

## Annex A. Agroclimatic indicators and BIOMSS

Tables in this Annex provide additional information about the agroclimatic indicators—RAIN, TEMP, and RADPAR—and BIOMSS for the Monitoring and Reporting Units (MRU) (table A.1), thirty-one main producing and exporting countries (A.2), regions or provinces within large countries—Argentina, Australia, Brazil, Canada, India, Kazakhstan, Russia, and the United States (tables A.3 through A.10), and China (table A.11).

**Table A.1. April to July 2014 agroclimatic indicators and biomass by global Monitoring and Reporting Unit, current value and departure from 13YA**

65 Global MRUs	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA dep. (%)	Current (°C)	13YA dep. (°C)	Current (MJ/m <sup>2</sup> )	13YA dep. (%)	Current (gDM/m <sup>2</sup> )	13YA dep. (%)
Equatorial Central Africa	365	-5	25.2	1.1	1132	6	1085	-2
East African Highlands	458	-18	20.7	0.3	1175	2	1319	-12
Gulf of Guinea	640	-0.5	28.2	0.5	1108	2	1743	0.4
Horn of Africa	139	-32	23.8	0.5	1187	4	484	-25
Madagascar(main)	141	-36	22.1	0.2	944	2	470	-25
SW Madagascar	28	-64	22.2	0.0	977	1	130	-57
North Africa Mediterranean	75	-19	21.6	0.4	1528	0.7	315	-12
Sahel	401	25	32.2	1.1	1362	0.1	1154	20
Southern Africa	73	-26	20.1	0.6	991	2	234	-28
S. Africa Western Cape	96	-48	12.5	0.1	680	-1	429	-36
British Columbia To Colorado	237	19	10.4	0.5	1406	-1	833	7
America northern great plains	458	34	16.1	-0.3	1299	-3	1313	14
America corn belt	441	3	16.1	-0.1	1213	-2	1389	-0.7
America cotton belt Mexican coastal plain	469	9	23.1	-0.1	1327	-0.3	1390	8
Sub boreal north America	428	51	10.5	-0.1	1166	-2	1351	20
America West Coast	62	-48	16.3	2.1	1498	0.1	261	-37
Sierra Madre	428	9	20.9	0.4	1420	-2	1106	7
SW Mexico and N. Mexico highlands	115	-1	20.5	0.4	1576	-0.2	435	-5
Northern South and Central America	679	-13	27.8	0.8	1153	3	1572	-9
Caribbean	722	6	26.9	0.4	1335	1	1737	0
Central Northern Andes	338	-22	16.0	1.1	991	3	786	-9
Brazil Nordeste	191	-14	26.8	2.0	1035	2	627	-6
Central Eastern Brazil	295	25	24.0	1.0	932	-1	865	19
Amazon	618	-6	27.5	0.8	960	2	1495	-2
Central north Argentina	180	83	17.5	0.5	647	-9	494	43
SE Brazil Concepcion Bahia Blanca	622	62	16.1	0.7	638	-7	1358	32
SW southern cone	578	14	6.9	-0.1	467	-5	1058	12
Semi-arid southern cone	125	83	9.4	-0.1	636	-6	432	55
Caucasus	253	5	18.0	1.1	1345	0	892	-1
Central Asia Pamir mountains	222	12	17.8	0.2	1455	-2	709	3
Western Asia	86	-3	23.5	1.0	1466	0	349	-3
China Gansu Xinjiang	240	114	17.4	0.2	1406	-0.1	743	70
China Hainan	911	26	28.2	1.2	1219	5	1835	5
China Huanghuaihai	302	-25	23.0	1.0	1276	1	1060	-11
China Inner Mongolia	317	24	16.7	0.8	1268	-1	1137	20
China Loess region	252	-7	18.3	0.4	1280	-0.7	1002	-1
China Lower Yangtze	981	22	23.6	0.4	1035	-4	2016	8
North East China	326	-9	16.9	1.2	1191	0.5	1086	-9
China Qinghai Tibet	852	31	11.9	1.1	1183	-2	1242	9
Southern China	985	11	24.6	1.2	1030	2	1945	0.5
South West China	604	2	20.5	0.5	981	-5	1528	-6
Taiwan	773	-19	24.3	0.6	1113	-3	1641	-5
East Asia	305	-40	16.0	1.2	1185	4	1072	-21
Southern Himalayas	897	7	27.3	1.1	1186	4	1517	-3

