Annex A. Agroclimatic indicators and BIOMSS

Table A.1. July-October 2017 agroclimatic indicators and biomass by global Monitoring and Reporting Unit

65 Global MRUs	RAIN Current (mm)	RAIN 15YA dep. (%)	TEMP Current (°C)	TEMP 15YA dep. (°C)	RADPAR Current(MJ/m2)	RADPAR 15YA dep. (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA dep. (%)
Equatorial central Africa	443	-3	24.7	0.0	1080	-2	1226	0
East African highlands	584	1	19.6	-0.2	1122	-1	1496	-2
Gulf of Guinea	913	5	26.1	-0.4	950	-2	1971	-1
Horn of Africa	101	-9	23.7	-0.4	1201	-4	336	-12
Madagascar (main)	159	32	21.7	0.1	1087	-2	474	14
Southwest Madagascar	22	-62	21.1	-0.8	1184	-1	101	-55
North Africa-Mediterranean	58	-42	24.2	0.0	1267	-2	252	-35
Sahel	624	12	28.8	-0.4	1212	-2	1590	5
Southern Africa	58	-7	21.4	-0.1	1140	-3	210	-13
Western Cape (South Africa)	38	-74	12.6	0.9	942	0	181	-66
British Columbia to Colorado	231	18	11.9	-0.1	1100	-3	852	15
Northern Great Plains	409	35	17.9	-0.2	1080	-2	1166	17
Corn Belt	416	0	17.8	0.0	990	-2	1378	1
Cotton Belt to Mexican Nordeste	442	0	23.7	-0.7	1109	-2	1313	1
Sub-boreal America	269	-4	12.3	0.3	858	0	1086	-3
West Coast (North America)	74	-22	17.5	0.3	1267	0	291	-5
Sierra Madre	632	1	20.0	-0.5	1184	-2	1591	-1
SW U.S. and N. Mexican highlands	183	-2	21.3	-0.3	1266	-2	675	0
Northern South and Central America	1004	8	26.8	-0.3	1053	0	2121	3
Caribbean	869	11	27.1	0.2	1181	-3	1960	-1
Central-northern Andes	280	-19	15.5	0.2	1110	1	718	-10
Nordeste (Brazil)	40	-31	26.4	-0.2	1132	-8	145	-29
Central eastern Brazil	166	-19	25.1	-0.2	1101	-2	525	-23
Amazon	336	-12	28.4	-0.1	1096	-3	1026	-11
Central-north Argentina	85	-6	19.3	-0.1	890	-9	328	-5
Pampas	454	3	17.4	1.0	849	-6	1077	-5
Western Patagonia	245	-33	6.6	-0.2	678	-8	751	-11
Semi-arid Southern Cone	62	0	10.7	-0.1	949	-1	264	0
Caucasus	117	-30	19.8	0.6	1183	5	457	-26
Pamir area	167	0	17.8	-0.2	1242	0	557	8
Western Asia	67	13	23.7	-0.1	1251	1	235	2

