

## Annex A. Agroclimatic indicators and BIOMSS

**Table A.1. October 2016-January 2017 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 <sup>2</sup> )	15YA dep. (%)	Current (gDM/m <sup>2</sup> )	5YA dep. (%)	
1	Equatorial central Africa	510	-8	25.9	0.4	1225	8	1496	-4
2	East African highlands	121	-40	19.8	0.1	1317	7	467	-30
3	Gulf of Guinea	251	7	27.1	-0.2	1148	0	685	3
4	Horn of Africa	189	-44	24.8	-0.3	1360	6	619	-37
5	Madagascar (main)	449	-41	24.3	-0.7	1381	8	1299	-21
6	Southwest Madagascar	353	-20	24.8	-0.9	1478	3	1089	-10
7	North Africa-Mediterranean	163	-7	13.2	-0.3	698	-1	566	-2
8	Sahel	41	-19	28.0	0.2	1276	1	135	-19
9	Southern Africa	474	7	24.9	-0.6	1369	2	1308	3
10	Western Cape (South Africa)	44	-65	18.6	0.0	1598	4	221	-55
11	British Columbia to Colorado	330	32	-3.8	-0.2	444	-4	509	11
12	Northern Great Plains	213	35	1.3	1.0	477	-5	647	28
13	Corn Belt	371	1	3.7	1.5	431	-5	885	11
14	Cotton Belt to Mexican Nordeste	344	-8	13.5	1.4	667	-2	957	-1
15	Sub-boreal America	180	18	-6.0	1.9	231	-13	451	15
16	West Coast (North America)	425	20	6.7	-0.4	496	-8	825	15
17	Sierra Madre	104	-18	15.6	0.4	1024	0	384	-11
18	SW U.S. and N. Mexican highlands	145	51	9.0	0.8	753	-4	459	22
19	Northern South and Central America	472	2	25.8	-0.2	961	2	1139	3
20	Caribbean	328	-2	24.4	-0.7	903	-2	798	-14
21	Central-northern Andes	598	5	16.6	0.0	1172	4	1282	1
22	Nordeste (Brazil)	196	-30	28.6	0.8	1378	1	550	-28
23	Central eastern Brazil	720	-4	26.2	-0.6	1268	4	1801	-2
24	Amazon	962	20	27.8	-0.5	1098	1	2054	5
25	Central-north Argentina	453	4	25.1	-1.3	1351	5	1366	3
26	Pampas	759	19	22.5	-0.7	1379	1	1717	7
27	Western Patagonia	86	-44	13.4	0.0	1410	-2	377	-28
28	Semi-arid Southern Cone	102	-17	18.6	-0.6	1543	4	412	-5
29	Caucasus	266	-6	2.1	-1.6	554	1	684	-11
30	Pamir area	246	77	2.8	0.3	709	-2	517	24
31	Western Asia	156	17	6.5	-0.5	653	0	453	1
32	Gansu-Xinjiang (China)	135	156	-3.6	0.3	564	-4	400	127
33	Hainan (China)	536	46	22.3	0.5	669	-15	935	41
34	Huanghuaihai (China)	168	107	6.7	0.6	566	-13	639	99
35	Inner Mongolia (China)	123	151	-5.2	0.7	548	-4	410	91
36	Loess region (China)	159	121	2.8	1.3	614	-9	582	101
37	Lower Yangtze (China)	221	-12	12.5	1.0	552	-21	790	6
38	Northeast China	172	90	-8.7	-0.6	472	-3	345	7
39	Qinghai-Tibet (China)	120	17	2.4	1.1	864	2	354	15
40	Southern China	170	-7	17.4	1.0	726	-9	577	4
41	Southwest China	149	-5	10.3	0.9	529	-12	527	0
42	Taiwan (China)	250	33	19.3	0.7	741	-3	694	17
43	East Asia	174	-18	-1.4	-0.2	499	-4	515	-5
44	Southern Himalayas	136	-4	18.5	0.7	885	0	384	-4
45	Southern Asia	122	-48	23.8	-0.2	1068	4	343	-39

