

Annex A. Agroclimatic indicators

Table A.1 Jan 2020 - Apr 2020 agroclimatic indicators by global Mapping and Reporting Unit (MRU)

65 Global MRUs		RAIN Current (mm)	RAIN 15YA dep. (%)	TEMP Current (°C)	TEMP 15YA dep. (°C)	RADPAR Current(MJ/m ²)	RADPAR 15YA dep. (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA dep. (%)
C01	Equatorial central Africa	737	-5	23.5	-0.1	1184	-1	643	-8
C02	East African highlands	478	93	19.7	-0.4	1274	-5	511	2
C03	Gulf of Guinea	124	-15	27.4	0.0	1330	2	452	-14
C04	Horn of Africa	816	87	21.2	-0.5	1182	-8	617	-6
C05	Madagascar (main)	1095	-6	22.4	0.1	1166	-1	711	-6
C06	Southwest Madagascar	291	-48	25.7	0.7	1295	5	790	0
C07	North Africa-Mediterranean	176	-17	11.2	0.5	959	0	284	-9
C08	Sahel	22	9	27.3	-0.3	1363	-1	164	-2
C09	Southern Africa	601	3	22.0	0.0	1226	1	706	-4
C10	Western Cape (South Africa)	114	-6	19.1	0.0	1251	-1	624	-4
C11	British Columbia to Colorado	372	1	-2.4	0.0	700	-1	108	-4
C12	Northern Great Plains	244	7	0.6	0.1	716	-3	135	-1
C13	Corn Belt	474	14	1.3	1.0	602	-9	107	-15
C14	Cotton Belt to Mexican Nordeste	511	35	12.8	1.3	790	-10	312	-4
C15	Sub-boreal America	234	9	-7.4	0.4	507	-5	57	-12
C16	West Coast (North America)	408	-21	7.3	0.1	776	2	206	5
C17	Sierra Madre	108	30	17.1	0.5	1249	-3	366	8
C18	SW U.S. and N. Mexican highlands	133	3	9.5	0.2	1023	-4	272	15
C19	Northern South and Central America	291	-31	24.1	0.8	1196	3	569	-8
C20	Caribbean	121	-42	24.2	0.8	1149	0	690	-5
C21	Central-northern Andes	789	-20	15.6	0.3	1077	3	414	-8
C22	Nordeste (Brazil)	724	79	25.3	-0.2	1216	-3	780	-7
C23	Central eastern Brazil	964	3	23.5	0.0	1181	0	735	-7
C24	Amazon	1156	-11	24.6	0.4	1092	3	706	-1
C25	Central-north Argentina	587	17	23.3	-0.1	1170	2	694	-3
C26	Pampas	334	-31	22.3	0.0	1227	4	684	-2
C27	Western Patagonia	206	-23	14.0	0.4	1220	2	323	-11
C28	Semi-arid Southern Cone	206	11	18.8	0.4	1288	-1	508	-5
C29	Caucasus	360	7	3.0	0.0	781	-2	166	-9
C30	Pamir area	489	20	2.7	-0.4	856	-5	190	-9

