Annex A. Agroclimatic indicators

Table A.1 October 2020 - January 2021 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	781	-13	22.9	-0.1	1170	-2	642	-8
C02	East African highlands	207	-8	17.9	-0.4	1290	-1	348	-23
C03	Gulf of Guinea	184	-19	25.5	0.3	1189	-3	445	-9
C04	Horn of Africa	399	8	21.2	-0.4	1256	-2	571	-13
C05	Madagascar (main)	616	-30	23.1	0.2	1342	0	793	-6
C06	Southwest Madagascar	177	-54	26.9	0.9	1452	2	813	-4
C07	North Africa-Mediterranean	176	-13	12.0	0.1	704	-1	228	-8
C08	Sahel	51	-16	25.7	0.4	1213	-3	181	-17
C09	Southern Africa	561	5	23.6	0.1	1310	-4	763	-7
C10	Western Cape (South Africa)	145	4	17.8	-0.2	1451	-5	691	-6
C11	British Columbia to Colorado	328	-10	-1.3	1.0	444	1	66	-2
C12	Northern Great Plains	154	-18	2.3	1.2	476	0	90	2
C13	Corn Belt	350	-13	2.9	0.7	410	-3	84	-2
C14	Cotton Belt to Mexican Nordeste	335	-8	11.8	0.4	659	-1	226	-4
C15	Sub-boreal America	200	-10	-4.8	1.4	235	-3	31	-3
C16	West Coast (North America)	414	-21	8.6	0.6	541	3	129	1
C17	Sierra Madre	156	-38	15.6	0.1	1064	2	281	-17
C18	SW U.S. and N. Mexican highlands	76	-46	8.9	0.5	808	4	139	-24
C19	Northern South and Central America	766	9	22.3	0.0	1015	-2	533	-10
C20	Caribbean	489	29	24.0	0.2	990	-3	622	-5
C21	Central-northern Andes	909	-2	15.4	-0.2	1136	-2	426	-13
C22	Nordeste (Brazil)	172	-36	26.4	0.3	1350	0	822	-2
C23	Central eastern Brazil	510	-46	25.9	1.4	1276	1	810	-3
C24	Amazon	854	-18	25.6	0.3	1153	0	754	-3
C25	Central-north Argentina	583	12	24.1	-0.2	1355	-2	826	-6
C26	Pampas	451	-17	22.3	0.2	1391	-2	816	-3
C27	Western Patagonia	222	-29	12.1	-0.3	1495	2	404	-9
C28	Semi-arid Southern Cone	157	-8	18.3	-0.2	1608	-2	620	-5
C29	Caucasus	236	-22	5.3	0.9	560	0	119	-5