	65 Global MRUs	RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	15YA dep. (%)	Current (°C)	15YA dep. (°C)	Current (MJ/m <sup>2</sup> )	15YA dep. (%)	Current (gDM/m <sup>2</sup> )	5YA dep. (%)
46	Southern Japan and Korea	303	-25	9.6	0.5	573	-4	1056	-6
47	Southern Mongolia	140	366	-9.9	0.3	462	-4	340	168
48	Punjab to Gujarat	84	201	21.3	-0.1	964	0	226	114
49	Maritime Southeast Asia	1285	15	25.5	-0.5	928	-5	2345	6
50	Mainland Southeast Asia	631	79	25.3	0.0	906	-8	1138	44
51	Eastern Siberia	116	-31	-13.0	-2.3	292	4	220	-33
52	Eastern Central Asia	52	-3	-16.8	-0.9	358	0	151	-21
53	Northern Australia	676	13	26.9	-0.7	1258	-3	1506	5
54	Queensland to Victoria	195	-21	20.5	-0.4	1494	1	772	-6
55	Nullarbor to Darling	61	-40	18.8	-1.0	1609	2	240	-44
56	New Zealand	145	-52	13.4	-0.3	1274	-2	667	-36
57	Boreal Eurasia	258	-2	-4.2	-0.7	130	0	455	-13
58	Ukraine to Ural mountains	212	4	-2.8	-1.6	192	-5	552	-12
59	Mediterranean Europe and Turkey	244	-24	7.9	-1.4	542	1	796	-16
60	W. Europe (non Mediterranean)	231	-20	3.9	-2.1	299	-3	797	-14
61	Boreal America	276	-12	-7.5	0.6	145	-1	375	7
62	Ural to Altai mountains	175	32	-9.8	-1.9	241	-7	314	-20
63	Australian desert	135	45	20.9	-1.1	1569	-1	564	39
64	Sahara to Afghan deserts	59	-5	17.8	0.0	975	1	187	-6
65	Sub-arctic America	121	91	-15.2	3.6	38	6	166	205

Table A.2. October 2016-January 2017 agroclimatic indicators and biomass by country

31 Countries		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
[ARG]	Argentina	608	23	22.1	-0.9	1417	2	1466	8
[AUS]	Australia	216	-15	20.9	-0.5	1499	1	705	-8
[BGD]	Bangladesh	240	5	22.4	-0.2	922	0	613	16
[BRA]	Brazil	769	5	26.4	-0.4	1233	2	1719	-2
[CAN]	Canada	259	12	-4.1	1.5	282	-9	508	17
[CHN]	China	176	12	7.5	0.7	577	-12	531	25
[DEU]	Germany	194	-24	3.2	-1.4	228	-8	828	-11
[EGY]	Egypt	37	-35	17.5	-0.6	798	0	153	-3
[ETH]	Ethiopia	116	-26	20.2	0.2	1310	8	446	-20
[FRA]	France	201	-36	5.6	-3.5	357	3	683	-35
[GBR]	UK	255	-31	6.4	-2.3	200	-1	967	-18
[IDN]	Indonesia	1251	13	25.6	-0.6	946	-5	2357	6
[IND]	India	101	-30	21.9	0.1	1017	3	287	-21
[IRN]	Iran	188	-1	7.5	-0.3	751	1	482	-15
[KAZ]	Kazakhstan	170	41	-7.3	-1.3	301	-8	394	-7
[KHM]	Cambodia	784	120	27.1	-0.3	934	-10	1449	62
[MEX]	Mexico	148	-24	19.7	0.6	969	1	449	-8
[MMR]	Myanmar	248	7	22.7	0.2	913	-3	713	10
[NGA]	Nigeria	170	-5	27.2	0.0	1218	0	387	-9
[PAK]	Pakistan	85	30	15.2	0.4	860	-1	213	20
[PHL]	Philippines	1354	50	25.3	-0.5	858	-6	2099	20
[POL]	Poland	250	31	1.9	-1.0	197	-14	794	-2
[ROU]	Romania	242	11	0.9	-2.2	347	-6	733	-2
[RUS]	Russia	176	-1	-7.2	-1.8	221	-2	380	-18
[THA]	Thailand	581	82	25.4	0.0	930	-7	1006	38
[TUR]	Turkey	272	-15	3.9	-1.3	594	2	745	-16