65 Global MRUs		RAIN Current (mm)	RAIN 15YA dep. (%)	TEMP Current (°C)	TEMP 15YA dep. (°C)	RADPAR Current(MJ/m ²)	RADPAR 15YA dep. (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA dep. (%)
C31	Western Asia	252	32	7.4	0.5	863	-4	254	2
C32	Gansu-Xinjiang (China)	99	1	-1.3	1.1	891	0	160	-4
C33	Hainan (China)	231	-17	22.0	0.7	992	6	605	8
C34	Huanghuaihai (China)	135	51	6.9	1.2	885	-4	205	-9
C35	Inner Mongolia (China)	69	34	-4.0	0.9	891	-2	126	-11
C36	Loess region (China)	90	6	2.7	0.8	973	-1	178	-13
C37	Lower Yangtze (China)	584	18	11.1	1.0	696	-2	234	-3
C38	Northeast China	109	10	-5.0	1.8	759	-4	111	-3
C39	Qinghai-Tibet (China)	427	18	-0.8	-1.4	1002	-5	140	-22
C40	Southern China	418	12	15.6	0.6	818	-1	345	0
C41	Southwest China	395	36	8.8	0.4	730	-9	211	-16
C42	Taiwan (China)	151	-53	19.9	0.7	1080	13	524	20
C43	East Asia	295	2	-0.7	1.5	767	-1	121	-6
C44	Southern Himalayas	233	42	17.7	-1.0	1074	-5	420	12
C45	Southern Asia	73	-18	25.2	-0.4	1239	-4	522	24
C46	Southern Japan and Korea	523	7	7.5	1.4	811	1	203	-2
C47	Southern Mongolia	35	-47	-9.7	2.9	840	2	99	11
C48	Punjab to Gujarat	125	116	21.6	-1.1	1151	-4	388	42
C49	Maritime Southeast Asia	1276	-3	24.6	0.5	1149	5	759	4
C50	Mainland Southeast Asia	143	-40	25.1	0.4	1228	4	523	-10
C51	Eastern Siberia	187	-13	-7.1	3.3	562	0	72	13
C52	Eastern Central Asia	93	7	-10.0	2.9	703	-1	83	11
C53	Northern Australia	871	-15	26.4	0.7	1309	6	867	5
C54	Queensland to Victoria	308	44	20.6	-0.5	1151	-4	613	-4
C55	Nullarbor to Darling	73	-32	21.1	0.1	1238	0	691	6
C56	New Zealand	176	-43	14.4	-0.1	1069	7	417	4
C57	Boreal Eurasia	390	30	-1.6	3.1	390	0	62	10
C58	Ukraine to Ural mountains	277	8	1.1	3.3	426	-4	80	-5
C59	Mediterranean Europe and Turkey	323	-11	7.4	0.3	774	-2	207	-6
C60	W. Europe (non Mediterranean)	305	-8	5.5	1.4	608	8	140	4
C61	Boreal America	268	-14	-9.0	-1.2	415	-6	45	-7
C62	Ural to Altai mountains	244	35	-2.4	4.6	506	-9	91	8
C63	Australian desert	109	1	21.7	-0.9	1272	-1	665	1
C64	Sahara to Afghan deserts	105	37	16.5	-0.3	1129	-2	381	12
C65	Sub-arctic America	67	-19	-23.1	-0.4	318	-1	14	-8

Table A.2 Jan 2020 - Apr 2020 agroclimatic indicators by country

Country code	Country name	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure(°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
ARG	Argentina	405	6	22.0	-0.1	1201	2	649	-3
AUS	Australia	304	17	21.3	-0.3	1176	-2	639	-1
BGD	Bangladesh	164	22	22.3	-1.1	1167	-2	531	9
BRA	Brazil	998	-2	23.7	0.1	1164	1	731	-5
KHM	Cambodia	173	-46	27.5	0.8	1222	5	653	-4
CAN	Canada	315	4	-5.4	0.4	546	-3	65	-7
CHN	China	347	20	7.1	0.8	791	-4	194	-7
EGY	Egypt	112	136	14.8	-0.7	963	-6	302	13
ETH	Ethiopia	264	54	20.5	-0.2	1308	-4	482	8
FRA	France	358	-2	7.4	1.9	623	3	162	7
DEU	Germany	311	4	5.1	1.8	566	10	129	8
IND	India	110	27	22.6	-0.8	1181	-5	463	29
IDN	Indonesia	1422	1	24.7	0.4	1149	5	768	4
IRN	Iran	312	47	7.1	-0.5	942	-5	281	0
KAZ	Kazakhstan	218	27	-1.2	3.9	613	-6	117	10
MEX	Mexico	125	4	19.7	0.8	1200	-3	422	5
MMR	Myanmar	136	7	21.1	-0.2	1257	1	316	-26
NGA	Nigeria	90	-31	26.9	-0.2	1355	2	296	-20
PAK	Pakistan	426	43	11.5	-1.5	983	-5	339	11
PHL	Philippines	339	-46	24.9	0.3	1216	6	790	3
POL	Poland	231	-11	4.1	2.0	530	11	116	10
ROU	Romania	180	-34	4.2	1.2	707	11	147	-2
RUS	Russia	258	17	-1.7	3.9	454	-8	77	0
ZAF	South Africa	228	-4	19.4	-0.2	1264	1	668	1
THA	Thailand	164	-40	26.1	0.7	1214	4	610	-4
TUR	Turkey	389	5	3.8	-0.3	796	-2	178	-10
GBR	United Kingdom	430	13	6.0	0.8	460	9	110	11
UKR	Ukraine	183	-25	3.5	2.2	585	11	125	6
USA	United States	411	17	5.9	0.7	733	-7	186	-3
UZB	Uzbekistan	288	20	6.8	0.5	815	-3	244	8
VNM	Vietnam	274	-7	21.2	0.4	976	1	500	-8
AFG	Afghanistan	382	25	4.8	-0.4	912	-6	254	0
AGO	Angola	901	10	22.1	-0.1	1158	-1	654	-8
BLR	Belarus	220	-15	2.5	2.8	428	2	84	-1
HUN	Hungary	159	-34	5.1	0.7	696	11	146	-9
ITA	Italy	223	-43	7.0	0.6	783	8	198	-5
KEN	Kenya	899	120	20.4	-0.8	1245	-6	669	-2
LKA	Sri Lanka	243	-58	26.0	0.7	1326	7	828	1
MAR	Morocco	167	-21	11.5	0.7	1017	0	266	-12
MNG	Mongolia	84	31	-10.0	2.5	786	-1	93	10
MOZ	Mozambique	724	-4	23.6	0.0	1220	2	768	-4
ZMB	Zambia	955	1	21.1	0.2	1140	-3	631	-13

