

Annex A. Agroclimatic indicators

Table A.1 April 2023 - July 2023 agroclimatic indicators and biomass by global Monitoring and Reporting Unit (MRU)

105 Global MRUs		RAIN Current (mm)	RAIN 15YA dep. (%)	TEMP Current (°C)	TEMP 15YA dep. (°C)	RADP AR Current (MJ/m ²)	RADP AR 15YA dep. (%)	BIOM S Current (gDM/m ²)	BIOM SS 15YA dep. (%)
C01	Equatorial central Africa_zone1 (Cameron, Central African Republic, and South Sudan)	706	-18	24.3	0.5	1196	3	1263	-5
C02	Equatorial central Africa_zone2 (North DRC, Equatorial Guinea, Uganda, Republic of Congo)	830	-9	23.5	0.3	1139	1	1317	-3
C03	Equatorial central Africa_zone3 (South DRC, Rwanda, Burundi, Gabon)	347	-19	23.1	0.4	1206	1	845	-6
C04	Equatorial central Africa_zone4 (Angola, Zambia, and Malawi)	98	-9	18.3	0.7	1170	3	421	-3
C05	East African highlands	554	-27	19.4	0.6	1250	4	862	-9
C06	Gulf of Guinea zone1 (Nigeria, Benin, Togo, Ghana, Cote d'Ivoire, Guinea, and Guinea Bissau)	353	-22	28.5	0.8	1241	1	905	-12
C07	Gulf of Guinea zone2 (South Nigeria, Liberia, Sierra Leone, south Ghana, south Cote d'Ivoire, and west Genua)	1026	9	25.8	0.3	1147	1	1428	2
C08	Horn of Africa	236	-24	21.2	0.7	1202	3	686	-6
C09	Madagascar(main)	240	-5	19.9	0.4	979	4	673	-2
C10	SW Madagascar	88	38	20.6	-0.5	997	2	439	5
C11	North Africa Mediterranean	91	-8	21.8	1.0	1534	-2	605	-1
C12	Sahel	307	-1	30.3	0.4	1318	0	812	1
C13	Southern Africa_zone1 (West Angolan coast)	296	3	22.4	-0.1	1195	-1	677	0
C14	Southern Africa_zone10 (Middle part of South Africa)	60	-5	12.6	0.2	894	-1	285	-1
C15	Southern Africa_zone2 (southeastern Kenya, East Tanzania, and Mozambique)	194	9	20.8	0.4	1033	4	583	-1
C16	Southern Africa_zone3 (South Zambia)	6	-84	19.1	1.2	1200	5	300	-12
C17	Southern Africa_zone4 (Zimbabwe)	14	-77	17.8	1.0	1111	6	286	-20
C18	Southern Africa_zone5 (Northeast of Namibia, Botswana, and south Zimbabwe and Mozambique)	17	-61	18.6	1.3	1071	0	297	-8
C19	Southern Africa_zone6 (West Namibia coast)	53	12	19.8	0.5	1166	-4	387	4
C20	Southern Africa_zone7 (Southeast Namibia, Southwest Botswana, and northeast of South Africa)	11	-64	13.6	-0.6	931	-1	196	-21

