

Annex A. Agroclimatic indicators and BIOMSS

Table A.1. July-October 2016 agroclimatic indicators and biomass by global Monitoring and Reporting Unit

65 Global MRUs	RAIN		TEMP		RADPAR		BIOMSS		
	Current (mm)	15YA dep. (%)	Current (°C)	15YA dep. (°C)	Current (MJ/m ²)	15YA dep. (%)	Current (gDM/m ²)	5YA dep. (%)	
1	Equatorial central Africa	446	-2	25.2	0.6	1177	7	1206	-1
2	East African highlands	451	-24	19.5	-0.3	1154	2	1297	-16
3	Gulf of Guinea	951	11	26.1	-0.4	977	0	2045	3
4	Horn of Africa	67	-41	23.5	-0.7	1303	4	230	-41
5	Madagascar (main)	119	-2	21.0	-0.7	1141	3	374	-12
6	Southwest Madagascar	37	-40	21.0	-1.0	1219	2	164	-32
7	North Africa-Mediterranean	83	-15	24.0	-0.2	1302	0	353	-6
8	Sahel	638	16	28.8	-0.4	1246	1	1629	9
9	Southern Africa	56	-11	21.6	0.2	1205	3	211	-15
10	Western Cape (South Africa)	67	-58	12.8	1.1	959	2	292	-51
11	British Columbia to Colorado	267	41	11.5	-0.5	1085	-5	936	32
12	Northern Great Plains	555	97	18.1	0.0	1053	-5	1493	58
13	Corn Belt	475	16	18.7	1.0	987	-2	1464	8
14	Cotton Belt to Mexican Nordeste	399	-10	24.9	0.5	1143	1	1185	-9
15	Sub-boreal America	367	34	11.6	-0.4	794	-8	1379	25
16	West Coast (North America)	135	45	16.7	-0.4	1237	-3	375	25
17	Sierra Madre	592	-6	20.1	-0.4	1226	1	1543	-4
18	SW U.S. and N. Mexican highlands	177	-4	21.4	-0.2	1293	0	662	1
19	Northern South and Central America	900	-4	26.9	-0.2	1101	4	2005	-2
20	Caribbean	829	7	27.1	0.1	1209	-1	1945	-1
21	Central-northern Andes	311	-11	15.8	0.4	1152	5	769	-5
22	Nordeste (Brazil)	72	26	27.1	0.5	1252	2	220	5
23	Central eastern Brazil	205	-1	25.0	-0.4	1142	2	707	3
24	Amazon	393	3	28.4	-0.1	1160	3	1187	3
25	Central-north Argentina	98	5	18.3	-1.2	989	1	356	3
26	Pampas	428	-3	15.9	-0.6	897	0	1015	-11
27	Western Patagonia	247	-36	7.5	0.7	729	-2	769	-11
28	Semi-arid Southern Cone	45	-35	10.6	-0.1	952	0	205	-27
29	Caucasus	124	-27	18.5	-0.7	1133	0	491	-21
30	Pamir area	217	35	17.8	-0.1	1233	-1	656	35
31	Western Asia	74	28	23.4	-0.4	1238	0	260	15
32	Gansu-Xinjiang (China)	374	175	16.8	-0.2	1092	-3	1064	132
33	Hainan (China)	1407	26	27.2	0.1	1017	-3	2189	9
34	Huanghuaihai (China)	438	-5	23.1	0.1	973	-4	1273	1
35	Inner Mongolia (China)	428	57	15.8	-0.3	1025	-3	1315	33
36	Loess region (China)	419	14	18.3	0.4	987	-3	1321	7
37	Lower Yangtze (China)	673	33	24.9	-0.1	952	-8	1613	16
38	Northeast China	371	-1	15.9	-0.4	931	-2	1257	4
39	Qinghai-Tibet (China)	751	8	12.4	0.2	1011	0	1338	7
40	Southern China	811	9	24.7	0.0	976	-3	1866	7
41	Southwest China	539	-3	21.3	0.1	896	-1	1490	-5
42	Taiwan (China)	1211	23	25.2	-0.2	1012	-5	1974	16
43	East Asia	440	-28	17.4	0.1	885	-2	1381	-8
44	Southern Himalayas	1190	17	25.4	-0.3	899	-4	1906	4
45	Southern Asia	959	0	27.0	-0.3	892	-4	1678	-6
46	Southern Japan and Korea	678	-14	23.0	1.9	922	-3	1589	-11
47	Southern Mongolia	506	201	15.1	-0.3	1093	-3	1125	97