Note: Departures are expressed in relative terms (percentage) for all variables, except for temperature, for which absolute departure in degrees Celsius is given. Zero means no change from the average value; relative departures are calculated as $(C-R)/R*100$, with C=current value and R=reference value, which is the fifteen-year average (15YA) for the same period between January and April.

Table A.3 Argentina, Jan 2020 - Apr 2020 agroclimatic indicators (by province)

RAIN Current	RAIN 15YA	TEMP Current	TEMP 15YA Departure(°C)	RADPAR Current	RADPAR 15YA	BIOMSS Current	BIOMSS 15YA
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	(mm)	Departure (%)	(°C)		(MJ/m ²)	Departure (%)	(gDM/m ²)	Departure (%)
Buenos Aires	317	34	20.5	-0.4	1217	0	657	2
Chaco	396	-20	24.6	-0.3	1182	4	706	-1
Cordoba	323	22	22.3	0.0	1212	-1	692	1
Corrientes	349	-32	24.3	0.2	1237	6	657	-11
Entre Rios	327	-13	22.9	-0.1	1233	4	646	-6
La Pampa	206	26	21.7	-0.3	1239	-1	704	4
Misiones	371	-44	22.7	-0.4	1292	9	738	-3
Santiago Del Estero	583	32	23.6	-0.6	1147	2	686	-3
San Luis	234	24	21.8	0.3	1238	-1	718	5
Salta	1118	31	20.2	-0.1	1064	-3	570	-13
Santa Fe	395	11	23.8	0.0	1199	2	655	-5
Tucuman	783	34	19.7	0.4	1102	-5	589	-13

Table A.4 Australia, Jan 2020 - Apr 2020 agroclimatic indicators (by state)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
New South Wales	332	59	21.3	-0.6	1178	-5	626	-3
South Australia	141	29	19.3	-1.2	1140	-5	601	-3
Victoria	277	57	17.6	-1.1	1042	-9	536	-7
W. Australia	126	-28	22.0	0.2	1248	0	692	5

Table A.5 Brazil, Jan 2020 - Apr 2020 agroclimatic indicators (by state)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
Ceara	964	60	25.5	-0.6	1250	1	836	0
Goias	1070	0	22.9	0.1	1197	-2	741	-8
Mato Grosso Do Sul	692	-20	24.6	0.0	1278	7	821	3
Mato Grosso	1159	-9	24.4	0.3	1153	4	757	0
Minas Gerais	1123	23	21.5	-0.2	1113	-7	651	-17
Parana	502	-41	21.1	-0.4	1257	9	695	-5
Rio Grande Do Sul	215	-61	22.2	0.4	1240	6	707	-2
Santa Catarina	435	-42	19.2	-0.5	1212	9	623	-5
Sao Paulo	898	-17	21.7	-0.6	1186	4	694	-6

Table A.6 Canada, Jan 2020 - Apr 2020 agroclimatic indicators (by province)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
Alberta	182	-1	-6.1	-1.0	570	3	75	-5
Manitoba	220	17	-6.3	0.8	530	-9	62	-15
Saskatchewan	181	3	-6.0	0.1	566	-1	74	-3