C2 1	Southern Africa_zone8 (South Africa and southwest Namibia)	207	44	12.8	-1.2	722	-5	485	12
C2 2	Southern Africa_zone9 (western part of South Africa, Lesotho, and Eswatini)	64	-21	12.8	0.6	907	1	296	-8
C2 3	S. Africa Western Cape	291	32	11.5	-1.6	639	-7	579	10
C2 4	British Columbia To Colorado	298	-10	10.4	0.5	1349	-3	656	-6
C2 5	America northern great plains_canada	280	-22	13.4	1.2	1234	-3	750	-10
C2 6	America northeastern great plains	297	-29	18.3	0.6	1333	2	880	-12
C2 7	America northwestern great plains	311	-10	15.5	0.4	1357	-1	821	-6
C2 8	Nnorth of high plain	258	-23	21.1	0.2	1416	-1	845	-10
C2 9	America corn belt	383	-15	15.7	0.0	1230	-1	907	-8
C3 0	America cotton belt_Mexican coastal plain	372	5	24.8	0.2	1360	-5	943	-3
C3 1	America cotton belt_lower Mississippi	441	-15	23.9	0.3	1341	-4	1114	-7
C3 2	America cotton belt_high plain	478	-4	21.8	-0.2	1351	-3	1142	-2
C3 3	Sub_boreal North America	354	-3	11.4	1.2	1114	-4	798	2
C3 4	America West Coast	184	-3	14.8	-0.4	1437	-3	578	-6
C3 5	Sierra Madre	412	-44	21.5	0.9	1498	2	802	-18
C3 6	SW Mexico and N. Mexico highlands	92	-51	20.2	0.3	1558	-2	589	-16
C3 7	Northern South and Central America	899	-18	25.2	0.9	1253	1	1169	-8
C3 8	Caribbean	510	-12	26.5	0.7	1429	0	1186	-4
C3 9	Central_Northern Andes	215	114	14.7	-0.2	1109	-3	452	18
C4 0	Central_Northern Andes	450	-24	14.5	0.7	1034	-1	589	-5
C4 1	Brazil Nordeste	163	-28	24.8	1.0	1071	1	646	-10
C4 2	Central_Eastern Brazil	120	-57	22.9	1.7	1005	3	522	-27
C4 3	Amazon	490	-23	24.8	0.9	1085	1	939	-12
C4 4	Central_North Argentina	223	22	16.3	0.8	644	-11	539	13
C4 5	SE Brazil Concepcion_Bahia Blanca	316	-21	15.4	0.8	632	-1	613	-10
C4 6	SW Southern Cone	782	3	7.9	0.6	473	0	577	1
C4 7	Semi_arid Southern Cone	104	-8	10.8	0.8	685	-4	288	-7
C4 8	Caucasus	307	0	16.2	-0.1	1442	-2	736	0
C4 9	Central Asia Pamir mountains	262	-27	17.1	0.1	1560	0	661	-10
C5 0	Western Asia (Kazakhstan,Uzbekistan,Turkm enistan,Iran et.al)	119	9	23.1	0.4	1527	-1	634	-2
C5 1	Western Asia(Syrian, Jordan,Israel, et.al)	48	-35	24.1	0.5	1575	-3	604	-4
C5 2	Gansu-Xinjiang (China)	249	-5	15.2	-1.1	1413	-1	621	-8
C5 3	Hainan (China)	855	-7	26.8	0.3	1377	3	1422	2
C5 4	Huanghuaihai (China)	436	27	22.8	0.6	1280	-3	1005	11
C5 5	Inner Mongolia (China)	226	0	16.8	0.6	1366	-1	685	-5