Gansu-Xinjiang (China)	300	97	16.7	-0.4	1064	-6	912	72
Hainan (China)	1163	3	27.1	0.0	1006	-4	2067	3
Huanghuaihai (China)	635	36	23.0	0.1	883	-12	1581	23
Inner Mongolia (China)	487	70	15.9	-0.1	988	-6	1375	32
Loess region (China)	479	28	17.9	0.0	905	-11	1458	17
Lower Yangtze (China)	590	13	24.9	-0.1	949	-8	1471	4
Northeast China	448	19	16.0	-0.3	918	-3	1272	4
Qinghai-Tibet (China)	913	30	12.5	0.3	980	-3	1338	6
Southern China	864	17	24.5	-0.2	931	-7	1865	7
Southwest China	641	16	21.1	-0.1	819	-10	1666	6
Taiwan (China)	1016	3	25.7	0.3	1106	4	1693	0
East Asia	486	-19	17.2	-0.1	868	-4	1374	-7
Southern Himalayas	1234	19	25.5	-0.2	877	-6	1882	2
Southern Asia	1131	17	27.4	0.1	911	-2	2026	14
Southern Japan and the southern fringe of the Korea peninsula	819	5	22.4	1.3	874	-8	1819	3
Southern Mongolia	477	144	15.0	-0.3	1146	2	1084	65
Punjab to Gujarat	648	20	29.4	-0.4	1010	-4	1017	-3
Maritime Southeast Asia	1015	22	25.6	0.1	949	-9	2093	13
Mainland Southeast Asia	1283	7	27.1	-0.1	909	-3	2355	5
Eastern Siberia	279	-5	10.6	-0.7	773	-4	1134	-2
Eastern Central Asia	302	24	9.7	-0.4	888	-3	1101	12
Northern Australia	127	23	24.8	1.5	1153	-4	392	9
Queensland to Victoria	138	-15	13.1	0.3	938	-1	565	-10
Nullarbor to Darling	115	-42	12.7	0.0	856	-6	460	-35
New Zealand	152	-46	9.1	0.7	660	-10	590	-32
Boreal Eurasia	389	18	9.9	-0.3	622	-11	1258	8
Ukraine to Ural mountains	275	16	14.5	-0.6	785	-3	1100	12
Mediterranean Europe and Turkey	91	-44	20.5	1.4	1217	3	364	-38
W. Europe (non Mediterranean)	304	4	16.0	-0.1	858	-4	1136	4
Boreal America	483	25	8.0	0.7	573	-9	1165	3
Ural to Altai mountains	221	9	12.5	-0.9	855	0	903	6
Australian desert	84	-5	14.2	0.4	989	0	372	-6
Sahara to Afghan deserts	37	18	30.0	-0.2	1368	-1	144	7
Sub-arctic America	210	75	-0.4	3.7	288	-4	754	132

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

31 Countries	31 Countries	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
ARG	Argentina	215	-5	15.7	0.4	841	-9	687	0
AUS	Australia	135	-15	14.1	0.3	951	-2	530	-14
BGD	Bangladesh	2211	49	28.5	-0.4	777	-12	2623	16
BRA	Brazil	224	-16	25.6	0.0	1094	-3	613	-21
KHM	Cambodia	1152	-2	28.0	-0.5	967	-3	2386	1
CAN	Canada	273	-8	12.9	0.7	905	0	1022	-3
CHN	China	623	20	21.2	-0.1	913	-8	1452	12
EGY	Egypt	3	-26	26.3	-0.4	1387	1	16	-2
ETH	Ethiopia	689	2	20.4	-0.1	1117	0	1696	-1
FRA	France	160	-42	16.4	-0.5	889	-7	736	-30
DEU	Germany	367	27	15.3	-0.3	744	-9	1410	22
IND	India	1089	16	27.4	0.0	918	-3	1762	6
IDN	Indonesia	963	27	25.5	0.0	943	-10	1948	16
IRN	Iran	28	-28	23.5	0.0	1309	1	94	-28
KAZ	Kazakhstan	176	18	14.7	-0.6	968	3	711	12
MEX	Mexico	740	5	23.9	-0.4	1165	-2	1516	-1
MMR	Burma	1351	9	26.0	-0.1	806	-4	2318	3
NGA	Nigeria	850	2	26.4	-0.8	1008	-4	1906	-1
PAK	Pakistan	293	4	27.0	-0.3	1159	-3	616	-6
PHL	Philippines	1312	12	26.1	0.7	996	-3	2401	7
POL	Poland	387	56	15.0	-0.5	740	-8	1442	40
ROU	Romania	258	-8	17.1	0.0	1015	6	1003	-3
RUS	Russia	261	8	13.3	-0.7	801	-2	1051	5
ZAF	South Africa	70	-40	15.4	0.1	1053	-2	274	-35
THA	Thailand	1082	12	27.0	-0.3	942	-3	2304	8
TUR	Turkey	93	-28	20.4	0.8	1243	3	357	-29
GBR	United Kingdom	412	27	13.3	0.0	654	-9	1373	12
UKR	Ukraine	205	-6	17.1	0.2	910	2	874	-1
USA	United States	402	11	19.8	-0.3	1088	-2	1158	10
UZB	Uzbekistan	73	92	21.3	-0.3	1256	1	298	88
VNM	Vietnam	1313	17	26.2	0.0	906	-8	2331	9