65 Global MRUs		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	15YA dep. (%)	Current (°C)	15YA dep. (°C)	Current (MJ/m ²)	15YA dep. (%)	Current (gDM/m ²)	5YA dep. (%)
48	Punjab to Gujarat	689	33	29.1	-0.7	1008	-5	1224	20
49	Maritime Southeast Asia	1025	26	25.7	0.3	1001	-4	2109	15
50	Mainland Southeast Asia	1297	9	27.2	-0.1	929	-1	2357	6
51	Eastern Siberia	256	-12	10.3	-1.0	793	-2	979	-16
52	Eastern Central Asia	288	19	9.4	-0.7	883	-4	1071	10
53	Northern Australia	214	128	24.8	1.5	1141	-5	650	89
54	Queensland to Victoria	176	8	12.3	-0.5	881	-7	762	19
55	Nullarbor to Darling	99	-53	11.3	-1.5	881	-4	422	-43
56	New Zealand	131	-55	8.8	0.4	685	-7	544	-42
57	Boreal Eurasia	325	-1	10.3	0.1	665	-5	1099	-6
58	Ukraine to Ural mountains	246	4	14.6	-0.5	787	-3	994	-1
59	Mediterranean Europe and Turkey	121	-26	20.3	1.4	1195	1	454	-23
60	W. Europe (non Mediterranean)	256	-14	16.0	-0.2	877	-1	998	-9
61	Boreal America	464	23	8.8	1.6	614	-3	1225	9
62	Ural to Altai mountains	237	16	13.0	-0.3	854	0	927	9
63	Australian desert	93	3	13.0	-0.8	945	-5	441	9
64	Sahara to Afghan deserts	43	42	29.9	-0.4	1384	1	152	16
65	Sub-arctic America	183	62	-0.1	4.1	302	0	756	205

Table A.2. July-October 2016 agroclimatic indicators and biomass by country

31 Countries		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
[ARG]	Argentina	218	-6	14.6	-0.8	906	-1	604	-14
[AUS]	Australia	158	-1	13.2	-0.5	907	-7	678	7
[BGD]	Bangladesh	1729	19	28.5	-0.5	836	-6	2374	6
[BRA]	Brazil	268	1	25.4	-0.2	1144	2	781	0
[CAN]	Canada	359	24	12.4	0.1	853	-6	1284	25
[CHN]	China	583	14	21.3	0.0	954	-4	1413	11
[DEU]	Germany	226	-23	15.8	0.2	800	-2	978	-16
[EGY]	Egypt	3	-31	26.4	-0.4	1371	0	16	-6
[ETH]	Ethiopia	545	-21	20.3	-0.3	1134	2	1512	-13
[FRA]	France	171	-41	16.7	-0.2	979	3	709	-35
[GBR]	UK	290	-12	13.7	0.4	694	-4	1128	-9
[IDN]	Indonesia	1001	36	25.7	0.2	999	-5	2027	21
[IND]	India	1039	12	27.1	-0.4	895	-6	1696	3
[IRN]	Iran	25	-39	23.1	-0.5	1311	1	76	-42
[KAZ]	Kazakhstan	229	56	14.6	-0.8	921	-2	840	34
[KHM]	Cambodia	1495	29	28.0	-0.6	976	-2	2536	8
[MEX]	Mexico	644	-9	24.1	-0.2	1215	2	1435	-6
[MMR]	Myanmar	1237	-1	25.9	-0.1	824	-2	2268	0
[NGA]	Nigeria	888	8	26.5	-0.6	1051	0	1981	4
[PAK]	Pakistan	292	6	27.0	-0.3	1217	2	666	3
[PHL]	Philippines	1282	11	26.3	0.8	1022	-1	2261	2
[POL]	Poland	318	28	14.9	-0.6	755	-6	1235	21
[ROU]	Romania	207	-27	16.5	-0.8	952	-1	864	-17
[RUS]	Russia	240	-1	13.6	-0.4	807	-2	982	-3
[THA]	Thailand	1048	9	27.1	-0.2	967	0	2271	7
[TUR]	Turkey	75	-43	19.7	0.1	1214	0	317	-37
[UKR]	Ukraine	190	-13	16.4	-0.6	894	0	789	-12
[USA]	USA	437	23	20.6	0.5	1099	-1	1217	18

