

Annex A. Agroclimatic indicators

Table A.1 Jul 2020 - Oct 2020 agroclimatic indicators and biomass by global Monitoring 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 5YA dep. (%)
C01	Equatorial central Africa	701	-8	22.6	-0.2	1172	-2	599	-2
C02	East African highlands	841	10	17.3	-0.4	1122	-5	472	-8
C03	Gulf of Guinea	767	-22	24.8	0.1	1064	-1	688	-3
C04	Horn of Africa	221	29	21.0	-0.1	1211	-3	549	-5
C05	Madagascar (main)	162	-2	19.7	0.0	1092	-3	490	-6
C06	Southwest Madagascar	21	-42	22.1	-0.1	1217	0	471	-2
C07	North Africa-Mediterranean	55	-36	23.3	0.0	1331	-1	521	-9
C08	Sahel	596	3	26.6	-0.6	1156	-3	704	-5
C09	Southern Africa	67	-8	19.5	-0.2	1179	-4	439	-2
C10	Western Cape (South Africa)	236	13	12.2	-0.6	958	1	333	-2
C11	British Columbia to Colorado	249	-8	12.7	0.3	1149	1	405	-5
C12	Northern Great Plains	224	-17	18.0	-0.6	1139	2	582	0
C13	Corn Belt	341	-6	17.4	-0.3	1032	-1	509	1
C14	Cotton Belt to Mexican Nordeste	466	5	23.9	-0.1	1173	-2	709	-3
C15	Sub-boreal America	314	1	10.9	-1.0	845	-2	317	-4
C16	West Coast (North America)	98	-30	19.1	1.2	1285	1	376	-14
C17	Sierra Madre	1154	-7	19.9	0.3	1234	2	604	-2
C18	SW U.S. and N. Mexican highlands	190	-36	22.0	0.9	1334	3	546	-15
C19	Northern South and Central America	1233	-7	23.7	0.1	1202	0	750	-1
C20	Caribbean	800	7	26.6	0.3	1346	0	910	0
C21	Central-northern Andes	469	-6	14.5	0.1	1181	-1	363	-4
C22	Nordeste (Brazil)	94	-4	24.4	0.2	1240	2	638	-1
C23	Central eastern Brazil	210	-16	24.1	0.9	1150	2	492	-9
C24	Amazon	330	-18	26.3	0.6	1194	1	620	-8
C25	Central-north Argentina	133	-10	18.1	0.6	1062	2	442	1
C26	Pampas	324	-24	15.7	0.4	908	3	363	2
C27	Western Patagonia	584	-17	6.3	-0.3	762	4	163	-6
C28	Semi-arid Southern Cone	84	-19	10.6	-0.1	1054	3	222	-15
C29	Caucasus	150	-26	19.1	0.5	1232	-1	459	4