		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
<b>31 Countries</b>									
[UKR]	Ukraine	249	33	0.2	-1.7	260	-7	695	-4
[USA]	USA	317	5	6.7	1.1	554	-3	781	12
[UZB]	Uzbekistan	300	100	3.9	-0.8	551	-2	725	51
[VNM]	Vietnam	750	74	22.7	0.7	723	-11	1218	38
[ZAF]	South Africa	402	9	20.9	-0.2	1416	1	1179	-1

See note table A.1.

**Table A.3. Argentina, October 2016-January 2017 agroclimatic indicators and biomass (by province)**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Buenos Aires	474	7	20.0	-0.4	1488	0	1336	0
Chaco	764	37	24.8	-1.5	1360	1	1904	25
Cordoba	456	3	21.8	-1.1	1461	3	1351	-4
Corrientes	1072	42	23.9	-1.2	1365	0	2039	18
Entre Rios	849	47	22.3	-1.0	1420	0	1790	14
La Pampa	460	18	21.0	-0.5	1572	3	1433	15
Misiones	939	4	23.8	-0.8	1342	4	2098	8
Santiago Del Estero	480	9	24.7	-1.4	1345	2	1472	9
San Luis	389	-4	21.0	-1.0	1547	6	1360	2
Salta	482	6	24.1	-1.2	1301	7	1350	2
Santa Fe	817	48	23.0	-1.1	1412	0	1859	18
Tucuman	352	-18	23.1	-1.2	1322	8	1136	-13

See note table A.1.

**Table A.4. Australia, October 2016-January 2017 agroclimatic indicators and biomass (by state)**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
New South Wales	196	-19	21.3	-0.3	1527	2	776	-4
South Australia	136	23	18.3	-0.9	1491	-2	641	28
Victoria	148	-25	17.0	-0.8	1435	-2	704	-8
W. Australia	110	-10	19.6	-0.9	1594	2	284	-36

See note table A.1.

**Table A.5. Brazil, October 2016-January 2017 agroclimatic indicators and biomass (by state)**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Ceará	166	-11	28.8	0.2	1369	-2	513	0
Goias	737	-14	25.7	-0.7	1315	8	2022	-4
Mato Grosso do Sul	740	6	26.2	-1.5	1306	3	1961	4
Mato Grosso	1057	6	27.3	-0.5	1184	3	2347	2
Minas Gerais	719	-12	24.8	0.1	1299	5	1738	-8
Parana	719	-8	23.1	-0.7	1267	4	1917	0
Rio Grande do Sul	977	30	22.7	-0.4	1316	0	1858	7
Santa Catarina	846	2	21.2	-0.1	1187	-1	1811	-8
Sao Paulo	821	4	24.3	-0.7	1272	4	2062	5

See note table A.1.

**Table A.6. Canada, October 2016-January 2017 agroclimatic indicators and biomass (by province)**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Alberta	101	-5	-5.8	0.9	255	-9	407	3
Manitoba	198	63	-4.7	2.6	276	-13	541	29
Saskatchewan	149	50	-5.9	1.7	271	-13	457	18

See note table A.1.