31 Countries		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
[UZB]	Uzbekistan	95	169	21.1	-0.5	1219	-2	327	133
[VNM]	Vietnam	1255	12	26.6	0.3	981	0	2158	1
[ZAF]	South Africa	107	-12	15.5	0.3	1091	2	389	-13

See note table A.1.

Table A.3. Argentina, July-October 2016 agroclimatic indicators and biomass (by province)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Buenos Aires	203	-29	11.5	-0.5	810	-5	700	-23
Chaco	250	26	18.3	-1.4	950	0	730	8
Cordoba	109	-27	13.8	-0.9	953	0	399	-26
Corrientes	570	34	17.3	-1.0	919	1	1066	-11
Entre Rios	242	-29	14.6	-0.9	880	-2	753	-26
La Pampa	250	23	11.8	-0.5	845	-5	791	14
Misiones	672	0	18.6	-0.4	941	3	1635	-1
Santiago Del Estero	108	7	17.3	-1.3	979	-1	425	14
San Luis	145	9	12.6	-0.5	967	1	459	-11
Salta	91	72	18.2	-1.0	1030	0	301	50
Santa Fe	208	-9	15.5	-1.0	929	-1	631	-18

See note table A.1.

Table A.4. Australia, July-October 2016 agroclimatic indicators and biomass (by state)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
New South Wales	193	29	11.8	-0.8	900	-8	797	36
South Australia	197	21	11.7	-0.4	817	-6	801	21
Victoria	165	-24	10.3	-0.1	734	-9	781	-4
W. Australia	94	-52	12.4	-1.0	911	-3	407	-42

See note table A.1.

Table A.5. Brazil, July-October 2016 agroclimatic indicators and biomass (by state)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Ceará	8	-75	28.2	0.3	1383	2	44	-69
Goias	162	-7	25.5	-0.5	1213	3	622	1
Mato Grosso do Sul	291	0	24.0	-1.4	1112	3	974	3
Mato Grosso	255	6	28.4	0.1	1193	2	900	13
Minas Gerais	140	-10	23.4	0.3	1131	0	521	-4
Parana	652	12	19.3	-0.6	1005	3	1502	3
Rio Grande do Sul	634	-8	16.5	-0.2	871	1	1404	-14
Santa Catarina	703	2	16.1	0.0	886	2	1441	-11
Sao Paulo	262	-13	21.6	-0.7	1093	3	878	-9

See note table A.1.

Table A.6. Canada, July-October 2016 agroclimatic indicators and biomass (by province)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Alberta	297	50	10.8	-0.8	857	-8	1161	37
Manitoba	433	73	13.7	-0.3	846	-9	1555	47
Saskatchewan	335	66	12.0	-0.8	855	-10	1281	48

See note table A.1.