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. (%)
C30	Pamir area	141	-28	1.7	-1.2	718	0	90	-25
C31	Western Asia	111	-25	6.4	-0.5	660	0	97	-26
C32	Gansu-Xinjiang (China)	47	-38	-5.7	-2.2	589	0	66	-18
C33	Hainan (China)	543	-1	20.1	-0.6	671	-12	384	-16
C34	Huanghuaihai (China)	78	-3	5.3	-0.2	632	-3	119	-16
C35	Inner Mongolia (China)	45	-7	-7.5	-1.5	585	0	70	-8
C36	Loess region (China)	69	-8	0.1	-0.6	676	-4	107	-10
C37	Lower Yangtze (China)	170	-44	10.3	-0.2	637	-1	196	-7
C38	Northeast China	102	13	-7.4	0.1	466	-5	59	-6
C39	Qinghai-Tibet (China)	211	6	0.6	0.0	818	-7	111	-13
C40	Southern China	233	-32	14.5	-0.1	764	4	293	-4
C41	Southwest China	254	-7	7.3	-0.5	549	-8	135	-20
C42	Taiwan (China)	198	-41	21.0	0.8	795	-2	351	-6
C43	East Asia	287	-9	-0.8	0.1	488	-2	84	-4
C44	Southern Himalayas	194	-6	16.3	0.2	911	-2	206	-22
C45	Southern Asia	328	8	22.4	0.4	1032	-5	399	-5
C46	Southern Japan and Korea	354	-26	9.2	0.4	591	2	177	1
C47	Southern Mongolia	25	-55	-14.5	-1.3	459	-2	35	-10
C48	Punjab to Gujarat	49	26	20.2	-0.1	950	-4	154	3
C49	Maritime Southeast Asia	1364	-2	24.3	0.1	1062	-2	699	-3
C50	Mainland Southeast Asia	514	13	22.3	-0.2	970	-6	429	-23
C51	Eastern Siberia	218	-10	-9.8	-0.2	268	-2	32	2
C52	Eastern Central Asia	84	13	-13.4	0.2	350	-6	31	-6
C53	Northern Australia	858	9	26.6	0.2	1349	-3	884	-2
C54	Queensland to Victoria	267	8	20.6	-0.2	1394	-5	741	-5
C55	Nullarbor to Darling	82	-26	19.4	-0.1	1507	-1	769	1
C56	New Zealand	318	-4	13.6	0.3	1265	-1	459	-2
C57	Boreal Eurasia	382	0	-2.2	0.8	110	-12	17	-8
C58	Ukraine to Ural mountains	239	-13	0.0	0.8	179	-5	36	4
C59	Mediterranean Europe and Turkey	369	-3	8.8	0.5	517	-3	159	1
C60	W. Europe (non Mediterranean)	414	13	5.3	0.2	265	-10	65	-9
C61	Boreal America	431	8	-5.3	1.2	133	-3	17	3
C62	Ural to Altai mountains	156	-18	-7.3	-0.6	263	-3	34	-8
C63	Australian desert	129	23	21.1	-0.5	1492	-5	770	-4
C64	Sahara to Afghan deserts	47	-24	16.6	-0.1	918	-2	162	-22
C65	Sub-arctic America	106	-7	-18.5	0.7	39	-5	2	-7

Table A.2 October 2020 - January 2021 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	420	-2	22.0	-0.1	1432	-1	810	-1
AUS	Australia	278	7	21.0	-0.1	1406	-4	753	-4
BGD	Bangladesh	262	0	21.4	0.6	971	-1	337	-1
BRA	Brazil	584	-37	25.5	0.9	1261	1	803	-2
KHM	Cambodia	561	17	23.7	-0.7	988	-8	551	-17
CAN	Canada	290	-11	-2.5	1.3	274	-3	39	3
CHN	China	172	-24	5.6	-0.3	620	-3	132	-11
EGY	Egypt	54	1	18.0	1.0	758	-1	176	-18
ETH	Ethiopia	127	-22	18.0	-0.4	1304	-1	285	-28
FRA	France	482	18	6.6	-0.1	292	-13	73	-17
DEU	Germany	331	-2	4.4	0.1	205	-11	45	-15
IND	India	212	8	20.4	0.3	990	-4	277	-8
IDN	Indonesia	1325	-4	24.4	0.0	1095	-2	730	-3
IRN	Iran	156	-12	8.0	0.0	748	-2	119	-25
KAZ	Kazakhstan	115	-31	-5.9	-1.2	354	1	46	-7
MEX	Mexico	245	-18	18.0	0.2	1006	1	309	-19
MMR	Myanmar	304	-10	19.5	0.4	1011	0	318	-27
NGA	Nigeria	124	-34	25.4	0.5	1212	-3	312	-8
PAK	Pakistan	114	0	11.2	-0.7	850	-2	98	-28
PHL	Philippines	1427	35	24.7	0.1	959	-7	645	-7
POL	Poland	266	-3	3.7	0.5	179	-14	40	-11
ROU	Romania	281	17	4.3	1.0	339	-11	82	-1
RUS	Russia	199	-15	-4.2	0.4	215	-3	33	2
ZAF	South Africa	297	9	20.4	0.2	1352	-7	733	-6
THA	Thailand	449	3	22.3	-0.5	989	-7	436	-26
TUR	Turkey	267	-25	6.9	1.4	578	1	142	2
GBR	United Kingdom	586	20	6.3	-0.3	147	-13	37	-16
UKR	Ukraine	222	-5	3.3	1.2	243	-11	63	7
USA	United States	291	-12	6.4	0.7	548	-1	128	-3
UZB	Uzbekistan	65	-57	2.8	-2.3	632	4	76	-35
VNM	Vietnam	744	31	18.9	-0.6	752	-9	389	-18
AFG	Afghanistan	99	-28	3.4	-1.3	772	-1	79	-36
AGO	Angola	764	-15	22.8	-0.2	1227	0	702	-8
BLR	Belarus	292	5	2.0	1.2	126	-23	28	-11
HUN	Hungary	253	9	4.6	0.2	296	-13	71	-10
ITA	Italy	499	18	7.3	-0.4	429	-6	129	-12
KEN	Kenya	391	-4	20.0	-0.4	1278	-1	614	-9
LKA	Sri_Lanka	1144	-4	25.0	0.4	1066	-2	708	-4
MAR	Morocco	203	-6	11.8	0.0	755	-1	232	3
MNG	Mongolia	52	5	-13.6	-0.5	432	-4	37	-7
MOZ	Mozambique	597	-8	25.6	0.3	1308	-1	837	-3
ZMB	Zambia	869	0	23.5	0.0	1260	-4	718	-7