65 Global MRUs	RAIN		TEMP		RADPAR		BIOMSS	
	Current	13YA	Current	13YA	Current	13YA	Current	13YA
	(mm)	dep. (%)	(°C)	dep. (°C)	(MJ/m <sup>2</sup> )	dep. (%)	(gDM/m <sup>2</sup> )	dep. (%)
Southern Asia	719	9	30.3	1.2	1192	4	1314	-2
Southern Japan and Korea	511	-33	19.2	0.3	1141	3	1376	-22
Mongolia region	355	184	16.2	0.4	1445	-0.3	988	82
S. Asia Punjab to Gujarat	318	-2	32.4	0.9	1375	1	732	1
SE Asia islands	927	0.4	26.4	0.8	1010	0.7	2016	-2
SE Asia mainland	992	7	29.0	1.1	1119	4	2046	5
Eastern Siberia	216	-9	10.6	0.9	1142	-1	921	-8
Eastern Central Asia	243	3	11.4	0.6	1250	0.5	963	-1
North Australia	250	6	24.2	0.8	991	-0.5	582	-0.9
Australia Queensland to Victoria	123	-26	13.0	0.8	667	-3	544	-13
Australia Nullarbor Darling	178	-21	14.0	0.4	647	-5	687	-9
New Zealand	197	-44	9.0	0.1	443	-7	733	-29
Boreal Eurasia	251	-11	9.6	-0.6	1086	0.6	1000	-8
Ukraine to URAL Mountains	208	-13	15.2	0.1	1169	3	889	-12
Mediterranean Europe and Turkey	172	4	16.8	-1.0	1386	-2	638	-6
W. Europe (non Mediterranean)	299	1	15.1	0.0	1141	-2	1182	4
Boreal north America	396	52	6.9	1.0	1068	2	1094	14
URAL to Altai Mountains	214	5	13.8	-0.2	1217	0.2	843	-3
Australian Desert	107	17	14.5	0.4	705	-4	448	11
Old World Deserts	52	30	29.2	0.6	1532	-1	198	13
Sub-Arctic America	197	266	-7.1	-3.3	514	-2	605	374

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 five-year (5YA) or thirteen-year average (13YA) for the same period between April and July.

**Table A.2. April to July 2014 agroclimatic indicators and biomass by country, current value and departure from 13YA**

31 Countries	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Argentina	348	72	14.7	0.5	613	-8	839	37
Australia	144	-17	14.1	0.8	692	-3	562	-10
Bangladesh	1410	2	30.0	1.6	1106	9	2080	-3
Brazil	402	12	24.6	1.1	933	-0.5	1015	8
Cambodia	1169	43	29.7	1.0	1145	3	2355	16
Canada	385	29	11.0	0.3	1174	-3	1284	18
China	663	10	21.0	0.7	1102	-2	1371	2
Egypt	10	60	24.3	0.2	1565	-0.3	53	73
Ethiopia	540	-10	22.0	0.3	1181	1	1505	-5
France	247	-15	14.7	-0.5	1190	-1	1003	-10
Germany	298	4	15.6	0.7	1100	0.2	1254	9
India	706	8	30.2	1.1	1236	3	1195	-3
Indonesia	968	3	26.4	0.7	992	2	2006	-1
Iran	81	-10	22.6	1.2	1483	-1	302	-8
Kazakhstan	171	5	15.8	0.0	1284	1	681	-5
Mexico	458	5	24.7	0.4	1379	-2	1053	5
Myanmar	919	-11	28.0	1.5	1087	6	1808	-5
Nigeria	628	4	29.1	0.4	1177	1	1663	6
Pakistan	192	-7	27.6	0.2	1441	-2	569	6
Philippines	945	2	27.2	0.7	1153	0.6	1961	-1
Poland	302	12	15.3	0.4	1101	1	1285	16
Romania	328	0.3	16.1	-0.4	1163	-4	1257	5
Russia	210	-12	14.2	0.1	1188	3	880	-12
South Africa	40	-60	13.5	0.3	869	3	193	-52
Thailand	809	6	28.9	1.0	1145	6	1989	4
Turkey	244	34	17.8	1.1	1397	-2	851	10
United Kingdom	262	-10	12.1	0.3	995	-3	1184	2

31 Countries	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Ukraine	255	-0.5	17.0	0.3	1175	0.9	1090	5
United States	415	12	18.6	-0.1	1326	-1	1142	5
Uzbekistan	94	-5	22.5	0.4	1467	1	377	-0.6
Vietnam	962	17	27.5	1.2	1081	-1	2074	6

See note table A.1.