C30	Pamir area	208	24	16.6	-1.1	1323	-5	419	9
C31	Western Asia	65	8	22.7	-0.4	1294	-3	317	6
C32	Gansu-Xinjiang (China)	216	13	14.9	-1.1	1121	-4	492	-4
C33	Hainan (China)	992	-25	26.5	0.7	1131	-5	776	-4
C34	Huanghuaihai (China)	502	19	21.6	-0.4	1009	-5	569	-6
C35	Inner Mongolia (China)	284	24	15.4	-0.7	1025	-7	460	-8
C36	Loess region (China)	365	1	16.0	-0.7	1016	-6	453	-9
C37	Lower Yangtze (China)	869	6	22.5	-0.6	962	-10	586	-10
C38	Northeast China	493	46	15.6	-0.1	919	-9	430	-6
C39	Qinghai-Tibet (China)	1179	8	11.5	0.2	913	-9	278	-9
C40	Southern China	1235	3	22.7	0.1	1010	-6	609	-5
C41	Southwest China	983	17	18.4	-0.4	791	-18	408	-18
C42	Taiwan (China)	424	-60	27.1	1.1	1181	-1	727	-4
C43	East Asia	797	25	16.7	-0.2	860	-9	398	-10
C44	Southern Himalayas	1368	0	24.3	0.5	1038	-2	580	-4
C45	Southern Asia	1381	9	25.8	0.2	1049	-1	680	1
C46	Southern Japan and Korea	1035	13	21.5	0.0	963	-7	556	-8
C47	Southern Mongolia	193	18	5.6	-1.5	1079	-5	311	-8
C48	Punjab to Gujarat	811	21	29.2	0.2	1144	-1	629	3
C49	Maritime Southeast Asia	1220	8	24.4	0.1	1133	-2	743	0
C50	Mainland Southeast Asia	1439	0	25.3	0.3	1085	0	722	0
C51	Eastern Siberia	436	21	11.2	0.1	735	-10	273	-11
C52	Eastern Central Asia	416	59	9.7	-0.5	866	-10	301	-12
C53	Northern Australia	171	-8	24.3	0.4	1222	-3	604	-5
C54	Queensland to Victoria	242	21	13.0	0.0	866	-6	322	-3
C55	Nullarbor to Darling	187	-21	13.5	0.5	873	2	343	8
C56	New Zealand	309	-19	8.7	0.5	686	0	190	3
C57	Boreal Eurasia	421	6	10.6	-0.1	689	-4	239	-7
C58	Ukraine to Ural mountains	238	-11	15.0	0.6	827	0	367	-1
C59	Mediterranean Europe and Turkey	138	-18	20.0	0.4	1249	0	505	-4
C60	W. Europe (non Mediterranean)	356	10	15.9	0.3	905	-3	408	-2
C61	Boreal America	410	-14	7.8	0.0	639	4	185	3
C62	Ural to Altai mountains	281	21	12.9	-0.1	852	-4	368	0
C63	Australian desert	167	32	15.0	0.1	923	-4	358	-3
C64	Sahara to Afghan deserts	33	46	28.2	-0.2	1420	-3	230	1
C65	Sub-arctic America	176	0	-0.5	0.4	630	0	115	0

Table A.2 Jul 2020 - Oct 2020 agroclimatic indicators and biomass 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 5YA Departure (%)
ARG	Argentina	208	-20	14.5	0.1	933	2	341	0
AUS	Australia	217	12	14.0	0.2	901	-5	335	-1
BGD	Bangladesh	2106	8	27.3	0.5	1055	-3	718	-2
BRA	Brazil	238	-21	24.2	0.7	1153	2	529	-7
KHM	Cambodia	1311	-2	25.6	0.2	1091	1	735	1
CAN	Canada	321	-4	12.3	-0.6	902	-1	341	-1
CHN	China	806	10	19.5	-0.4	942	-10	487	-9
EGY	Egypt	3	-62	26.3	0.8	1365	-2	159	-19
ETH	Ethiopia	955	6	17.4	-0.5	1114	-7	469	-9
FRA	France	324	6	16.3	0.4	964	-2	444	1
DEU	Germany	321	-1	15.1	0.4	838	-4	361	-3
IND	India	1306	5	26.1	0.3	1057	0	642	1
IDN	Indonesia	1082	10	24.2	0.1	1125	-2	726	-1
IRN	Iran	46	-13	21.9	-0.6	1370	-4	275	18
KAZ	Kazakhstan	212	23	14.5	-0.7	971	-4	428	1
MEX	Mexico	986	-6	22.8	0.3	1268	1	677	-5
MMR	Myanmar	1589	-4	24.1	0.6	979	-3	621	-2
NGA	Nigeria	708	-27	25.1	0.0	1080	-1	667	-5
PAK	Pakistan	302	-2	24.7	-0.3	1310	-3	525	-1
PHL	Philippines	1623	-2	25.7	0.4	1233	3	831	3
POL	Poland	325	13	15.6	0.5	824	-3	365	-5
ROU	Romania	277	16	17.9	0.7	1039	-1	491	-2
RUS	Russia	281	0	13.7	0.3	819	-2	346	-3
ZAF	South Africa	90	-20	14.0	-0.6	1107	-1	369	-4
THA	Thailand	1324	12	25.0	0.1	1076	-2	713	-1
TUR	Turkey	65	-54	20.1	1.1	1304	2	437	-6
GBR	United Kingdom	505	12	12.6	-0.4	579	-12	215	-13
UKR	Ukraine	198	-3	17.8	1.1	967	2	471	2
USA	United States	328	-6	20.1	-0.1	1149	0	570	-3
UZB	Uzbekistan	35	4	20.6	-1.5	1302	-5	360	27
VNM	Vietnam	1577	13	24.0	0.2	1082	-1	698	0
AFG	Afghanistan	49	29	18.1	-1.2	1410	-3	180	17
AGO	Angola	145	-8	21.7	0.0	1305	-2	448	7
BLR	Belarus	260	-7	15.2	1.0	766	-3	336	-3
HUN	Hungary	295	39	18.3	0.3	1003	-2	521	0
ITA	Italy	389	15	18.8	0.0	1133	-1	545	-2
KEN	Kenya	405	21	19.5	-0.2	1156	0	596	0
LKA	Sri Lanka	840	-23	26.4	0.2	1191	-3	782	-3
MAR	Morocco	53	-39	23.1	0.4	1345	-1	587	-3
MNG	Mongolia	398	67	8.6	-1.2	967	-8	301	-14
MOZ	Mozambique	79	15	21.8	-0.4	1083	-7	583	-4
ZMB	Zambia	19	3	21.5	0.0	1339	-4	349	3