*Note: Departures are expressed in relative terms (percentage) forall 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 October and January.*

Table A.3 Argentina, October 2020 - January 2021 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 (%)
Buenos Aires	198	-24	20.1	-0.1	1510	-1	798	0
Chaco	624	10	25.4	0.4	1347	1	889	4
Cordoba	288	7	22.4	-0.4	1477	-3	869	0
Corrientes	568	-8	24.0	0.3	1374	-1	863	-1
Entre Rios	312	-25	22.6	0.1	1455	-1	795	-7
La Pampa	221	1	21.5	-0.3	1534	-2	886	4
Misiones	582	-22	23.4	0.4	1346	-3	845	-5
Santiago Del Estero	544	10	24.3	-0.6	1357	-2	872	-2
San Luis	314	49	21.4	-0.5	1521	-2	851	-1
Salta	1070	26	21.2	-0.2	1297	-1	724	-10
Santa Fe	432	3	23.6	-0.1	1423	-1	875	3
Tucuman	604	13	20.0	-0.2	1408	-1	745	-12

Table A.4 Australia, October 2020 - January 2021 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	299	14	21.4	-0.3	1442	-5	785	-3
South Australia	170	29	19.0	-0.5	1353	-8	693	-7
Victoria	287	24	17.2	-0.4	1290	-8	622	-10
W. Australia	128	-19	20.5	-0.1	1498	-1	768	1

Table A.5 Brazil, October 2020 - January 2021 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	76	-63	28	0	1362	-1	775	-8
Goias	409	-65	27	2	1349	6	858	3
Mato Grosso Do Sul	341	-63	28	2	1262	-4	813	-9
Mato Grosso	689	-45	27	2	1169	1	768	-3
Minas Gerais	713	-38	23	1	1336	6	805	0
Parana	605	-32	23	1	1292	-2	781	-5
Rio Grande Do Sul	484	-21	21	0	1357	-2	779	-7
Santa Catarina	825	4	20	0	1216	-4	636	-12
Sao Paulo	431	-62	25	2	1316	4	829	1

Table A.6 Canada, October 2020 - January 2021 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	139	-11	-3.6	1.2	265	-2	39	0
Manitoba	141	-28	-3.8	1.7	280	-1	39	4
Saskatchewan	144	-10	-3.5	1.5	287	0	43	10

