			NCEP & AMIP05 (6h)		1960-dec to 2005-may
adj	Canadian RCM v4.2.0	AMNO 45 km & 29L	CGCM3 4th member (6h)	Obs + SRES A2	1960-dec to 1990-dec
adk			CGCM3 4th member (6h)		2040-dec to 2070-dec

[3] Resolution : horizontal (in km) and vertical (number of levels, L).

Table 2.4 : Raw CRCM variables at surface and near surface available from the runs given in Table 2.3.

Variable	Unit	Level(s)	Frequency	Simulation
Topography (PHIS)	m	-	-	aba, abb, abd, abe, abf, abg, abi, abj, ade, acw, acy, acu, adj, adk
Downward net radiation flux (BALG)	W/m^2	surface	6 h	
Surface energy budget at surface (BEG)	W/m^2			
Ground Temperature (GT)	K			
Ground cover (GC)[4]	[classes]		daily	
Total liquid precipitation rate falling on vegetation (PIVL)	$kg/(m^2s)$~mm/s		6 h	ade, acw, acy, acu, adj, adk
Total solid precipitation rate falling on vegetation (PIVF)	$kg/(m^2s)$~mm/s			
Surface albedo of IR radiation (ALSI)	fraction[0-1]			
Surface albedo of visible radiation (ALSV)	fraction[0-1]			
Sublimation rate on snow surface (QFN)	$kg/(m^2s)$~mm/s		averaged over 6h	
Evaporation rate of liquid water from vegetation (QFVL)	$kg/(m^2s)$~mm/s			
Liquid convective precipitation rate (RAIN)	$kg/(m^2s)$~mm/s			
Solid convective precipitation rate (RAIS)	$kg/(m^2s)$~mm/s			
Surface upward sensible heat flux (HFS)	W/m^2			aba, abb, abd, abe, abf, abg, abi, abj, ade, acw, adj, adk
Total precipitation (liquid & solid) rate (PCP)	$kg/(m^2s)$~mm/s			aba, abb, abd, abe, abf, abg, abi, abj, acu, acy, ade, acw, acy, acu, adj, adk
Total precipitation (liquid & solid) rate reaching ground (PIG)	$kg/(m^2s)$~mm/s			acu, acw, acy, ade, adj, adk
Total precipitation (liquid & solid) rate falling on snow (PIN)	$kg/(m^2s)$~mm/s			
Mean Sea Level Pressure (PMSL)	Pa			aba,abb,abd, abe, abf, abg, abi, abj, acu, acw, acy,

[4] If simulations *ade*, *acw*, *acy*, *acu*, *adj* and *adk* [land=-1; sea=0; sea_ice=1; free_lake=2; free_ice=3], if otherwise, [land=-1; sea=0; sea_ice=1].

				ade, adj, adk
Evaporation rate at surface (QFG)	kg/(m^2s)~mm/s			acu, acw, acy, ade, adj, adk
Vapor flux from surface (QFS)	kg/(m^2s)~mm/s			aba, abb, abd, abe, abf, abg, abi, abj, acu, acw, acy, adk, ade, adj, adk, acu
Snow on ground (water equivalent) (SNO)	kg/m^2~mm		daily	
Minimum Temperature (STMND)♣	K	2m		aba, abb, abd, abe, abf, abg, abi, abj, acu, acw, acy, ade, adj, adk
Maximum Temperature (STMXD)♣	K			
Daily minimum specific humidity (SQMND)♣	kg/kg			adj, adk, ade, acw, acy, acu
Daily maximum of specific humidity (SQMXD)♣	kg/kg			
Temperature at 2m (ST)	K		averaged over 6h	
Specific humidity (SQ)	kg/kg			
Sustained wind speed (not a maximum) (SWMX)	m/s	10m		
Daily maximum of eastward surface wind (SUMXD)♣	m/s	Lowest model level	daily	
Daily maximum of northward surface wind (SVMXD)♣	m/s			
Eastward surface wind (SU)	m/s		6 h	aba, abb, abd, abe, abf, abg, abi, abj, adk, adj, ade, acw, acy, acu
Northward surface wind (SV)	m/s			
Snow cover thickness (ZN)	m	surface	averaged over 6h	acu, acw, acy, ade, adj, adk
Downward radiative incident flux (FDL)	W/m^2			ade, acw, acy, acu, adj, adk
Downward Solar incident flux at surface (FSS)	W/m^2			
Solar flux absorbed by atmosphere – positif if absorbed - (FSA)	W/m^2			
Downward Solar incident flux on the top of atmosphere – positif downward - (FSO)	W/m^2			
Solar flux reflected by earth-atmosphere on the top of atmosphere : FSO-FSAG (FSR)	W/m^2			
Downward Solar incident flux absorbed by surface (FSG)	W/m^2			

♣ For certain runs, variable might take different nomenclature (without D).