**Table A.3. Argentina, April to July 2014 agroclimatic indicators and biomass (by province), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Buenos Aires	375	92	11.7	0.2	548	-9	964	37
Chaco	367	66	18.7	0.9	631	-10	1005	49
Cordoba	226	109	13.7	0.6	633	-8	572	36
Corrientes	513	33	17.7	0.7	643	-7	1440	28
Entre Rios	454	53	15.0	0.5	623	-5	1172	29
La Pampa	285	167	11.5	0.1	544	-14	776	83
Misiones	1201	98	18.2	0.7	669	-7	2083	34
Santiago Del Estero	157	69	17.1	0.8	630	-11	503	52
San Luis	80	-13	12.1	0.7	626	-9	280	-23
Salta	88	57	17.2	0.4	713	-7	270	23
Santa Fe	377	91	15.9	1.0	633	-7	969	47
Tucuman	-1	0	-1.0	0.0	-1	0	-1	0

See note table A.1.

**Table A.4. Australia, April to July 2014 agroclimatic indicators and biomass (by state), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
New South Wales	129	-19	12.4	0.8	680	-4	562	-2
South Australia	187	9	13.2	0.8	574	-6	749	13
Victoria	174	-20	11.4	0.8	504	-9	711	-9
Western Australia	174	-20	14.7	0.4	678	-4	671	-8

See note table A.1.

**Table A.5. Brazil, April to July 2014 agroclimatic indicators and biomass (by state), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Ceara	240	-34	27.8	1.7	1089	1	819	-21
Goias	189	35	24.4	1.3	1029	0.4	613	27
Mato Grosso Do Sul	475	66	22.8	0.5	860	-5	1340	44
Mato Grosso	261	31	26.7	1.1	1010	-0.9	826	25
Minas Gerais	135	2	22.5	1.6	945	0.7	477	-0.5
Parana	782	54	19.3	1.2	759	-3	1737	26
Rio Grande Do Sul	837	45	16.2	0.6	640	-6	1828	20
Santa Catarina	885	57	16.4	1.0	650	-7	1676	13
Sao Paulo	224	-17	21.4	1.3	874	-0.3	814	-9

See note table A.1.

**Table A.6. Canada, April to July 2014 agroclimatic indicators and biomass (by province), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Alberta	368	42	11.2	0.6	1249	-0.3	1258	20
Manitoba	468	59	11.3	-0.9	1192	-3	1455	26
Saskatchewan	436	71	11.1	-0.1	1184	-5	1372	31

See note table A.1.