Table A.7 India, October 2020 - January 2021 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	316	29	22.6	-0.1	1038	-6	415	-17
Assam	396	25	17.7	0.3	844	-4	344	-8
Bihar	63	-41	19.6	0.5	952	-2	193	-25
Chhattisgarh	133	9	20.2	0.6	1041	-3	251	-14
Daman and Diu	53	57	26.4	0.3	1089	-6	361	64
Delhi	13	-65	17.8	-0.2	899	-3	158	-4
Gujarat	75	178	24.2	0.0	1053	-4	233	36
Goa	426	79	26.2	0.2	1104	-7	521	21
Himachal Pradesh	115	-22	8.7	-0.4	893	0	92	-26
Haryana	19	-50	17.5	-0.2	889	-3	108	-32
Jharkhand	145	14	19.1	0.8	1000	-2	249	-8
Kerala	844	11	24.4	-0.1	1036	-7	661	3
Karnataka	320	5	22.6	0.0	1059	-7	480	-7
Meghalaya	357	-1	18.4	0.8	891	-1	331	-5
Maharashtra	210	89	23.0	0.4	1050	-7	346	10
Manipur	507	42	14.2	0.0	907	1	230	-27
Madhya Pradesh	46	-15	20.1	0.7	991	-5	202	-3
Mizoram	461	31	16.6	-0.3	974	0	279	-18
Nagaland	659	64	13.9	0.0	809	-4	260	-20
Orissa	222	11	20.8	0.6	1048	-2	335	-5
Puducherry	699	24	25.7	0.0	1061	-7	653	-4
Punjab	51	-27	16.7	-0.3	839	-2	105	-44
Rajasthan	17	-20	20.1	0.2	962	-4	131	3
Sikkim	11	-83	10.0	0.5	1051	0	90	-26
Tamil Nadu	841	19	23.7	0.0	980	-9	596	-11
Tripura	373	8	19.8	0.5	951	-1	330	-4
Uttarakhand	23	-67	10.8	-0.2	942	0	63	-50
Uttar Pradesh	7	-88	18.8	0.5	929	-3	128	-36
West Bengal	155	-14	20.9	0.6	991	-1	277	-11

Table A.8 Kazakhstan, October 2020 - January 2021 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	117	-21	-7.3	-0.8	294	-2	39	2
Karagandinskaya	91	-28	-8.1	-1.5	359	-2	43	-5
Kustanayskaya	124	-17	-6.3	-0.3	276	2	41	11
Pavlodarskaya	111	-14	-7.7	-0.8	255	-8	33	-8
Severo	132	-19	-7.4	-0.4	223	-3	30	0

	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 (%)
kazachstanskaya								
Vostochno kazachstanskaya	132	-38	-8.1	-2.0	396	1	47	-1
Zapadno kazachstanskaya	141	-22	-2.5	-0.4	315	9	44	-7

Table A.9 Russia, October 2020 - January 2021 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.	170	-33	-6.0	-0.2	207	9	30	18
Chelyabinskaya Oblast	128	-21	-6.6	-0.1	223	4	32	12
Gorodovikovsk	209	-9	4.4	0.9	329	-4	92	17
Krasnodarskiy Kray	228	-18	-1.4	0.6	295	-1	60	16
Kurganskaya Oblast	153	-13	-7.1	-0.2	177	-3	24	0
Kirovskaya Oblast	230	-28	-4.6	0.2	117	5	19	21
Kurskaya Oblast	258	-7	1.0	1.3	187	-6	40	10
Lipetskaya Oblast	238	-11	0.0	1.1	187	-2	23	-31
Mordoviya Rep.	200	-28	-2.4	0.3	182	10	25	-4
Novosibirskaya Oblast	216	-3	-8.4	0.0	154	-19	18	-22
Nizhegorodskaya O.	211	-29	-2.7	0.3	144	7	20	-3
Orenburgskaya Oblast	153	-27	-5.1	-0.5	274	9	44	20
Omskaya Oblast	169	-15	-7.8	0.2	149	-16	19	-16
Permskaya Oblast	212	-29	-6.1	0.2	125	3	17	12
Penzenskaya Oblast	216	-22	-2.3	0.3	201	9	27	-8
Rostovskaya Oblast	214	-11	3.0	1.0	300	-3	72	9
Ryazanskaya Oblast	227	-18	-0.7	1.0	163	2	26	-3
Stavropolskiy Kray	195	-19	4.6	1.0	369	-1	100	18
Sverdlovskaya Oblast	165	-22	-7.2	-0.1	143	2	19	7
Samarskaya Oblast	164	-33	-4.1	-0.7	225	11	39	25
Saratovskaya Oblast	179	-24	-2.2	-0.2	257	8	36	-11
Tambovskaya Oblast	227	-18	-0.7	0.9	196	0	25	-23
Tyumenskaya Oblast	178	-13	-7.7	-0.1	136	-12	17	-12
Tatarstan Rep.	189	-30	-4.5	-0.3	173	12	29	24
Ulyanovskaya Oblast	171	-31	-3.6	-0.4	201	11	35	25
Udmurtiya Rep.	208	-30	-5.2	0.1	136	8	21	20
Volgogradskaya	191	-10	0.2	0.4	279	0	42	-23