C5 6	Loess region (China)	315	11	17.1	0.0	1336	-2	827	4
C5 7	Lower Yangtze (China)	1048	-8	22.4	0.5	1108	2	1421	6
C5 8	Northeast China	347	1	15.7	0.2	1262	0	833	-2
C5 9	Qinghai-Tibet (China)	962	-15	11.1	0.8	1248	7	721	-1
C6 0	Southern China	1063	-21	23.5	0.9	1195	6	1390	-2
C6 1	Southwest China	790	-12	19.0	0.6	1072	1	1163	0
C6 2	Taiwan (China)	1036	15	24.5	-0.9	1201	-6	1233	2
C6 3	East Asia	604	12	15.2	0.7	1193	-1	969	3
C6 4	Southern Himalayas_zone111 (Vietnam, Laos, Myanmar)	1053	-11	24.7	1.2	1270	7	1425	-1
C6 5	Southern Himalayas_zone112 (Myanmar)	618	-33	24.3	1.3	1280	9	1120	-14
C6 6	Southern Himalayas_zone12 (India, Myanmar, Bangladesh, Bhutan)	1397	-25	24.8	0.9	1229	11	1262	-7
C6 7	Southern Himalayas_zone222 (Nepal, India)	651	5	28.7	-0.3	1380	2	999	9
C6 8	Southern Asia	801	3	29.6	0.2	1243	0	1038	1
C6 9	Southern Japan and Korea	994	16	18.9	1.0	1182	-1	1249	5
C7 0	Mongolia region (Western of Mongolia)	204	5	5.9	-2.1	1432	-4	507	-10
C7 1	S. Asia Punjab to Gujarat	820	101	30.8	-1.5	1352	-6	1068	30
C7 2	SE Asia islands_zone1 (Indonesia, Malaysia)	954	-1	25.0	0.2	1176	0	1380	2
C7 3	SE Asia islands_zone2 (Indonesia, Malaysia)	1176	-3	25.2	0.3	1215	2	1482	1
C7 4	SE Asia islands_zone3 (Indonesia, Papua New Guinea)	1350	-10	23.6	0.3	989	2	1312	-2
C7 5	SE Asia mainland_zone1 (Myanmar, Bangladesh)	850	-39	28.8	0.9	1358	8	1169	-13
C7 6	SE Asia mainland_zone2 (Thailand, Myanmar, Laos)	1076	-2	27.1	0.9	1249	4	1456	0
C7 7	SE Asia mainland_zone3 (Cambodia, Vietnam, Thailand, Laos)	952	-12	27.0	0.8	1273	5	1345	-3
C7 8	Eastern Siberia	289	-11	9.8	-0.2	1162	2	737	-2
C7 9	Eastern Central Asia (Eastern of Mongolia)	247	-11	10.1	-0.7	1291	0	660	-7
C8 0	North Australia_zone1 (Timor Leste, Indonesia, Papua New Guinea)	536	4	25.2	0.1	1106	-2	964	-4
C8 1	North Australia_zone2 (Northern Australia)	172	7	21.6	0.9	979	0	587	8
C8 2	Australia Queensland to Victoria_zone1 (Southeast Australia coast)	180	-23	12.0	0.1	658	3	482	-12
C8 3	Australia Queensland to Victoria_zone21 (Southeast Australia Murrumbidgee)	131	-14	13.5	0.0	664	0	417	-6
C8 4	Australia Queensland to Victoria_zone22 (Southeast Australia Adelaide)	350	14	12.4	-0.2	422	-8	736	8
C8 5	Australia Nullarbor_Darling_z one1 (Southwest Australia)	125	-20	12.9	-1.1	625	-3	392	-17
C8 6	Australia Nullarbor_Darling_z one2 (Southwest Australia)	244	-15	13.0	-1.1	578	-6	569	-10
C8 7	New Zealand	391	5	9.6	0.7	404	-9	680	7
C8 8	Boreal Eurasia	312	-7	9.5	-0.2	1094	1	689	-4

C89	Ukraine to URAL Mountains	261	-16	13.9	-0.1	1123	-3	734	-10
C90	Mediterranean Europe and Turkey	258	21	17.6	0.5	1440	-2	745	6
C91	W. Europe_zone1 (Germany, Poland, Switzerland, Czechia, Hungary, Austria, and Balkans countries)	334	-3	14.4	-0.2	1223	-2	797	-5
C92	W. Europe_zone10 (Northwestern Greece and southwestern of Albania)	457	53	17.0	-0.2	1391	-5	964	16
C93	W. Europe_zone2 (Southeastern of Romania, Moldova, and southwestern Uraia)	248	3	17.6	-0.4	1254	-5	760	-3
C94	W. Europe_zone3 (Ebro River, Zaragoza, Spain)	150	-26	18.4	1.4	1443	0	631	-12
C95	W. Europe_zone4 (Northeastern of Italy and southwestern coast of France)	384	11	18.0	1.1	1383	-2	856	3
C96	W. Europe_zone5 (North Italy)	589	21	17.5	0.0	1304	-4	1066	7
C97	W. Europe_zone6 (Switzerland, North Italy and west Austria)	806	10	10.7	0.4	1227	-3	854	3
C98	W. Europe_zone7 (Ireland, United Kingdom, France, Belgium, Netherland)	358	-2	14.0	0.6	1166	2	845	2
C99	W. Europe_zone8 (Northwest of turkey and northeast of Greece)	287	-3	18.2	0.2	1359	-5	849	2
C100	W. Europe_zone9 (North Greece and North Macedonia)	397	14	16.8	0.0	1387	-3	890	3
C101	Boreal North America	431	24	5.4	-0.9	908	-10	594	-2
C102	URAL to Altai Mountains	240	-16	13.8	0.4	1285	5	669	-9
C103	Australian Desert (Central Australia)	92	-20	14.8	-0.8	730	-1	356	-16
C104	Old World Deserts	39	15	28.3	0.4	1587	-3	603	3
C105	Sub Arctic America (IceLand)	135	6	-2.9	0.9	1122	-8	280	4