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

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Buenos Aires	205	-25	12.6	0.7	801	-6	822	-7
Chaco	199	-2	19.9	0.4	838	-12	760	13
Cordoba	87	-37	14.4	-0.2	869	-10	357	-30
Corrientes	428	-1	19.0	0.8	840	-8	1363	14
Entre Rios	425	31	16.1	0.7	799	-11	1389	39
La Pampa	131	-32	12.5	0.2	838	-6	596	-14
Misiones	965	41	20.3	1.5	882	-4	1666	-1
Santiago Del Estero	127	30	18.6	0.1	844	-14	452	21
San Luis	67	-47	12.9	-0.3	905	-6	311	-36
Salta	35	-36	18.9	-0.2	952	-8	156	-28
Santa Fe	217	-2	16.7	0.4	830	-11	788	6
Tucuman	22	-54	16.8	-0.3	979	-3	107	-45

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

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
New South Wales	146	-3	12.8	0.2	982	1	593	1
South Australia	146	-9	12.6	0.5	848	-2	617	-4
Victoria	121	-42	10.3	0.0	770	-4	563	-27
W. Australia	110	-42	13.7	0.3	890	-5	445	-34

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

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Ceara	34	5	28.2	0.3	1261	-7	125	-9
Goias	101	-40	25.5	-0.4	1213	3	401	-33
Mato Grosso Do Sul	327	11	25.1	-0.2	1033	-5	863	-11
Mato Grosso	189	-21	28.2	-0.1	1087	-7	652	-18
Minas Gerais	106	-30	22.6	-0.5	1125	0	348	-34
Parana	645	9	20.9	1.0	974	0	1031	-31
Rio Grande Do Sul	636	-7	18.6	1.9	844	-3	1525	-7
Santa Catarina	533	-23	18.0	1.9	882	2	1162	-28
Sao Paulo	234	-22	22.3	0.0	1051	-1	697	-27

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

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Alberta	205	-1	12.1	0.6	921	0	877	-1
Manitoba	211	-20	14.1	0.1	934	1	916	-17
Saskatchewan	165	-23	13.3	0.6	947	1	741	-19

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

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Andhra Pradesh	916	22	28.2	-0.1	973	2	2043	20
Assam	2076	45	29.2	0.0	786	-8	2655	15
Bihar	1210	23	29.4	-0.8	874	-7	1885	1
Chhattisgarh	1147	1	27.1	0.2	899	1	2136	4
Daman and Diu	1053	3	28.2	-0.4	954	1	1471	7
Delhi	324	-37	29.9	-0.3	1022	-4	1119	-15
Gujarat	1034	33	29.0	0.0	940	-3	1275	3
Goa	1043	-34	25.3	0.2	813	0	2074	-2
Himachal Pradesh	710	-15	15.2	-0.3	1055	-3	1237	-13
Haryana	352	-28	29.1	-0.4	1039	-4	964	-21
Jharkhand	1264	25	27.7	-0.2	877	-6	2172	7
Kerala	1077	-11	25.2	-0.2	823	-6	2180	3
Karnataka	960	17	24.9	-0.2	910	-1	1958	23
Meghalaya	2632	25	25.4	0.2	740	-12	2517	7
Maharashtra	1126	11	26.7	0.1	908	3	1878	10
Manipur	1259	23	23.0	0.0	795	-5	2357	8
Madhya Pradesh	942	2	27.7	0.2	923	0	1661	-1
Mizoram	1720	22	23.6	-0.5	836	-5	2422	2
Nagaland	1624	26	23.1	0.4	821	-5	2384	6
Orissa	1212	5	27.9	0.4	868	-1	2325	9
Puducherry	660	103	29.7	87.8	1068	-3	1566	44
Punjab	367	-26	28.7	-0.3	1063	-3	930	-23
Rajasthan	540	13	29.4	-0.5	1017	-5	1007	-4
Sikkim	1210	-6	13.5	-1.1	877	-15	1383	-3
Tamil Nadu	811	39	28.4	0.3	1033	-4	1892	24
Tripura	2531	63	27.7	-0.4	778	-12	2634	10
Uttarakhand	1125	6	19.2	0.4	965	-4	1547	-3
Uttar Pradesh	900	11	29.5	-0.1	933	-6	1591	-4
West Bengal	1756	34	29.3	0.2	810	-10	2441	14