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 Jul 2020 and Oct 2020.

Table A.3 Argentina, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Buenos Aires	204	-18	11.1	-0.5	865	3	266	-3
Chaco	202	-27	19.2	1.2	949	4	478	11
Cordoba	93	-28	14.0	-0.1	1001	1	327	-6
Corrientes	320	-30	17.0	0.5	862	1	396	5
Entre Rios	287	-21	14.2	0.0	867	1	319	-5
La Pampa	188	18	11.8	-0.5	904	1	271	-9
Misiones	412	-32	18.0	0.6	939	6	437	6
Santiago Del Estero	120	-20	17.6	0.2	1020	0	443	6
San Luis	87	-13	12.5	-0.2	1024	3	297	-8
Salta	195	22	16.7	0.7	1140	1	475	10
Santa Fe	201	-21	15.8	0.2	903	-1	370	0
Tucuman	66	-25	14.3	0.5	1185	2	390	6

Table A.4 Australia, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
New South Wales	266	56	12.6	0.0	886	-9	332	-3
South Australia	236	16	13.1	-0.1	766	-7	286	-9
Victoria	296	6	10.7	0.0	692	-7	228	-8
W. Australia	167	-22	14.8	0.5	923	2	330	5

Table A.5 Brazil, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Ceara	48	-16	26.7	0.0	1396	2	720	-7
Goiias	207	-10	25.1	0.5	1251	3	357	-22
Mato Grosso Do Sul	211	-27	25.1	1.8	1113	4	512	-9
Mato Grosso	176	-22	26.9	0.9	1201	3	372	-25
Minas Gerais	245	-6	21.6	0.6	1108	-1	502	-7
Parana	390	-27	19.2	1.3	1014	5	473	6
Rio Grande Do Sul	493	-23	15.4	0.2	856	2	347	1
Santa Catarina	474	-27	15.9	0.8	910	6	372	7
Sao Paulo	239	-33	22.1	1.6	1081	3	539	4

Table A.6 Canada, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Alberta	234	-4	11.4	-0.6	945	-1	361	-2
Manitoba	219	-23	13.1	-0.9	947	3	413	3
Saskatchewan	236	1	12.6	-1.0	964	1	407	-1