Table A.2 April 2023 - July 2023 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 15YA Departure (%)
ARG	Argentina	238	-9	14.4	1.0	595	-6	505	-1
AUS	Australia	172	-15	13.6	0.0	676	0	472	-8
BGD	Bangladesh	1095	-29	29.4	0.8	1336	6	1336	-9
BRA	Brazil	236	-40	23.1	1.4	1018	3	648	-21
KHM	Cambodia	1020	-5	27.5	0.7	1199	1	1508	-1
CAN	Canada	369	-5	11.5	0.9	1138	-3	756	-1
CHN	China	753	-10	19.9	0.5	1187	1	1016	1
EGY	Egypt	10	73	24.2	0.6	1544	-3	546	17
ETH	Ethiopia	622	-20	20.1	0.6	1293	4	931	-4
FRA	France	370	-4	15.3	0.7	1254	0	864	0
DEU	Germany	307	-10	13.8	0.0	1196	0	763	-7
IND	India	833	4	29.4	-0.2	1283	1	1054	8
IDN	Indonesia	1088	-7	24.5	0.2	1111	2	1342	0
IRN	Iran	70	-24	21.8	0.3	1618	-1	575	-7
KAZ	Kazakhstan	222	-10	15.7	0.3	1362	3	670	-5
MEX	Mexico	391	-37	24.4	0.9	1478	0	819	-17

MMR	Myanmar	932	-31	26.3	1.0	1282	9	1177	-12
NGA	Nigeria	464	-20	28.5	0.8	1251	3	869	-15
PAK	Pakistan	443	58	24.9	-0.7	1473	-5	860	19
PHL	Philippines	1634	18	25.8	0.0	1248	-4	1534	2
POL	Poland	262	-20	14.1	-0.3	1139	-2	759	-10
ROU	Romania	310	-15	15.9	-0.2	1268	-4	817	-7
RUS	Russia	267	-15	13.3	0.0	1169	0	716	-9
ZAF	South Africa	81	-8	13.0	0.4	884	0	329	-3
THA	Thailand	907	-6	27.7	1.0	1269	6	1379	-2
TUR	Turkey	325	38	16.1	-0.2	1434	-4	801	12
GBR	United Kingdom	376	2	11.9	0.6	1049	6	835	7
UKR	Ukraine	288	-7	15.4	-0.6	1150	-7	786	-6
USA	United States	349	-12	18.6	0.0	1338	-2	836	-8
UZB	Uzbekistan	69	-52	22.9	0.6	1583	1	584	-14
VNM	Vietnam	1039	-9	25.7	0.8	1267	5	1433	0
AFG	Afghanistan	83	-55	20.0	0.5	1628	1	548	-14
AGO	Angola	168	-13	20.3	0.7	1198	-1	506	-3
BLR	Belarus	248	-23	14.0	0.0	1092	-2	721	-14
HUN	Hungary	326	26	16.7	-0.6	1276	-3	886	10
ITA	Italy	508	33	17.3	0.3	1347	-4	942	15
KEN	Kenya	348	-43	20.1	0.7	1182	5	773	-14
LKA	Sri_Lanka	755	-20	27.0	0.3	1273	0	1109	-7
MAR	Morocco	74	-20	21.2	1.0	1571	-1	574	-4
MNG	Mongolia	255	-8	9.4	-1.0	1338	-2	641	-8
MOZ	Mozambique	102	-23	20.3	0.4	1016	5	481	-9
ZMB	Zambia	61	-17	18.9	0.9	1186	5	370	-4
KGZ	Kyrgyzstan	406	-20	9.8	-1.0	1506	2	614	-11
SYR	Syria	40	-36	24.3	0.4	1588	-3	596	-6
DZA	Algeria	118	-13	21.7	1.2	1514	-1	645	-4
LBN	Lebanon	73	7.7	19.6	0	1620	-3	568	-1
MUS	Mauritius	644	206	23.8	0.5	951	1	1207	44