Table A.7 India, Jan 2020 - Apr 2020 agroclimatic indicators (by state)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
Andhra Pradesh	39	-20	26.6	-0.2	1243	-5	494	26
Assam	432	10	17.9	-0.8	995	-5	468	-7
Bihar	109	160	21.1	-1.8	1129	-6	475	19
Chhattisgarh	62	68	23.8	-0.6	1174	-7	522	42
Daman and Diu	0	-86	26.3	0.0	1374	0	174	44
Delhi	180	290	19.0	-1.7	1067	-7	481	29
Gujarat	4	24	25.7	-0.4	1313	-1	197	37
Goa	2	-87	26.9	0.2	1385	-1	342	41
Himachal Pradesh	441	39	8.5	-2.1	1002	-4	278	18
Haryana	195	227	18.6	-1.9	1054	-6	517	43
Jharkhand	119	241	21.5	-1.6	1133	-7	490	35
Kerala	198	-35	26.4	0.4	1307	0	723	1
Karnataka	32	-51	26.1	0.1	1286	-4	508	19
Meghalaya	297	0	18.6	-0.5	1064	-3	466	0
Maharashtra	15	-4	26.3	-0.4	1278	-5	408	43
Manipur	322	24	14.8	-0.9	1107	-5	398	-11
Madhya Pradesh	33	57	23.0	-1.0	1182	-6	449	49
Mizoram	185	-1	17.3	-1.4	1201	-2	439	-7
Nagaland	733	76	14.1	-0.8	983	-9	385	-16
Orissa	82	102	23.9	-0.7	1156	-7	573	42
Puducherry	62	-51	27.4	0.2	1386	1	735	15
Punjab	321	145	16.9	-2.4	999	-5	483	24
Rajasthan	33	98	22.2	-0.9	1158	-5	443	64
Sikkim	80	4	8.6	-1.5	1207	-4	251	16
Tamil Nadu	116	-49	26.0	0.1	1309	0	658	-1
Tripura	225	-13	21.1	-1.0	1143	-2	559	8
Uttarakhand	231	86	11.2	-2.5	1066	-6	315	10
Uttar Pradesh	103	139	20.5	-1.6	1108	-6	508	35
West Bengal	125	93	22.3	-1.5	1150	-5	521	21

Table A.8 Kazakhstan, Jan 2020 - Apr 2020 agroclimatic indicators (by oblast)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
Akmolinskaya	229	65	-2.1	4.9	561	-8	102	16
Karagandinskaya	138	15	-2.8	3.9	660	-5	115	14
Kustanayskaya	231	46	-1.8	4.9	486	-14	85	0
Pavlodarskaya	181	59	-1.9	5.3	571	-4	109	21
Severo kazachstanskaya	241	58	-2.0	5.5	469	-10	84	13
Vostochno kazachstanskaya	178	-2	-3.1	3.2	713	0	123	23
Zapadno kazachstanskaya	194	-1	1.0	4.2	543	-6	107	2

Table A.9 Russia, Jan 2020 - Apr 2020 agroclimatic indicators (by oblast, kray and republic)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
Bashkortostan Rep.	340	43	-2.3	4.4	388	-16	61	-10
Chelyabinskaya Oblast	227	32	-2.7	4.5	437	-12	68	-5
Gorodovikovsk	151	-36	4.2	1.6	643	7	146	4
Krasnodarskiy Krai	212	-18	0.5	3.1	584	4	110	11
Kurganskaya Oblast	228	32	-2.4	5.0	383	-15	63	-3
Kirovskaya Oblast	412	48	-1.9	4.4	248	-29	37	-28
Kurskaya Oblast	250	-4	1.6	3.0	449	0	85	-5
Lipetskaya Oblast	270	6	1.0	3.5	417	-8	76	-10
Mordoviya Rep.	392	56	-0.3	4.0	330	-23	55	-24
Novosibirskaya Oblast	264	45	-3.1	5.8	393	-14	68	9
Nizhegorodskaya O.	364	39	-0.5	4.2	298	-24	48	-26
Orenburgskaya Oblast	290	30	-1.2	4.4	469	-13	81	-4
Omskaya Oblast	279	57	-2.5	6.0	370	-16	66	9
Permskaya Oblast	372	38	-2.6	4.7	267	-26	40	-20
Penzenskaya Oblast	365	43	-0.1	3.9	367	-18	63	-17
Rostovskaya Oblast	192	-23	3.2	2.2	610	7	131	5
Ryazanskaya Oblast	329	26	0.6	3.8	345	-18	60	-20
Stavropolskiy Krai	166	-37	3.7	1.2	681	9	150	2
Sverdlovskaya Oblast	253	20	-2.9	4.8	325	-17	50	-9
Samarskaya Oblast	322	34	-0.5	4.5	418	-12	73	-5
Saratovskaya Oblast	275	16	0.5	3.9	466	-9	87	-5
Tambovskaya Oblast	319	23	0.7	3.7	408	-12	74	-12
Tyumenskaya Oblast	284	50	-2.7	5.4	328	-18	55	-1
Tatarstan Rep.	346	39	-1.1	4.6	323	-20	53	-16
Ulyanovskaya Oblast	317	35	-0.5	4.3	374	-16	64	-12
Udmurtiya Rep.	397	47	-1.9	4.7	257	-29	39	-26
Volgogradskaya O.	211	-5	1.8	3.2	542	-2	107	-3
Voronezhskaya Oblast	247	-4	1.5	3.3	500	-2	95	-3