Table A.7 India, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Andhra Pradesh	1351	51	25.7	-0.7	1031	-5	680	-5
Assam	2656	3	25.1	0.3	836	-11	548	-9
Bihar	1392	3	27.3	0.1	1083	-2	690	-4
Chhattisgarh	1181	-4	25.9	0.7	1089	3	680	3
Daman and Diu	2302	50	27.9	0.3	1102	-3	757	13
Delhi	439	-24	29.4	0.6	1201	3	644	-1
Gujarat	1615	51	27.9	0.2	1068	0	684	17
Goa	3351	17	24.9	-0.1	912	-11	630	-10
Himachal Pradesh	324	-68	20.2	0.9	1312	12	439	-10
Haryana	274	-52	30.0	1.0	1229	6	618	-3
Jharkhand	1357	7	26.2	0.6	1151	3	767	7
Kerala	1711	-22	24.0	0.0	1037	0	675	0
Karnataka	1242	10	23.3	-0.2	902	-4	583	-4
Meghalaya	2123	-19	25.0	0.9	897	-3	586	1
Maharashtra	1588	29	25.0	0.2	984	0	652	6
Manipur	2240	16	22.0	0.6	821	-8	483	-5
Madhya Pradesh	1036	-4	26.3	0.8	1088	5	638	8
Mizoram	1759	-12	23.9	0.4	967	-3	613	-1
Nagaland	2909	41	22.0	0.3	729	-19	427	-17
Orissa	1309	-7	26.3	0.5	1100	1	722	2
Puducherry	1516	-7	27.2	-0.4	1095	-2	750	-3
Punjab	226	-65	30.0	1.1	1240	5	593	-14
Rajasthan	583	-6	29.3	0.5	1125	-1	603	6
Sikkim	625	-29	17.7	0.5	1122	5	420	-1
Tamil Nadu	729	-20	26.1	-0.2	1056	-2	690	-2
Tripura	1669	-14	26.5	0.6	1005	-2	684	0
Uttarakhand	528	-52	21.3	1.0	1238	11	455	-6
Uttar Pradesh	913	-7	28.1	0.5	1135	2	627	-6
West Bengal	1889	5	27.2	0.5	1117	0	741	0

Table A.8 Kazakhstan, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Akmolinskaya	202	28	13.5	-0.6	886	-5	398	-3
Karagandinskaya	180	30	12.6	-1.1	955	-6	400	-4
Kustanayskaya	246	47	14.4	-0.3	894	-1	423	1
Pavlodarskaya	197	10	13.9	-0.2	848	-7	396	-3
Severo kazachstanskaya	209	-3	13.3	0.2	803	-3	366	4
Vostochno kazachstanskaya	283	24	12.0	-1.5	1009	-6	390	-10
Zapadno kazachstanskaya	125	0	17.8	-0.2	1026	2	513	2

Table A.9 Russia, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Bashkortostan Rep.	319	10	12.6	0.0	779	-2	330	0
Chelyabinskaya Oblast	314	26	12.9	0.2	799	0	348	2
Gorodovikovsk	123	-37	21.3	1.1	1094	2	570	0
Krasnodarskiy Krai	261	-16	16.1	0.8	956	0	426	2
Kurganskaya Oblast	235	-4	13.3	0.7	752	0	347	9
Kirovskaya Oblast	316	-3	12.2	0.4	687	0	281	0
Kurskaya Oblast	151	-36	15.7	0.9	893	4	395	2
Lipetskaya Oblast	123	-48	15.4	0.6	882	6	372	-4
Mordoviya Rep.	167	-41	14.0	0.3	850	8	354	1
Novosibirskaya Oblast	329	25	12.2	0.3	725	-6	314	0
Nizhegorodskaya O.	224	-27	13.5	0.4	770	4	319	-2
Orenburgskaya Oblast	218	17	14.9	-0.3	911	0	433	1
Omskaya Oblast	249	2	12.8	0.8	714	-4	329	7
Permskaya Oblast	357	6	11.7	0.4	650	-3	268	-1
Penzenskaya Oblast	154	-41	14.3	0.2	906	9	377	2
Rostovskaya Oblast	106	-40	20.1	1.1	1064	3	542	1
Ryazanskaya Oblast	163	-41	14.6	0.4	824	5	348	-3
Stavropolskiy Krai	168	-41	20.5	1.0	1105	3	603	5
Sverdlovskaya Oblast	304	1	12.1	0.8	705	2	304	10
Samarskaya Oblast	172	-30	14.6	-0.1	859	1	394	1
Saratovskaya Oblast	109	-43	16.1	0.0	983	6	451	2
Tambovskaya Oblast	110	-52	15.5	0.4	909	6	380	-4
Tyumenskaya Oblast	253	-1	12.8	1.1	713	1	331	14
Tatarstan Rep.	270	-10	13.2	0.1	776	3	331	2
Ulyanovskaya Oblast	189	-33	14.0	0.0	864	7	377	6
Udmurtiya Rep.	328	5	12.3	0.2	689	-1	286	-1
Volgogradskaya O.	86	-45	18.3	0.6	1037	5	472	-4
Voronezhskaya Oblast	105	-48	16.9	0.8	959	5	433	-1