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 Oct-Jan.

Table A.3 April 2023 - July 2023 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 15YA Departure (%)
Buenos Aires	174	-20	12.5	0.9	556	-3	419	-14
Chaco	291	-11	17.4	0.9	592	-4	619	-9
Cordoba	141	18	14.1	1.1	601	-12	417	18
Corrientes	350	-27	16.7	1.1	609	2	723	-12
Entre Rios	287	-16	14.9	1.0	558	-7	652	3
La Pampa	74	-45	12.7	1.1	588	-2	285	-22
Misiones	454	-24	17.0	0.6	684	3	902	-3
Santiago Del Estero	288	64	16.5	1.0	573	-15	617	33
San Luis	68	-21	12.4	0.9	653	-6	280	-4
Salta	254	24	15.1	1.1	710	-11	540	7
Santa Fe	222	-12	15.8	1.2	577	-7	564	3
Tucuman	236	98	13.5	1.3	732	-12	544	40

Table A.4 April 2023 - July 2023 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 15YA Departure (%)
New South Wales	132	-28	11.9	-0.1	686	2	399	-13
South Australia	224	7	13.3	-0.3	514	-7	540	2
Victoria	288	10	10.6	-0.2	455	-4	591	5
W. Australia	194	-10	14.2	-1.0	649	-5	491	-10

Table A.5 April 2023 - July 2023 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 15YA Departure (%)
Ceara	280	-28	26.0	0.8	1173	1	869	-11
Goias	5	-97	24.5	2.9	1094	1	369	-38
Mato Grosso Do Sul	101	-61	22.5	1.7	944	9	486	-30
Mato Grosso	53	-77	25.0	1.6	1116	3	467	-33
Minas Gerais	54	-74	20.8	1.7	975	4	393	-34
Parana	325	-34	17.2	0.7	805	6	642	-25
Rio Grande Do Sul	474	-18	15.7	0.9	637	0	806	-8
Santa Catarina	501	-13	15.0	0.6	689	0	817	-8
Sao Paulo	74	-74	20.1	1.4	933	9	400	-42

Table A.6 Canada, April 2023 - July 2023 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 15YA Departure (%)
Alberta	311	-11	12.6	2.0	1247	-1	740	-5
Manitoba	352	-8	12.5	0.7	1090	-9	838	0
Saskatchewan	291	-14	12.9	1.2	1192	-3	756	-6

Table A.7 India, April 2023 - July 2023 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 15YA Departure (%)
Andhra Pradesh	680	47	30.5	-0.1	1188	-3	1060	17
Assam	2093	-15	25.1	0.3	1171	11	1505	1
Bihar	669	-15	32.0	0.3	1425	7	1040	-2
Chhattisgarh	777	16	30.5	0.1	1266	2	1006	3
Daman and Diu	1471	42	29.2	-0.1	1417	-2	1079	-2