Horizontal divergence of the stream flow in the column (DFQ)	kg/(m^2 s)			
Instantaneous total cloud cover (CLDL)	fraction[0-1]		6 h	
Shallow convection cloud base (SCLB)	m			
Shallow convection cloud top (SCLT)	m			
Deep convection cloud base (KCLB)	m			
Deep convection cloud top (KCLT)	m			

Table 2.5 : Raw CRCM variables in near-surface soil layers and at standard pressure levels available from the runs given in Table 1.3.

Variable	Unit	Level(s)	Frequency	Simulation
Soil temperature (TG)	K	Soil layer levels : 0.10, 0.25 and 3.75 m	6 h	ade, acw, acy, acu,adj,adk
Ice water content of the soil (WGL)	(kg/m^2) ~ mm			
Liquid water content of the soil (WGF)	(kg/m^2) ~ mm			
Upward evaporation rate in soil (QFVG)	(kg/m^2s) ~ mm/s		averaged over 6h	
Heat transfer through the soil horizon by percolation/conduction (HFCG1, HFCG2, HFCG3)	W/m^2			
Energy used for melting/freezing of ice/water in soil horizon (HMFG1, HMFG2, HMFG3)	W/m^2			
Topographic Boer‘s mask (BETA)	fraction [0-1]	Pressure (diagnostic) levels : 1000, 925, 850, 700, 600 and 500 hPa	6 h	aba, abb, abd, abe, abf, abg, abi, abj, ade, acw, acy, acu, adj, adk
Temperature (TEMP)	K			
Eastward wind (U)	m/s			
Northward wind (V)	m/s			
Geopotential (PHI)	m^2/s^2			
Relative humidity (RHUM)	fraction[0-1]			
Clouds by layer (CLD)	fraction[0-1]	Pressure (diagnostic) levels : 1000, 925, 850, 700, 600, 500, 400, 300, 250, 200, 150, 100, 70, 50, 30 and 20 hPa		ade, acw, acy, acu, adj, adk
Vertical velocity (W)	m/s			

2.2.2 ARPEGE-Climat

Table 2.6 : List of available simulations issued from the ARPÈGE-Climat (GCM with variable resolution)[5] (Déqué and Piedelievre, 1995; Gibelin and Déqué, 2003): version, domain and resolution, driving oceanic and atmospheric data, GHG and A evolution, and time window.

	Model Version	Domain & Resolution	Driving atmospheric & oceanic data	GHG+A evolution	Time Window
abx	ARPÈGE - Climat v4.4	Original : WINI T159 & 31L Available : PS of 182x174 pts[6]	ERA40 (6 h)	-	1961-jan to 2001-dec
acb			ERA40 (6 h) & [ARPEGE.3 coupled OPA A2]	SRES A2	2041-jan to 2081-dec

Table 2.7 : Raw ARPÈGE-Climat v 4.4 variables available from simulations given in Table 2.6.

Variable	Unit	Level(s)	Frequency	Simulation
Mean Sea Level Pressure (PMSL)	Pa	pmsl	6 h	abx, acb
Ground cover [1:ground/0 : ocean] (GC)	Classes	surface		
Liquid latent heat flux (FCLS))	W/m^2		averaged over 6h	
Sensible heat flux (FCSS)	W/m^2			
Long waves flux at surface (LWRB)	W/m^2			
Short waves flux at surface (SWRB)	W/m^2			
Solid convective precipitations (NECO)	$kg/(m^2s)$ ~mm/s			
Total snow fall (NGTS)	$kg/(m^2s)$ ~mm/s			
Liquide convective precipitations (PLCO)	$kg/(m^2s)$ ~mm/s			
Total precipitations (PRET)	$kg/(m^2s)$ ~mm/s			
Total rain (PLTS)	$kg/(m^2s)$ ~mm/s			
Surface Temperature (TSUR)	K			
Total nebulosity (TCLD)	fraction[0-1]			
Snow amount (RNEI)	kg/m^2			
Total run-off (RUIP)	$kg/(m^2s)$ ~mm/s	Soil layer levels :		
Soil Temperature (TPRO)	K		6 h	

[5] Spatial resolution is maximum near the main point of interest (pole-centered model by 50 º N and 95 º W (grid called "WINI), and minimum non-pole.