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

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Akmolinskaya	123	-16	13.4	-0.7	890	2	588	-11
Karagandinskaya	157	10	13.1	-0.7	943	3	735	14
Kustanayskaya	129	-9	14.2	-1.0	891	3	629	-1
Pavlodarskaya	151	-8	13.5	-0.9	866	2	717	-2
Severo kazachstanskaya	162	-15	12.8	-0.9	835	4	741	-11
Vostochno kazachstanskaya	312	61	12.3	-0.7	1007	2	1080	39
Zapadno kazachstanskaya	81	-18	18.0	0.0	967	3	398	-14

Table A.9. Russia, July-October 2017 agroclimatic indicators and biomass (by oblast, kray and republic)

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Bashkortostan Rep.	215	-1	12.8	-0.9	802	-1	949	1
Chelyabinskaya Oblast	164	-22	12.4	-1.0	799	0	782	-14
Gorodovikovsk	256	8	21.0	0.3	1050	7	932	-5
Krasnodarskiy Kray	254	-2	15.0	-0.3	890	0	1096	1
Kurganskaya Oblast	171	-19	12.1	-1.3	790	2	807	-13
Kirovskaya Oblast	348	25	11.9	-0.9	660	-9	1337	15
Kurskaya Oblast	200	-7	15.1	-0.6	828	-1	913	0
Lipetskaya Oblast	202	-4	14.6	-0.9	806	-2	928	1
Mordoviya Rep.	279	16	13.5	-1.1	771	-3	1119	8
Novosibirskaya Oblast	223	-2	10.9	-1.2	753	-4	984	1
Nizhegorodskaya O.	269	3	13.1	-0.9	711	-6	1101	0
Orenburgskaya Oblast	112	-21	15.0	-0.5	903	2	542	-15
Omskaya Oblast	226	4	11.4	-0.9	756	0	971	3
Permskaya Oblast	333	19	11.5	-0.7	677	-7	1296	11
Penzenskaya Oblast	256	20	14.0	-1.0	824	0	1075	15
Rostovskaya Oblast	167	0	19.4	0.3	1007	5	729	-1
Ryazanskaya Oblast	272	12	13.9	-0.8	753	-4	1131	10
Stavropolskiy Kray	128	-37	21.0	0.5	1053	8	595	-30
Sverdlovskaya Oblast	245	-3	11.3	-0.8	698	-4	1047	-2

Samarskaya Oblast	168	-7	14.7	-0.5	866	2	733	-7
Saratovskaya Oblast	152	1	16.3	-0.6	910	4	688	2
Tambovskaya Oblast	212	5	14.6	-0.8	837	1	949	7
Tyumenskaya Oblast	209	-8	11.3	-1.1	751	1	940	-4
Tatarstan Rep.	279	24	13.5	-1.0	765	-4	1096	12
Ulyanovskaya Oblast	237	11	14.3	-0.7	812	-1	984	6
Udmurtiya Rep.	309	18	12.0	-1.0	698	-6	1238	11
Volgogradskaya O.	172	28	18.1	-0.4	954	4	736	18
Voronezhskaya Oblast	171	2	16.1	-0.2	888	2	789	3