Delhi	1211	325	30.5	-2.8	1366	-6	1333	58
Gujarat	1043	60	30.4	-0.7	1307	-6	1035	10
Goa	1665	-18	27.3	0.7	1295	5	1113	-10
Himachal Pradesh	723	20	20.0	-1.1	1379	-5	985	15
Haryana	959	272	30.5	-2.6	1365	-6	1276	59
Jharkhand	568	-14	30.9	0.3	1344	5	971	-3
Kerala	1379	-14	25.6	0.1	1222	2	1387	-5
Karnataka	568	-14	27.1	0.3	1148	1	933	-1
Meghalaya	1673	-21	24.9	0.0	1199	9	1414	-5
Maharashtra	826	2	29.6	0.1	1213	-3	954	-4
Manipur	908	-49	23.0	0.9	1259	12	1286	-9
Madhya Pradesh	656	3	30.7	-0.7	1326	2	982	5
Mizoram	810	-49	24.9	0.5	1347	10	1299	-13
Nagaland	1710	-17	20.7	-0.8	1118	4	1381	-1
Orissa	756	5	30.5	0.5	1255	2	1016	-3
Puducherry	825	-17	29.4	-0.3	1318	1	1187	7
Punjab	791	154	30.0	-2.5	1367	-6	1230	45
Rajasthan	852	140	31.2	-1.9	1340	-4	1085	40
Sikkim	728	22	21.5	4.1	1370	1	836	2
Tamil Nadu	582	33	28.6	0.1	1223	1	1036	13
Tripura	829	-51	28.4	1.0	1324	8	1357	-15
Uttarakhand	462	-16	23.6	0.2	1405	-2	918	10
Uttar Pradesh	531	0	32.0	-0.8	1403	2	1033	12
West Bengal	1101	-1	30.9	0.9	1337	4	1148	-6

Table A.8 Kazakhstan, April 2023 - July 2023 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 15YA Departure (%)
Akmolinskaya	177	-17	15.7	0.9	1329	5	647	-6
Karagandinskaya	110	-43	15.4	1.0	1418	5	538	-20
Kustanayskaya	224	1	16.1	1.1	1272	2	718	2
Pavlodarskaya	176	-20	15.4	0.4	1343	6	645	-9
Severo kazachstanskaya	199	-21	14.8	1.1	1282	9	671	-8
Vostochno kazachstanskaya	225	-23	13.1	-0.6	1463	5	665	-10
Zapadno kazachstanskaya	304	57	17.9	0.0	1193	-10	869	22

Table A.9 Russia, April 2023 - July 2023 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 15YA Departure (%)
Bashkortostan Rep.	210	-34	13.7	1.0	1192	2	672	-17
Chelyabinskaya Oblast	188	-32	14.0	1.0	1179	1	638	-16
Gorodovikovsk	240	-19	18.0	-0.5	1291	-3	842	-5

Krasnodarskiy Krai	380	3	13.6	-0.9	1224	-2	854	1
Kurganskaya Oblast	167	-36	14.5	1.5	1213	8	592	-19
Kirovskaya Oblast	273	-13	12.3	0.6	1002	-4	728	-7
Kurskaya Oblast	273	-11	14.0	-0.7	1120	-5	756	-10
Lipetskaya Oblast	329	12	13.8	-0.8	1090	-7	804	-2
Mordoviya Rep.	308	-2	13.5	-0.1	1094	-4	790	-5
Novosibirskaya Oblast	255	-12	12.9	0.4	1206	8	688	-10
Nizhegorodskaya O.	348	13	13.1	0.0	1072	-3	806	0
Orenburgskaya Oblast	212	-15	15.8	0.6	1231	-2	708	-5
Omskaya Oblast	239	-15	13.8	1.2	1220	11	689	-8
Permskaya Oblast	189	-41	12.8	1.3	1075	3	610	-23
Penzenskaya Oblast	339	10	13.6	-0.4	1079	-7	852	4
Rostovskaya Oblast	335	20	17.0	-0.8	1222	-7	911	8
Ryazanskaya Oblast	328	4	13.7	-0.4	1081	-5	764	-9
Stavropolskiy Krai	397	-8	17.0	-0.5	1278	-4	924	-5
Sverdlovskaya Oblast	170	-42	13.3	1.5	1135	6	569	-25
Samarskaya Oblast	170	-42	15.3	0.7	1170	-3	639	-21
Saratovskaya Oblast	339	27	15.5	-0.3	1144	-9	889	13
Tambovskaya Oblast	446	51	13.9	-0.9	1081	-10	919	12
Tyumenskaya Oblast	254	-6	13.6	1.4	1182	11	660	-10
Tatarstan Rep.	190	-39	14.1	0.9	1141	1	640	-21
Ulyanovskaya Oblast	200	-35	14.3	0.4	1133	-2	678	-17
Udmurtiya Rep.	189	-38	13.2	1.1	1057	-1	614	-21
Volgogradskaya O.	294	26	16.6	-0.6	1166	-10	838	10
Voronezhskaya Oblast	364	22	14.6	-1.0	1121	-9	878	5