[6] Interpolated first on the global grid of 300 lat. x 600 long. grid cells (0.6 ˚ x0, 6 ˚), and then on PS of CRCM grid.

Total water in soil (REPR)	kg/m^2	0.10, 0.25 and 3.75 m		
Total ice in soil (RGPR)	kg/m^2			
Temperature (if 2m : T_2M ; otherwise : T)	K	2m, 850 and 500 hPa		
Eastward wind (U)	m/s	850 and 500 hPa		
Northward wind (V)	m/s			
Vertical motion (W)	m/s	850, 700, 500 and 200 hPa		
Geopotential (Z)	m^2/s^2	700 and 500 hPa		
Minimum Temperature (if 6-hrs : TMIN, if daily : STMN)	K	2m	6 h / daily	
Maximum Temperature (if 6-hours : TMAX ; if daily : STMX) [7]	K			

[7] STMN (STMX) is minimum (maximum) daily temperature computed from TMIN (TMAX) which is min (max) of 6-hrs temperature (issued from 15 min. model time step between two archives).

3 REGIONAL REANALYSIS

3.1 North American Regional Reanalysis [NARR]

Table 3.1 : List of available variables as NARR products: level(s), frequency (hourly to daily scale) and time window for each variable (more details at www.emc.ncep.noaa.gov/mmb/rreanl and/or CCCSN at http://quebec.cccsn.ca/local/DAI/reanalysis-e.html).

Variable	Unit	Level(s)	Frequency	Time Window
Pressure reduced to mean sea level (PRMSL)	Pa	msl	3 h	1979-Jan to 2008-Dec
MSL Pressure (MSLT)	Pa			
Downward shortwave radiation flux (DSWRF)	W/m^2	surface	averaged over 3h	
Downward longwave radiation flux (DLWRF)	W/m^2			
Upward shortwave radiation flux (USWRF)	W/m^2	surface, atmos top		
Upward longwave radiation flux (ULWRF)	W/m^2			
Convective precipitation (ACPCP)	mm	surface	accumulated during 3h	
Total precipitation (nearest grid point) (APCPN)	mm			
Total precipitation (APCP)	mm			
Water vapor flux convergence (vertical int) (WVCONV)	kg/m^2	0-700 hPa, atmos col	averaged over 3h	
Water condensate flux convergence (vertical int) (WCCONV)	kg/m^2			
Water vapor zonal flux (vertical int) (WVUFLX)	kg/m		accumulated during 3h	
Water vapor meridional flux (vertical int) (WVVFLX)	kg/m			
Water condensate zonal flux (vertical int) (WCUFLX)	kg/m			
Water condensate meridional flux (vertical int) (WCVFLX)	kg/m			
Relative humidity (RH)	%	2 m, 0℃ isotherm, Hybrid lev 1	3 h	
Pressure (nearest grid point)	Pa	surface		

Pressure (PRES)	Pa	Surface, 2, 10 and 30m, Cld base, Cld top, Tropopause, max wind level,, cond lev Hybrid lev 1		1979-Jan to 2008-Dec
Eastward wind speed (UGRD)	m/s	10 and 30 m, pressure levels : 1000, 975, 950, 925, 900, 875, 850, 825, 800, 775, 750, 725, 700, 650, 600, 550, 500, 450, 400, 350, 300, 275, 250, 225, 200, 175, 150, 125 and 100 hPa Tropopause, max wind level 30-0, 60-30, 90-60, 120-90, 150-120 hPa, 180-150 hPa, and Hybrid lev 1		
Northward wind speed (VGRD)	m/s			
Temperature (TMP)	K	Surface, 2, 10 and 30 m and at pressure levels : 1000, 975, 950, 925, 900, 875, 850, 825, 800, 775, 750, 725, 700, 650, 600, 550, 500, 450, 400, 350, 300, 275, 250, 225, 200, 175, 150, 125 and 100 hPa,. Cld top, Tropopause, 30-0, 60-30, 90-60, 120-90, 150-120, 180-150 hPa, and Hybrid lev 1		

Specific humidity (SPFH)	kg/kg	2, 10 and 30 m and at pressure levels : 1000, 975, 950, 925, 900, 875, 850, 825, 800, 775, 750, 725, 700, 650, 600, 550, 500, 450, 400, 350, 300, 275, 250, 225, 200, 175, 150, 125 and 100 hPa,. 30-0, 60-30, 90-60, 120-90, 150-120, 180-150 hPa, and Hybrid lev 1		
Geopotential height (HGT)	m^2/s^2	Pressure levels : 1000, 975, 950, 925, 900, 875, 850, 825, 800, 775, 750, 725, 700, 650, 600, 550, 500, 450, 400, 350, 300, 275, 250, 225, 200, 175, 150, 125 and 100 hPa, Cld base, Cld top, Tropopause, max wind level, OC isotherm, Hybrid lev 1		1979-Jan to 2008-Dec