	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 (%)
O.								
Voronezhskaya Oblast	223	-13	0.4	0.9	233	0	36	-15

Table A.10 United States, October 2020 - January 2021 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 (%)
Arkansas	386	-16	9.3	0.0	584	-3	177	-4
California	205	-40	10.6	0.7	681	5	142	-5
Idaho	267	-21	-0.1	0.7	468	2	88	18
Indiana	328	-19	4.9	0.4	460	-2	112	-2
Illinois	324	-9	4.7	0.5	469	-4	114	0
Iowa	209	-17	2.4	0.8	478	0	104	10
Kansas	175	-5	6.8	1.0	617	-1	146	-1
Michigan	259	-28	1.8	0.6	350	1	69	1
Minnesota	181	-22	-0.9	1.4	376	0	66	7
Missouri	336	4	6.1	0.4	522	-6	136	-3
Montana	148	-23	0.0	1.5	432	0	65	-8
Nebraska	111	-30	4.2	1.4	573	2	124	11
North Dakota	81	-49	-0.4	1.9	399	1	68	10
Ohio	331	-16	4.6	0.5	426	-5	101	-6
Oklahoma	271	9	9.2	0.1	634	-4	185	-2
Oregon	446	-17	4.4	0.5	420	2	103	25
South Dakota	100	-38	2.1	1.8	488	1	99	12
Texas	207	-22	13.3	0.3	729	1	233	-9
Washington	558	-3	3.7	0.8	319	-2	78	18
Wisconsin	225	-21	0.0	0.8	395	2	71	4

Table A.11 China, October 2020 - January 2021 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	167	-24	8.6	0.0	633	-2	170	-5
Chongqing	265	-4	8.2	-0.5	519	-6	138	-13
Fujian	130	-68	12.5	0.0	660	4	239	-2
Gansu	101	-8	-1.4	-0.7	654	-8	95	-16
Guangdong	163	-58	15.9	-0.1	778	7	335	2
Guangxi	259	-30	13.3	-0.7	671	2	250	-10
Guizhou	285	-21	7.8	-1.0	464	-6	123	-20
Hebei	28	-40	-1.6	-1.2	633	1	87	-17
Heilongjiang	107	15	-9.2	0.4	406	-8	47	-11
Henan	126	17	6.8	-0.1	628	-7	127	-16
Hubei	232	5	7.6	-0.5	590	-9	146	-18
Hunan	213	-34	9.3	-0.6	569	-8	166	-18
Jiangsu	131	-32	9.0	0.3	653	1	181	1
Jiangxi	152	-58	10.8	-0.1	638	1	205	-7
Jilin	108	10	-6.5	0.0	520	-2	70	-2
Liaoning	84	5	-3.2	-0.8	579	0	94	-2
Inner	53	7	-9.2	-1.0	530	-2	58	-11

	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 (%)
Mongolia								
Ningxia	40	-30	-2.4	-1.5	696	-4	99	-11
Shaanxi	111	2	2.3	-0.6	645	-5	119	-7
Shandong	76	4	5.5	0.0	630	-4	124	-16
Shanxi	45	-20	-1.6	-0.8	664	0	95	-8
Sichuan	260	1	6.0	-0.3	542	-12	121	-22
Yunnan	274	-10	9.9	0.0	723	-2	201	-14
Zhejiang	146	-62	10.0	0.1	634	4	198	-3