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

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Arkansas	330	-23	23.1	-0.9	1106	-3	1162	-12
California	50	0	18.9	0.4	1349	-2	228	19
Idaho	150	33	13.8	-0.5	1188	-4	688	37
Indiana	504	24	19.8	-0.4	1041	-3	1509	12
Illinois	454	13	20.2	-0.3	1083	-1	1407	8
Iowa	636	44	18.8	-0.2	1069	-1	1706	26
Kansas	475	23	21.4	-0.7	1150	-2	1381	14
Michigan	333	-2	16.9	0.3	995	-1	1236	3
Minnesota	564	49	15.9	-0.6	957	-6	1607	27
Missouri	448	-3	21.3	-0.4	1126	0	1382	1
Montana	186	22	15.1	0.0	1106	-3	803	16
Nebraska	612	91	18.9	-0.4	1117	-3	1596	43
North Dakota	273	13	15.8	-0.1	1029	-1	1044	9
Ohio	447	14	19.1	-0.4	1008	-3	1413	4
Oklahoma	589	54	23.1	-1.3	1173	-1	1538	28
Oregon	88	-20	15.9	0.1	1198	0	401	-4
South Dakota	502	80	17.9	-0.4	1078	-3	1498	45
Texas	370	12	25.0	-0.9	1192	-1	1063	5
Washington	95	-29	15.7	-0.1	1145	2	367	-21
Wisconsin	479	16	16.5	-0.2	969	-4	1475	11

Table A.11. China, July-October 2017agroclimatic indicators and biomass (by province)

Region	RAIN Current (mm)	RAIN 15YA Departure (%)	TEMP Current (°C)	TEMP 15YA Departure (°C)	RADPAR Current (MJ/m2)	RADPAR 15YA Departure (%)	BIOMSS Current (gDM/m2)	BIOMSS 5YA Departure (%)
Anhui	748	31	24.2	-0.6	852	-14	1717	15
Chongqing	697	25	22.0	-0.3	805	-12	1792	14
Fujian	479	-13	25.1	0.9	1108	6	1384	-6
Gansu	362	12	15.7	0.1	899	-10	1192	14
Guangdong	795	16	26.4	-0.2	1029	-3	1687	5
Guangxi	901	39	25.6	-0.4	917	-11	1899	20
Guizhou	524	9	21.9	0.2	845	-9	1472	3
Hebei	529	46	19.6	-0.1	928	-11	1456	22
Heilongjiang	434	24	15.1	-0.5	908	-2	1279	6
Henan	687	42	22.9	-0.2	844	-15	1702	22
Hubei	692	33	22.8	-0.7	819	-16	1722	17
Hunan	514	8	24.2	-0.5	894	-11	1304	-2
Jiangsu	713	27	24.5	0.1	857	-12	1750	20
Jiangxi	523	9	25.8	-0.2	1011	-4	1308	-4
Jilin	502	30	16.6	-0.3	953	-2	1262	3
Liaoning	480	10	18.9	0.0	933	-7	1323	4
Inner Mongolia	418	54	15.1	-0.2	974	-5	1272	28
Ningxia	270	20	16.9	0.1	967	-12	962	14

Shaanxi	581	25	19.1	0.0	855	-12	1667	18
Shandong	589	25	23.0	0.5	895	-11	1504	19
Shanxi	578	57	17.4	0.2	936	-10	1614	30
Sichuan	694	14	19.9	0.2	812	-7	1641	4
Yunnan	696	5	19.4	-0.1	850	-8	1708	-2
Zhejiang	573	-1	25.2	0.7	971	-4	1460	-5