Pressure vertical velocity (VVEL)	Pa/s	Pressure levels : 1000, 975, 950, 925, 900, 875, 850, 825, 800, 775, 750, 725, 700, 650, 600, 550, 500, 450, 400, 350, 300, 275, 250, 225, 200, 175, 150, 125 and 100 hPa, 30-0, 60-30, 90-60, 120-90, 150-120, 180-150 hPa, and Hybrid lev 1		
Turbulent kinetic energy (TKE)	J/kg	Pressure levels : 1000, 975, 950, 925, 900, 875, 850, 825, 800, 775, 750,725, 700, 650, 600, and Hybrid lev 1		
Cloud water (CLWMR)	kg/kg	Pressure levels : 1000, 975, 950, 925, 900, 875, 850, 825, 800, 775, 750, 725, 700, 650, 600, 550, 500, 450, 400, 350, 300, 275, 250, 225, 200, 175, 150, 125 and 100 hPa,		
Ice mixing ratio (ICMR)	kg/kg			
Horizontal moisture divergence (MCONV)	kg/kg/s	Pressure levels : 850, 30-0, 60-30, 90-60, 120-90, 150-120 and 180-150 hPa, Hybrid lev 1		
Potential temperature (POT)	K	Surface, 10 and 30m Hybrid lev 1		
Visibility (VIS)	m	Surface		

Soil temperature (TSOIL)	K	0-10cm down, 10-40cm down, 40-100cm down, 100-200cm down, 800cm down		
Volumetric soil moisture (frozen + liquid) (SOILW)	fraction[0-1]	0-10cm down, 10-40cm down, 40-100cm down, 100-200cm down	3 h	1979-Jan to 2008-Dec
Liquid volumetric soil moisture (non frozen) (SOILL)	fraction[0-1]			
Water □apour added by precipitation assimilation (WVINC)	kg/m^2	0-700 hPa, atmos col	accumulated during 3h	
Water condensate added by precipitation assimilation (WCINC)	kg/m^2			
Planetary boundary layer height (HPBL)	m	Surface	3 h	
Blackadars mixing length scale (BMIXL)	m	Hybrid lev 1		
Moisture availability (MSTAV)	%	0-100cm down,		
Soil moisture content (SOILM)	kg/m^2	0-200cm down		
Plant canopy surface water (CNWAT)	kg/m^2	Surface		
Accum snow (WEASD)	kg/m^2			
Snow cover (SNOWC)	%			
Snow depth (SNOD)	m			
Dew point temp. (DPT)	K	2m		
Surface friction speed (FRICV)	m/s	Surface		
Surface drag coefficient (CD)	-			
Exchange coefficient (SFEXC)	kg/m^3 m/s			
Vegetation (VEG)	%			
Canopy conductance (CCOND)	m/s			
Temperature parameter in canopy conductance (RCT)	fraction[0-1]			
Humidity parameter in canopy conductance (RCQ)	fraction[0-1]			
Soil moisture parameter in canopy conductance (RCSOL)	fraction[0-1]			
Surface lifted index (LFTX)	K	500-1000 hPa		
Convective available potential energy (CAPE)	J/kg	Surface, 180-0 hPa		

Convective inhibition (CIN)	J/kg	Surface, 180-0 hPa		
Precipitable water (PWAT)	kg/m^2	Atmos col		1979-Jan to 2008-Dec
Storm relative helicity (HLCY)	m^2/s^2	3000-0m		
Eastward storm motion (USTM)	m/s	6000-0m		
Northward storm motion (VSTM)	m/s			
Vertical speed shear (VWSH)	1/s	Tropopause		
Best 4 layers lifted index (4LFTX)	K	180-0mb		
Albedo (ALBDO)	%	Surface		
Precipitation rate (PRATE)	$kg/m^2/s$		3h forecast	
Snow melt (SNOM)	kg/m^2		accumulated during 3h	
Surface runoff (non infiltrating) (SSRUN)	kg/m^2			
Subsurface runoff (baseflow) (BGRUN)	kg/m^2			
Categorical snow (CSNOW)	Yes=1 No=0		3h forecast	
Categorical ice pellets (CICEP)	Yes=1 No=0			
Categorical freezing rain (CFRZR)	Yes=1 No=0			
Categorical rain (CRAIN)	Yes=1 No=0			
Latent heat flux (LHTFL)	W/m^2		averaged over 3h	
Sensible heat flux (SHTFL)	W/m^2			
Ground heat flux (GFLUX)	W/m^2			
Snow phase change heat flux (SNOHF)	W/m^2			
Evaporation (EVP)	kg/m^2		accumulated during 3h	
Potential evaporation (PEVP)	kg/m^2			
Low level cloud cover (LCDC)	%	Low cld lay	3h forecast	
Mid level cloud cover (MCDC)	%	Mid cld lay		
High level cloud cover (HCDC)	%	High cld lay		
Non convective cloud (CDCON)	%	Atmos col	averaged over 3h	
Convective cloud cover (CDCON)	%			
Total cloud cover (TCDC)	%		3h forecast	