**Table A.7. India, October 2016-January 2017 agroclimatic indicators and biomass (by state)**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Arunachal Pradesh	217	1	16.4	1.3	812	1	684	1
Andhra Pradesh	67	-71	25.0	-0.4	1104	6	221	-60
Assam	168	-7	22.8	1.2	851	1	506	0
Bihar	66	-23	21.4	-0.2	936	1	203	-27
Chhattisgarh	79	-25	21.8	-0.4	1062	3	223	-37
Daman and Diu	84	84	24.5	-1.4	1083	0	239	42
Delhi	127	240	19.9	0.5	918	1	425	148
Gujarat	142	473	24.3	-0.2	1052	-1	344	264
Goa	63	-69	24.5	-0.4	1160	3	293	-46
Himachal Pradesh	218	84	4.4	1.3	857	-2	415	13
Haryana	125	201	18.9	0.4	902	0	376	125
Jharkhand	48	-58	21.0	0.2	998	2	181	-51
Kerala	205	-62	25.4	-0.2	1097	2	695	-40
Karnataka	53	-74	24.1	-0.2	1159	5	203	-64
Meghalaya	184	-28	19.4	1.5	875	0	509	4
Maharashtra	59	-42	23.4	-0.5	1095	3	192	-39
Manipur	206	8	17.3	1.2	891	1	579	-1
Madhya Pradesh	39	-34	21.4	0.0	1037	3	166	-24
Mizoram	303	17	18.5	0.2	935	0	716	6
Nagaland	148	-15	17.4	1.9	841	1	466	-20
Orissa	126	-28	23.1	0.0	1042	4	324	-33
Puducherry	260	-82	27.0	-0.1	1059	9	957	0
Punjab	107	73	17.8	0.6	849	0	300	23
Rajasthan	66	292	21.0	-0.3	981	0	205	192
Sikkim	56	-62	6.1	1.2	908	3	208	-45
Tamil Nadu	216	-60	26.6	0.1	1084	9	748	-34
Tripura	396	60	22.1	0.2	912	-1	789	31
Uttarakhand	153	41	11.0	3.1	898	0	399	22
Uttar Pradesh	86	31	20.4	0.3	946	1	263	12
West Bengal	146	-18	23.0	0.5	948	2	380	-17

See note table A.1.

**Table A.8. Kazakhstan, October 2016-January 2017 agroclimatic indicators and biomass (by oblast)**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Akmolinskaya	139	33	-9.0	-1.1	235	-12	325	-18
Karagandinskaya	146	50	-8.8	-1.1	295	-11	320	-20
Kustanayskaya	135	22	-8.8	-1.9	233	-8	349	-17
Pavlodarskaya	129	58	-9.1	-1.3	234	-12	316	-15
Severo	143	33	-9.9	-1.9	200	-9	306	-22
Vostochno	219	45	-10.0	-1.0	330	-11	308	-16
Zapadno	128	-2	-4.8	-2.0	272	-3	502	-8

See note table A.1.

**Table A.9. Russia, October 2016-January 2017 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 <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Bashkortostan	220	17	-8.4	-2.3	192	-4	352	-22
Chelyabinskaya	137	17	-9.3	-2.4	203	-6	328	-19
Gorodovikovsk	254	3	1.4	-2.2	323	-1	778	-7
Krasnodarskiy	181	-23	-4.8	-1.5	286	1	432	-19
Kurganskaya	127	7	-10.7	-3.2	189	-2	298	-26
Kirovskaya	169	-27	-8.4	-3.0	134	4	354	-25
Kurskaya	221	18	-2.0	-1.5	214	-5	585	-14
Lipetskaya	205	8	-2.9	-1.6	206	-4	545	-16
Mordoviya	162	-21	-4.6	-1.6	184	1	480	-16
Novosibirskaya	180	24	-11.8	-2.1	192	-2	247	-33
Nizhegorodskaya	169	-22	-5.2	-1.9	155	2	458	-18
Orenburgskaya	179	15	-7.0	-1.8	230	-7	408	-16
Omskaya	148	14	-12.1	-2.8	183	0	255	-32
Permskaya	187	-13	-10.5	-3.4	146	5	297	-29
Penzenskaya	168	-17	-4.5	-1.6	199	-2	488	-15
Rostovskaya	159	-29	0.1	-1.7	303	0	656	-12
Ryazanskaya	178	-11	-3.6	-1.5	177	-1	515	-16
Stavropolskiy	208	5	1.7	-2.2	337	-5	731	-4
Sverdlovskaya	139	-2	-11.5	-3.8	156	-1	280	-30
Samarskaya	187	9	-6.1	-2.1	213	-1	438	-17
Saratovskaya	138	-16	-4.1	-1.7	242	-1	518	-12
Tambovskaya	190	-5	-3.4	-1.5	207	-3	530	-15
Tyumenskaya	143	10	-12.2	-3.5	168	-2	265	-31
Tatarstan	176	-9	-6.8	-2.5	180	1	404	-23
Ulyanovskaya	163	-8	-5.4	-1.9	198	-1	456	-17
Udmurtiya	180	-16	-8.8	-3.1	151	4	341	-27
Volgogradskaya	153	-11	-2.0	-1.8	271	-1	607	-8
Voronezhskaya	192	3	-2.1	-1.4	233	-3	592	-11