Table A.10 United States, April 2023 - July 2023 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 15YA Departure (%)
Arkansas	472	4	22.4	-0.1	1330	-3	1091	-2
California	93	-5	16.6	-0.7	1550	-5	522	-7
Idaho	258	4	11.9	0.1	1401	-5	682	1
Indiana	292	-39	18.2	-0.2	1307	0	876	-21
Illinois	291	-40	19.3	0.4	1356	3	897	-19
Iowa	341	-23	18.1	0.6	1341	4	924	-11
Kansas	248	-28	21.8	0.4	1404	-1	879	-10
Michigan	340	-15	14.1	0.4	1211	-2	825	-12
Minnesota	329	-21	14.9	0.5	1221	0	861	-8
Missouri	269	-38	20.7	0.3	1382	2	885	-18

Montana	324	-3	12.7	0.4	1345	-3	769	-5
Nebraska	232	-34	19.0	0.7	1396	0	806	-15
North Dakota	375	2	14.7	0.3	1231	-4	922	4
Ohio	326	-25	17.0	-0.6	1277	-1	913	-14
Oklahoma	374	2	22.9	-0.4	1369	-3	996	-1
Oregon	249	4	12.9	0.2	1364	-2	663	3
South Dakota	277	-25	17.2	0.7	1371	2	828	-11
Texas	356	8	25.4	0.2	1363	-6	915	-3
Washington	285	7	13.6	0.6	1312	-2	709	6
Wisconsin	315	-26	14.9	0.5	1230	0	841	-13

Table A.11 China, April 2023 - July 2023 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 15YA Departure (%)
Anhui	871	13	22.4	0.3	1129	-3	1336	12
Chongqing	996	14	20.0	0.0	968	-8	1290	4
Fujian	1001	-24	22.3	0.8	1135	8	1412	1
Gansu	336	-5	13.9	-0.1	1313	0	772	-1
Guangdong	1261	-20	24.7	0.5	1153	2	1549	2
Guangxi	1147	-21	23.9	0.7	1101	2	1453	-1
Guizhou	856	-22	19.6	0.7	949	0	1259	-1
Hebei	265	7	20.6	1.3	1355	-2	754	-4
Heilongjiang	299	-9	15.4	0.3	1242	0	795	-6
Henan	516	32	22.3	0.0	1233	-4	1142	19
Hubei	909	15	21.0	0.2	1096	-4	1343	10
Hunan	1010	-13	22.1	0.6	1084	3	1409	2
Jiangsu	852	35	22.4	0.5	1143	-5	1281	14
Jiangxi	1203	-9	22.7	0.5	1116	6	1493	4
Jilin	390	5	16.0	0.2	1284	0	894	0
Liaoning	420	20	17.4	0.2	1299	0	930	8
Inner Mongolia	217	-5	16.1	0.5	1348	-1	665	-7
Ningxia	158	-9	16.4	-0.4	1391	-2	630	-6
Shaanxi	462	3	17.7	-0.2	1234	-4	924	5
Shandong	394	17	22.3	0.6	1289	-4	984	8
Shanxi	271	12	17.7	0.3	1358	-2	785	4
Sichuan	829	-4	17.6	0.5	1117	0	1092	1
Yunnan	721	-27	19.3	1.1	1224	13	1085	-8
Zhejiang	1014	-8	21.4	0.7	1072	2	1373	3