4 SATELLITE DATA

Table 4.1 : The image product is generated from MODIS orbital granules of Level 1B (MOD02) Collection 5. All bands are reprojected to an LCC map covering Canada.

Variable	Unit	Level(s)	Frequency	Time Window
Normalized Difference Vegetative Index (NDVI)	-	-	10 days	2000-Mar to 2006-Dec

5 PREDICTORS

Table 5.1 : Types of datasets used for developement of the 25 basic predictors at daily scale.

Data Type	Experiment	Domain	GES+A Evolution	Time Window
NCEP/NCAR	Voir Nakicenovic *et al*., 2000	Interpolated on corresponding grid of each of GCMs noted below	-	1961-Jan to 2001-Dec
HadCM3[8]	Voir tab 2.1	Continents	IS92	1961-Jan to 1989-Dec
			SRES A2a	1990-Jan to 2099-Dec
			SRES B2a	
CGCM2[9]		North America, Africa, Iran	Control	1961-Jan to 1989-Dec
			SRES A2	1990-Jan to 2100-Dec
			SRES B2	
CGCM3.1[10]		Global (Continents and Oceans)	Control	1961-Jan to 2000-Dec
			SRES A2	2001-Jan to 2100-Dec
			SRES B2	

[8] Disponible via CCCSN http://www.cccsn.ca/Download_Data/Statistical_Downscaling_Input_Introduction-e.html

[9] Disponible via CCCSN http://www.cccsn.ca/Download_Data/Statistical_Downscaling_Input_Introduction-e.html

[10] Disponible via DAI http://quebec.cccsn.ca/DAI/predictors-f.html

Table 5.2 : List of the basic predictors derived from global reanalysis of NCEP/NCAR and from the GCMs given in tab 5.1.

Predictor Variable	Units	Level(s)	Frequency	Data Type
Geopotential	m^2/s^2	500 hPa	daily	HadCM3; NCEP/NCAR; CGCM2 & CGCM3.1
		700 hPa		HadCM3; NCEP/NCAR & CGCM3.1
		850 hPa		HadCM3; NCEP/NCAR; CGCM2 & CGCM3.1
Wind: Speed & Direction	m/s	500 hPa		HadCM3; NCEP/NCAR; CGCM2 & CGCM3.1
		850 hPa		
		1000 hPa		
Eastward wind	m/s	500 hPa		
		850 hPa		
		1000 hPa		
Northward wind	m/s	500 hPa		
		850 hPa		
		1000 hPa		
Vorticity	Pa/s	500 hPa		
		850 hPa		
		1000 hPa		
Divergence	s^{-1}	500 hPa		
		850 hPa		
		1000 hPa		
Mean Sea Level Pressure	hPa	surface		NCEP/NCAR; CGCM2 & CGCM3.1
Precipitation	mm			NCEP/NCAR & CGCM3.1
Specific humidity	kg/kg	2m		NCEP/NCAR; CGCM2 & CGCM3.1
Temperature	℃			

ACRONYMS

Acronym	**Description**
AMNO	North American grid
AMIP	Atmospheric Model Intercomparison Project
AR4	The 4th Assesement Rapport
ARPEGE	Action de Recherche Petite Échelle Grande Échelle
CGCM	Canadian Global Climate Model
CRCM	Canadian Regional Climate Model
ERA40	The 40-years reanalysis of European Center for Medium-range Weather Forecasts
FAR	Fourth Assessment Report published by IPCC, 2007
GHG	Green House Gas
IPCC	Intergovernmental Panel on Climate Change
NCEP/NCAR	National Center for Environmental Prediction/ National Center for Atmospheric Research
QC	Quebec (eastern Canada grid)
SRES	Special Report on Emissions Scenarios projections (for A2 and B2, see Nakicenovic et al. (2000) and/or Barrow et al. (2004))
TAR	Third Assessment Report
UTC	Coordinated Universal Time

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