See note table A.1.

**Table A.10. United States, October 2016-January 2017 agroclimatic indicators and biomass (by state)**

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	15YA Departure (%)	Current (°C)	15YA Departure (°C)	Current (MJ/m <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Arkansas	416	-20	11.5	1.6	604	-3	1261	2
California	348	45	7.9	-0.2	600	-8	757	26
Idaho	367	75	-2.9	-1.1	454	-7	601	11
Indiana	360	-8	6.1	1.4	484	-5	1075	8
Illinois	318	-10	5.8	1.5	490	-6	1024	7
Iowa	299	36	3.0	1.6	473	-8	921	32
Kansas	189	11	6.3	1.0	616	-2	538	-11
Michigan	364	16	2.8	1.6	365	-9	890	16
Minnesota	293	63	-1.0	1.7	395	-5	718	35
Missouri	304	-14	7.5	1.4	535	-6	985	0
Montana	268	115	-2.8	-0.9	427	-4	620	43
Nebraska	186	38	3.0	1.1	555	-3	724	44
North Dakota	250	113	-2.8	1.0	398	-5	642	57
Ohio	346	0	5.9	1.5	465	-4	1074	10
Oklahoma	248	-7	10.1	1.0	655	-2	828	1
Oregon	429	22	2.4	-1.1	397	-10	811	9
South Dakota	241	86	0.4	0.7	488	-2	775	75
Texas	271	2	14.7	1.4	704	-4	754	7
Washington	407	13	1.5	-0.9	335	-8	797	11
Wisconsin	353	35	0.9	1.5	402	-5	805	19

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 <sup>2</sup> )	15YA Departure (%)	Current (gDM/m <sup>2</sup> )	5YA Departure (%)
Anhui	245	15	10.2	0.6	524	-23	915	32
Chongqing	176	1	9.9	0.7	396	-22	567	-8
Fujian	286	19	15.0	1.7	604	-20	832	22
Gansu	122	110	1.6	1.3	650	-6	462	115
Guangdong	221	25	18.0	1.0	706	-14	707	41
Guangxi	141	-36	17.0	1.2	644	-11	500	-19
Guizhou	141	-25	11.3	1.2	460	-16	503	-16
Hebei	90	83	1.0	0.6	578	-6	401	83
Henan	189	110	-11.4	-1.3	443	-1	290	-6
Heilongjiang	206	91	8.0	0.6	551	-18	785	79
Hubei	222	22	9.5	0.5	502	-22	774	17
Hunan	177	-32	11.6	0.5	501	-24	670	-16
Jilin	285	85	9.8	0.7	523	-22	1005	82
Jiangsu	224	-26	13.4	1.2	562	-22	791	-5
Jiangxi	192	104	-6.8	-0.1	494	-5	421	20
Liaoning	140	47	-1.6	0.5	543	-5	543	42
Inner Mongolia	121	147	-8.3	0.2	508	-3	335	65
Ningxia	122	182	1.1	1.8	671	-3	457	171
Sichuan	207	102	4.5	1.2	541	-15	730	91
Shandong	162	114	6.7	0.8	575	-11	658	115
Shaanxi	117	85	0.9	1.6	605	-8	485	77
Shanxi	102	-1	9.0	0.9	563	-7	387	-1
Yunnan	134	-20	12.9	0.8	772	0	472	-11
Zhejiang	222	-26	12.5	1.6	525	-22	835	-2

See note table A.1.