**Table A.7. India, April to July 2014 agroclimatic indicators and biomass (by state), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Arunachal Pradesh	1313	-18	23.1	1.1	916	6	2063	-5
Andhra Pradesh	455	10	31.6	1.2	1217	2	1140	-3
Assam	1689	14	29.3	1.6	1005	11	2400	-2
Bihar	698	5	32.1	1.0	1266	4	1290	-10
Chandigarh	-1	0	-1.0	0.0	-1	0	-1	0
Chhattisgarh	892	38	30.8	0.8	1196	3	1390	0.3
Daman and Diu	294	-32	30.8	1.6	1289	4	675	-15
Delhi	228	-20	32.4	0.4	1381	1	878	-3
Dadra and Nagar Haveli	971	-7	29.5	0.9	1225	6	716	-43
Gujarat	360	-23	32.5	1.4	1328	2	581	-28
Goa	965	-32	28.8	0.4	1082	4	1628	3
Himachal Pradesh	703	26	16.2	0.2	1382	-2	1272	3
Haryana	246	-17	31.6	0.3	1386	0.4	953	6
Jharkhand	698	10	30.9	1.4	1232	1	1413	-5
Kerala	1015	-24	27.4	0.7	1034	9	2162	-4
Karnataka	607	-10	27.7	1.0	1146	5	1432	7
Meghalaya	2361	3	25.7	1.5	1031	10	2450	3
Maharashtra	724	10	30.3	1.1	1215	4	1155	-2
Manipur	942	-15	24.3	1.9	1114	15	1896	-13
Madhya Pradesh	584	7	32.0	1.1	1292	5	1012	-8
Mizoram	1570	8	26.3	1.5	1147	12	2137	-6
Nagaland	1218	0.1	24.2	1.4	1084	11	2059	-9
Orissa	916	24	30.5	0.9	1145	0	1628	0
Puducherry	1296	-28	27.5	0.5	1056	7	2111	-3
Punjab	237	-24	31.0	0.1	1383	0.3	858	-3
Rajasthan	324	25	33.3	1.0	1397	2	780	14
Sikkim	1769	51	15.7	1.6	1120	-5	1620	7
Tamil Nadu	335	-0.3	30.5	1.9	1260	4	1028	-8
Tripura	2008	33	29.1	1.5	1100	13	2345	0.2
Uttarakhand	891	37	20.2	0.3	1323	0.4	1304	3
Uttar Pradesh	461	-6	32.5	0.8	1341	4	1013	-9
West Bengal	983	4	31.1	1.7	1162	2	1775	-5

See note table A.1.

**Table A.8. Kazakhstan, April to July 2014 agroclimatic indicators and biomass (by province), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Akmolinskaya	158	-2	14.5	-0.1	1215	-1	697	-4
Karagandinskaya	185	11	14.3	-0.1	1255	0.5	813	7
Kustanayskaya	135	-12	15.3	0.0	1217	-0.5	573	-18
Pavlodarskaya	133	-18	15.2	0.3	1240	2	589	-20
Severo kazachstanskaya	213	10	13.9	-0.4	1147	-3	844	-2
Vostochno kazachstanskaya	263	41	13.8	0.2	1313	0.4	987	24
Zapadno kazachstanskaya	60	-48	18.0	0.2	1310	5	311	-44

See note table A.1.

**Table A.9. Russia, April to July 2014 agroclimatic indicators and biomass (by oblast), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Bashkortostan Rep.	162	-27	13.2	-0.7	1199	3	736	-24
Chelyabinskaya Oblast	222	2	13.1	-0.6	1165	1	930	-2
Gorodovikovsk	-1	0	-1.0	0.0	-1	0	-1	0
Krasnodarskiy Krai	299	11	15.5	0.5	1184	-1	1153	5
Kurganskaya Oblast	254	26	13.1	-0.9	1134	-2	1017	14
Kirovskaya Oblast	167	-31	12.7	-0.5	1129	3	848	-19
Kurskaya Oblast	163	-31	16.4	0.5	1189	5	800	-22
Lipetskaya Oblast	152	-30	16.4	0.8	1216	6	707	-27
Mordoviya Rep.	163	-28	14.9	0.1	1205	6	707	-29
Novosibirskaya Oblast	159	-27	12.8	-0.2	1192	2	751	-20
Nizhegorodskaya Oblast	178	-25	14.4	0.1	1184	6	723	-29
Orenburgskaya Oblast	81	-52	15.2	-0.4	1267	4	410	-45
Omskaya Oblast	229	6	12.6	-0.4	1119	-3	873	-8
Permskaya Oblast	241	-7	11.4	-1.3	1096	-0.7	1067	-3
Penzenskaya Oblast	137	-36	15.4	0.2	1217	5	664	-30
Rostovskaya Oblast	245	24	19.1	0.7	1245	2	1041	21
Ryazanskaya Oblast	167	-28	15.3	0.3	1213	7	713	-30
Stavropolskiy Krai	321	25	19.8	1.0	1244	2	1189	13
Sverdlovskaya Oblast	279	14	11.5	-1.4	1093	-1	1116	7
Samarskaya Oblast	146	-20	15.2	-0.5	1237	4	510	-37
Saratovskaya Oblast	115	-27	16.9	0.0	1254	5	501	-31
Tambovskaya Oblast	143	-30	16.3	0.6	1227	6	700	-25
Tyumenskaya Oblast	246	10	12.1	-1.2	1113	-2	1036	7
Tatarstan Rep.	144	-31	14.4	-0.2	1203	4	685	-25
Ulyanovskaya Oblast	169	-19	14.9	-0.2	1218	4	522	-43
Udmurtiya Rep.	180	-24	12.7	-0.7	1127	0.8	904	-11
Volgogradskaya Oblast	130	-12	18.5	0.5	1257	4	638	-8
Voronezhskaya Oblast	165	-13	17.3	0.7	1219	5	817	-5

See note table A.1.

