Table A1. General circulation models (GCM) and country of origin, their spatial resolution, and their associated number of runs for each century and climate variable. The projected climate variables include monthly precipitation (precip) and monthly average (tavg), minimum (tmin), and maximum (tmax) temperature. The four climate models in bold are compared herein. Models below the dotted line were not candidates for selection.

GCM, Country	x (◦)	y (◦)	Resolution	Walsh et al. 2008[1]	Wang et al. 2007[2]	Glecker et al. 2008[1]	Chen et al. 2011[3]	Scherrer 2011[4]	Fasullo & Trenberth 2012[5]	Overall rank
INGV-ECHAM4, Italy/Germany	1.12500	1.12500	1.5				1			0.83
CCSM3, USA	1.40625	1.40625	3	5	3	9	6	9	9	4.40
ECHAM5/MPI-OM, Germany	**1.87500**	**1.87500**	**6**	**1**	**6.5**	**2**	**14**	**9**	**7**	**4.55**
UKMO-HadGEM1, UK	**1.87500**	**1.24138**	**4**			**1**	**13.5**	**9**	**2.5**	**5.00**
CSIRO-Mk3.5, Australia	1.87500	1.87500	6				5	9		5.00
UKMO-HadCM3, UK	3.75000	2.46575	17	8.5	9.5	3	3	9	4.5	5.45
ECHO-G, Germany/Korea	3.75000	3.75000	20		3		10			5.50
MIROC3.2(hires), Japan	1.12500	1.12500	1.5		16.5	5	6.5	9	1	5.64
GFDL-CM2.1, USA	**2.50000**	**2.00000**	**8.5**	**2**	**12**	**4**	**11**	**9**	**10.5**	**5.70**
CSIRO-Mk3.0, Australia	1.87500	1.87500	6	15	3	7	8	9	13	6.10
GFDL-CM2.0, USA	2.50000	2.00000	8.5	3	6.5	11	11.5	9	12	6.15
MIROC3.2(medres), Japan	2.81250	2.81250	12.5	4	16.5	10	8	9	6	6.60
CGCM3.1(T47), Canada	**3.75000**	**3.75000**	**19**	**10.5**	**9.5**	**6**	**15.5**	**9**	**2.5**	**7.20**
CGCM3.1(T63), Canada	2.81250	2.81250	12.5		9.5	8	8.5	9	4.5	7.43
MRI-CGCM2.3.2, Japan	2.81250	2.81250	12.5	7	16.5	12	11	9	10.5	7.85
CNRM-CM3, France	2.81250	2.81250	12.5	6	9.5	13	25.5	9		8.28
PCM, USA	2.81250	2.81250	12.5	10.5	3	16	23	9	14	8.80
IPSL-CM4, France	3.75000	2.50000	18	12.5	16.5	19	15	9	8	9.80
INM-CM3.0, Russia	5.00000	4.00000	24	14	3	14	23	9	15	10.20
GISS-ER, USA	5.00000	3.91305	23	12.5	16.5	18		19.5		12.05
FGOALS-g1.0, China	2.81250	3.00000	16	8.5	16.5	20	24	19.5	16	12.17
GISS-AOM, USA	4.00000	3.00000	21		16.5	17		19.5		12.79
BCCR-BCM2.0, Norway	2.81250	2.81250	12.5				24			16.75
GISS-EH, USA	5.00000	3.91305	22		16.5	15	27.5	19.5		18.50

[1] 20°–90°N: precipitation, temperature, sea level pressure
[2] Arctic: inter-annual variability
[3] 20°–90°N
[4] China: spatial accuracy, inter-annual variability
[5] Subtropics: cloud dynamics, moisture

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