Table A.7. India, July-October 2016 agroclimatic indicators and biomass (by state)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Arunachal Pradesh	1692	10	22.5	-0.5	774	-6	2214	4
Andhra Pradesh	807	9	28.0	-0.4	934	-3	1565	-9
Assam	1664	18	29.4	0.1	813	-5	2400	4
Bihar	1325	38	29.2	-1.1	848	-10	2162	17
Chandigarh	1323	18	26.5	-0.5	820	-9	2199	9
Chhattisgarh	766	-24	27.4	-1.3	882	-7	1369	-1
Daman and Diu	615	22	29.8	-0.5	1033	-3	1507	15
Delhi	733	-3	28.5	-0.5	877	-10	1330	9
Dadra and Nagar Haveli	539	-67	24.5	-0.6	867	7	1384	-35
Gujarat	674	-19	15.2	-0.3	1087	-1	1310	-7
Goa	599	27	29.1	-0.5	1061	-3	1313	10
Himachal Pradesh	1129	14	27.5	-0.4	873	-7	2139	6
Haryana	469	-62	25.3	-0.1	924	6	1233	-43
Jharkhand	469	-44	24.5	-0.7	912	-1	1176	-27
Kerala	1858	-12	25.5	0.3	792	-7	2424	4
Karnataka	1111	12	25.9	-0.7	818	-8	1787	5
Meghalaya	1157	14	23.5	0.5	832	-1	2209	0
Maharashtra	1413	62	26.9	-0.6	831	-11	1903	15
Manipur	1587	15	23.8	-0.3	865	-2	2407	2
Madhya Pradesh	1510	19	23.4	0.8	827	-4	2260	0
Mizoram	1023	-12	27.5	-0.1	824	-7	2071	-2
Nagaland	326	0	30.0	-	1143	3	1085	0
Orissa	471	-5	28.6	-0.4	1103	1	1068	-12
Puducherry	809	79	29.1	-0.9	1015	-6	1337	32
Punjab	1078	-17	13.1	-1.5	849	-20	1341	-6
Rajasthan	411	-31	28.6	0.6	1125	5	1155	-26
Sikkim	2139	43	28.0	-0.2	851	-4	2586	9
Tamil Nadu	1061	3	19.2	0.4	994	-2	1562	-1
Tripura	1013	29	29.1	-0.5	920	-7	1817	11
Uttarakhand	1433	11	29.1	0.1	850	-6	2211	4
Uttar Pradesh	1692	10	22.5	-0.5	774	-6	2214	4
West Bengal	807	9	28.0	-0.4	934	-3	1565	-9

See note table A.1.

Table A.8. Kazakhstan, July-October 2016 agroclimatic indicators and biomass (by oblast)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Akmolinskaya	180	20	13.1	-0.9	846	-2	791	18
Karagandinskaya	188	32	12.3	-1.5	896	-2	796	25

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Kustanayskaya	157	7	14.5	-0.6	863	0	695	6
Pavlodarskaya	226	39	13.6	-0.8	829	-2	866	20
Severo	214	10	13.4	-0.2	799	0	928	11
Vostochno	333	79	12.2	-0.9	963	-2	1090	49
Zapadno	149	51	17.5	-0.4	887	-5	677	41

See note table A.1.

Table A.9. Russia, July-October 2016 agroclimatic indicators and biomass (by oblast, kray and republic)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Bashkortostan	174	-22	14.1	0.6	830	2	784	-19
Chelyabinskaya	173	-21	13.5	0.2	818	3	811	-13
Gorodovikovsk	235	1	19.4	-1.4	954	-3	968	-1
Krasnodarskiy	179	-32	14.3	-1.0	907	2	826	-25
Kurganskaya	207	-5	13.4	0.2	787	2	906	-3
Kirovskaya	259	-7	13.2	0.5	717	-1	1063	-10
Kurskaya	270	28	14.8	-1.0	824	-1	1020	8
Lipetskaya	235	11	14.6	-0.9	794	-3	970	1
Mordoviya	204	-15	14.3	-0.3	775	-3	919	-13
Novosibirskaya	205	-11	11.8	-0.3	823	5	865	-13
Nizhegorodskaya	216	-17	13.8	-0.1	735	-3	981	-12
Orenburgskaya	149	3	15.4	-0.1	859	-3	688	3
Omskaya	197	-11	12.6	0.3	782	3	879	-7
Permskaya	188	-35	13.3	1.2	778	8	845	-29
Penzenskaya	201	-6	14.5	-0.5	797	-3	908	-4
Rostovskaya	145	-14	18.2	-0.9	942	-2	684	-10
Ryazanskaya	246	2	14.2	-0.6	757	-4	1032	-3
Stavropolskiy	154	-23	19.4	-1.2	946	-4	722	-15
Sverdlovskaya	219	-16	13.2	1.1	755	5	938	-14
Samarskaya	193	7	15.4	0.2	827	-2	839	3
Saratovskaya	194	29	16.4	-0.4	838	-5	826	19
Tambovskaya	193	-5	14.8	-0.6	799	-4	886	-4
Tyumenskaya	221	-4	12.9	0.6	771	4	955	-3
Tatarstan	202	-11	14.8	0.4	800	1	898	-10
Ulyanovskaya	247	18	15.0	0.0	800	-3	1039	12
Udmurtiya	209	-21	13.8	0.8	766	3	924	-18
Volgogradskaya	176	33	17.5	-1.0	881	-5	798	28
Voronezhskaya	165	-3	15.9	-0.4	847	-3	776	-2