Table A.10 United States, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Arkansas	431	12	22.7	-0.8	1142	-3	697	-2
California	9	-85	21.7	1.6	1417	1	329	-24
Idaho	91	-32	15.6	0.4	1268	2	501	-1
Indiana	285	-8	19.5	-0.2	1123	1	629	2
Illinois	341	8	19.4	-1.0	1106	-2	613	-3
Iowa	244	-22	18.5	-0.7	1143	2	621	2
Kansas	263	-20	21.9	-0.6	1214	2	707	-1
Michigan	275	-15	16.4	-0.3	1010	1	498	4
Minnesota	209	-30	15.8	-0.7	1067	4	532	6
Missouri	360	8	20.4	-1.1	1136	-3	655	-3
Montana	171	-4	15.2	0.0	1172	1	527	-1
Nebraska	229	-13	19.9	-0.2	1216	3	684	3
North Dakota	159	-34	16.3	-0.6	1106	5	549	2
Ohio	245	-19	19.2	0.2	1084	0	603	4
Oklahoma	393	20	23.4	-1.1	1195	-2	731	-2
Oregon	100	-36	16.6	0.9	1216	1	457	-5
South Dakota	150	-39	18.8	-0.1	1176	3	654	5
Texas	334	-10	25.6	-0.3	1237	-1	721	-6
Washington	194	-7	16.0	0.4	1110	0	409	-11
Wisconsin	251	-13	15.8	-0.9	1048	1	516	2

Table A.11 China, Jul 2020 - Oct 2020 agroclimatic indicators and biomass (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 5YA Departure (%)
Anhui	948	39	22.4	-0.6	939	-8	566	-7
Chongqing	964	15	20.1	-0.8	807	-19	463	-20
Fujian	755	-22	22.6	-0.1	1022	-5	638	-5
Gansu	419	0	13.3	-0.6	952	-7	389	-9
Guangdong	1035	-17	24.9	0.1	1119	-3	733	-2
Guangxi	1181	5	23.1	-0.4	1023	-9	638	-9
Guizhou	953	10	18.9	-0.5	768	-21	416	-20
Hebei	301	3	18.5	-0.5	1045	-5	504	-10
Heilongjiang	486	64	14.8	-0.3	883	-10	410	-8
Henan	525	19	21.4	-0.7	970	-8	561	-6
Hubei	943	39	20.6	-1.0	885	-14	506	-15
Hunan	869	13	21.6	-0.9	900	-15	545	-15
Jiangsu	739	6	22.8	-0.4	966	-5	577	-6
Jiangxi	844	5	23.0	-0.5	979	-9	610	-9
Jilin	527	40	16.0	0.0	963	-7	459	-4
Liaoning	444	13	18.1	0.0	984	-6	510	-5
Inner Mongolia	305	47	14.8	-0.6	991	-8	441	-9
Ningxia	255	9	15.6	-0.8	1051	-5	487	-7
Shaanxi	491	-8	17.1	-0.7	941	-9	467	-11
Shandong	534	25	21.4	-0.4	1015	-5	573	-6
Shanxi	334	7	16.1	-0.8	1048	-4	467	-9
Sichuan	1101	22	17.2	-0.3	780	-18	372	-18
Yunnan	1251	26	17.9	0.4	791	-15	376	-12
Zhejiang	753	-17	22.1	-0.5	943	-8	559	-11