Table A.10 United States, Jan 2020 - Apr 2020 agroclimatic indicators (by state)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
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	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
Arkansas	713	41	10.1	0.8	675	-14	214	-18
California	229	-43	9.1	0.2	903	1	239	5
Idaho	367	1	-0.4	0.3	719	1	129	3
Indiana	500	6	4.2	0.8	605	-12	133	-18
Illinois	495	19	3.9	0.5	623	-12	137	-18
Iowa	281	-9	1.0	0.5	679	-3	132	-4
Kansas	270	30	6.3	0.2	821	-5	214	1
Michigan	383	8	-0.6	0.9	543	-12	85	-19
Minnesota	243	-5	-3.1	0.7	612	-3	91	-8
Missouri	493	28	5.9	0.4	690	-9	173	-14
Montana	223	-6	-1.8	-0.1	728	3	117	-1
Nebraska	192	-7	2.7	0.0	806	-1	171	3
North Dakota	150	-21	-3.1	0.3	667	0	103	1
Ohio	499	11	3.9	1.2	591	-12	125	-18
Oklahoma	420	51	9.8	0.4	795	-9	254	-4
Oregon	430	-13	3.8	0.2	682	4	145	4
South Dakota	191	-11	-0.4	-0.1	750	2	135	2
Texas	342	40	14.4	0.7	834	-11	340	-3
Washington	514	3	3.2	0.2	604	3	130	1
Wisconsin	316	3	-1.9	0.9	594	-7	89	-15

Table A.11 China, Jan 2020 - Apr 2020 agroclimatic indicators (by province)

	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m ²)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m ²)	BIOMSS 15YA Departure (%)
Anhui	413	27	9.5	1.2	750	-8	238	-6
Chongqing	523	59	9.3	0.3	628	-15	189	-17
Fujian	578	-6	12.7	0.8	748	7	275	8
Gansu	113	-13	0.9	0.5	972	-1	162	-16
Guangdong	526	-5	16.7	1.0	740	7	349	11
Guangxi	589	35	14.9	0.8	572	-7	241	-11
Guizhou	483	26	9.7	0.5	540	-16	166	-23
Hebei	72	52	1.4	0.7	925	-1	157	-13
Heilongjiang	111	5	-6.4	2.2	722	-3	103	0
Henan	197	49	8.3	1.1	856	-6	233	-6
Hubei	462	43	9.0	0.8	729	-9	221	-9
Hunan	658	29	10.6	0.9	617	-5	203	-6
Jiangsu	275	21	9.2	1.5	823	-5	242	-2
Jiangxi	682	12	11.7	1.1	677	1	235	-1
Jilin	124	20	-4.3	1.6	774	-7	120	-7
Liaoning	85	10	-1.4	0.7	848	-4	140	-10
Inner Mongolia	72	30	-5.7	1.3	847	-2	116	-7
Ningxia	44	-32	1.0	0.5	1028	2	175	-11
Shaanxi	140	9	4.8	0.8	921	-2	192	-13
Shandong	121	54	6.8	1.2	902	-3	196	-14
Shanxi	75	20	1.5	0.8	954	-1	160	-16
Sichuan	356	28	6.9	0.1	803	-8	201	-20
Yunnan	323	54	11.3	-0.1	984	-5	314	-10
Zhejiang	539	4	10.0	1.1	731	-1	228	-3