See note table A.1.

Table A.10. United States, July-October 2016 agroclimatic indicators and biomass (by state)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Arkansas	376	-13	24.6	0.6	1100	-3	1223	-6
California	71	48	18.1	-0.5	1366	-1	231	25
Idaho	190	77	13.4	-1.0	1191	-4	768	67
Indiana	523	27	21.1	1.0	1016	-6	1567	17
Illinois	615	56	21.3	0.9	1020	-7	1759	38
Iowa	857	109	19.5	0.5	1039	-5	2004	57
Kansas	740	107	22.3	0.2	1143	-3	1701	48
Michigan	407	19	18.0	1.5	973	-4	1391	17
Minnesota	762	121	16.6	0.2	961	-6	1873	54
Missouri	703	59	22.3	0.7	1070	-5	1754	32
Montana	317	127	14.3	-0.9	1074	-6	1238	95
Nebraska	558	85	19.4	0.1	1119	-4	1589	51
North Dakota	550	150	15.8	-0.2	985	-6	1646	82
Ohio	436	12	20.8	1.4	1032	-1	1480	8
Oklahoma	562	55	24.5	0.1	1189	0	1608	40
Oregon	152	41	15.1	-0.7	1152	-4	477	19
South Dakota	575	126	18.5	0.2	1101	-1	1660	72
Texas	310	-6	26.1	0.2	1200	0	985	-2
Washington	200	56	14.8	-1.0	1039	-8	705	61
Wisconsin	741	90	17.5	0.8	959	-5	1806	40

See note table A.1.

Table A.11. China, July 2016 - October 2016 agroclimatic indicators and biomass (by province)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m ²)	15YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Anhui	673	23	24.4	-0.3	932	-7	1568	9
Chongqing	485	-12	22.5	0.1	881	-4	1410	-9
Fujian	704	29	24.6	0.4	948	-10	1862	29
Gansu	324	1	16.4	0.7	991	-1	1158	13
Guangdong	818	18	26.3	-0.3	992	-6	1919	20
Guangxi	762	18	25.9	0.0	1017	-1	1731	10
Guizhou	437	-9	21.8	0.0	910	-1	1315	-7
Hebei	503	46	19.5	-0.2	991	-5	1379	19
Henan	350	2	15.0	-0.6	914	-2	1246	5
Heilongjiang	407	-15	23.3	0.2	963	-3	1246	-8
Hubei	594	18	23.4	0.0	931	-6	1401	-3
Hunan	650	42	24.2	-0.6	934	-8	1498	15
Jilin	665	22	24.5	0.2	921	-7	1645	16
Jiangsu	676	46	25.6	-0.3	971	-9	1659	25
Jiangxi	421	10	16.5	-0.4	943	-3	1345	11
Liaoning	389	-11	18.7	-0.2	975	-3	1228	-5
Inner Mongolia	358	37	15.0	-0.4	1008	-2	1219	29
Ningxia	247	11	17.6	0.8	1084	-1	991	22
Sichuan	463	0	19.6	0.5	948	-3	1451	3
Shandong	416	-11	23.0	0.5	983	-2	1225	-3
Shaanxi	512	44	17.4	0.1	992	-5	1395	15
Shanxi	596	-2	19.9	0.2	866	0	1540	-2
Yunnan	673	0	19.6	0.0	929	1	1717	-2
Zhejiang	620	8	25.1	0.7	930	-9	1571	4

See note table A.1.