**Table A.10. United States, April to July 2014 agroclimatic indicators and biomass (by state), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Arkansas	605	33	22.0	-0.8	1275	-4	1697	20
California	52	-33	17.8	2.5	1604	0.1	211	-28
Idaho	118	-21	12.7	0.8	1493	0.2	532	-17
Indiana	500	5	18.6	-0.5	1270	-2	1557	4
Illinois	544	20	19.0	-0.4	1282	-2	1621	14
Iowa	760	58	17.4	-0.7	1231	-6	1805	23
Kansas	464	14	20.3	-0.3	1376	-2	1370	7
Michigan	361	-2	13.8	-1.0	1212	-5	1264	-2
Minnesota	502	33	14.3	-0.7	1175	-7	1399	8
Missouri	569	16	20.3	-0.4	1290	-3	1591	4
Montana	217	-3	12.9	0.1	1387	-0.4	920	-0.7
Nebraska	516	44	17.5	-0.2	1366	-2	1406	14
North Dakota	296	2	13.3	-0.9	1239	-5	1113	1
Ohio	469	6	18.0	-0.2	1233	-2	1551	6
Oklahoma	471	13	22.3	-0.4	1361	-2	1491	18
Oregon	91	-41	14.4	1.5	1422	0.7	448	-27
South Dakota	417	37	15.6	-0.7	1312	-3	1252	10
Texas	325	8	24.7	0.1	1389	-0.5	1054	13
Washington	111	-28	14.6	1.5	1346	-0.3	502	-16
Wisconsin	496	14	14.6	-0.7	1174	-6	1443	1

See note table A.1.

**Table A.11. China, April to July 2014 agroclimatic indicators and biomass (by province), current value and departure from 13YA**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	13YA Departure (%)	Current (°C)	13YA Departure (°C)	Current (MJ/m <sup>2</sup> )	13YA Departure (%)	Current (gDM/m <sup>2</sup> )	13YA Departure (%)
Anhui	687	6	23.4	0.2	1145	-2	1742	7
Chongqing	593	-9	20.6	0.0	895	-11	1675	-7
Fujian	1204	32	23.2	0.9	1021	-2	2199	11
Gansu	264	3	15.7	0.3	1232	-3	952	8
Guangdong	1235	18	25.8	1.0	996	0.2	2235	8
Guangxi	1162	23	25.3	0.9	927	-5	2205	9
Guizhou	798	20	20.9	0.3	863	-11	1777	0.9
Hebei	308	0.1	20.6	1.1	1285	0.9	1126	5
Heilongjiang	335	4	16.5	1.3	1166	-0.9	1056	-7
Henan	317	-25	23.0	0.6	1263	2	1135	-11
Hubei	546	-16	22.1	0.0	1061	-6	1582	-9
Hunan	940	23	23.1	-0.1	950	-9	2014	6
Jiangsu	484	-11	22.8	0.3	1167	-2	1448	-0.8
Jiangxi	1219	35	24.5	0.7	1028	-4	2316	15
Jilin	306	-19	17.1	1.0	1209	2	1101	-10
Liaoning	322	-21	18.8	1.2	1239	2	1120	-12
Inner Mongolia	316	26	16.1	0.9	1248	-1	1109	19
Ningxia	157	-4	17.4	0.6	1314	-3	681	4
Shaanxi	277	-22	19.2	0.3	1198	-1	1048	-10
Shandong	275	-31	22.6	1.2	1278	0.5	998	-15
Shanxi	274	2	17.9	0.5	1297	-0.7	1059	4
Sichuan	564	2	19.4	0.6	993	-5	1417	-8
Yunnan	565	-7	20.7	1.5	1134	5	1420	-12
Zhejiang	970	29	22.3	0.4	1019	-7	2015	8

See note table A.1.