

Annex A. Agroclimatic indicators and BIOMSS

Table A.1. October 2017 – January 2018 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/m ²)	RADPAR 15YA dep. (%)	BIOMSS Current (gDM/m ²)	BIOMSS 5YA dep. (%)
Equatorial central Africa	488	-11	25.2	-0.2	1122	-2	1447	-6
East African highlands	127	-34	18.7	-1.1	1235	0	454	-30
Gulf of Guinea	222	-7	26.6	-0.7	1076	-6	591	-13
Horn of Africa	265	-19	24.1	-1.0	1269	-2	817	-16
Madagascar (main)	856	14	24.1	-0.9	1184	-8	1724	6
Southwest Madagascar	224	-48	23.8	-1.9	1428	-1	795	-32
North Africa-Mediterranean	109	-38	13.1	-0.4	706	0	378	-34
Sahel	38	-24	26.9	-0.9	1242	-1	118	-32
Southern Africa	367	-18	24.6	-0.8	1340	-0	1108	-12
Western Cape (South Africa)	90	-25	18.4	-0.3	1534	-1	369	-18
British Columbia to Colorado	307	21	-2.8	0.8	443	-4	496	6
Northern Great Plains	203	24	0.3	0.1	478	-4	593	11
Corn Belt	379	3	1.7	-0.4	443	-2	805	0
Cotton Belt to Mexican Nordeste	265	-29	11.5	-0.7	678	1	853	-14
Sub-boreal America	195	25	-8.2	-0.4	246	-5	394	-2
West Coast (North America)	254	-28	7.5	0.5	533	-1	652	-10
Sierra Madre	120	-7	15.2	0.0	1037	1	393	-11
SW U.S. and N. Mexican highlands	87	-13	9.4	1.1	779	0	345	-13
Northern South and Central America	456	-1	25.3	-0.6	938	-1	1054	-5
Caribbean	432	29	24.4	-0.8	865	-6	1244	34
Central-northern Andes	581	2	16.4	-0.3	1113	-1	1252	-1
Nordeste (Brazil)	234	-11	28.4	0.4	1294	-5	762	3
Central eastern Brazil	749	1	26.1	-0.7	1177	-4	1867	2
Amazon	810	-0	27.7	-0.6	1037	-5	1930	-1
Central-north Argentina	398	-9	25.2	-1.1	1297	0	1208	-9
Pampas	631	-2	22.4	-0.8	1360	-0	1543	-5
Western Patagonia	75	-50	12.7	-0.7	1349	-5	346	-32
Semi-arid Southern Cone	97	-20	18.1	-1.0	1476	-1	375	-15
Caucasus	305	10	4.5	0.9	536	-2	782	3
Pamir area	147	-2	3.4	0.9	717	-0	397	-9
Western Asia	113	-15	7.4	0.4	653	-0	390	-13
Gansu-Xinjiang (China)	107	80	-4.0	-0.1	559	-4	345	68
Hainan (China)	541	43	21.1	-0.7	637	-18	957	42
Huanghuaihai (China)	129	47	5.7	-0.3	558	-14	482	36
Inner Mongolia (China)	69	27	-6.4	-0.3	546	-4	285	20
Loess region (China)	166	113	1.2	-0.3	591	-12	537	67
Lower Yangtze (China)	191	-24	11.1	-0.4	569	-18	677	-12
Northeast China	96	-1	-8.9	-0.7	466	-4	334	1
Qinghai-Tibet (China)	141	36	2.3	0.9	849	-0	388	23
Southern China	182	1	16.2	-0.2	688	-13	598	4
Southwest China	127	-18	9.2	-0.3	517	-13	507	-5
Taiwan (China)	332	67	18.4	-0.2	714	-6	746	21
East Asia	155	-24	-2.0	-0.7	483	-7	477	-11
Southern Himalayas	144	5	18.2	0.4	821	-7	365	-8
Southern Asia	239	5	24.1	0.1	981	-5	555	2
Southern Japan and the	485	24	8.1	-1.0	523	-12	1117	0

southern fringe of the Korea peninsula									
Southern Mongolia	117	204	-10.2	-0.1	490	2	304	91	
Punjab to Gujarat	31	-3	21.3	-0.1	902	-6	102	-11	
Maritime Southeast Asia	1194	6	25.5	-0.5	926	-5	2283	4	
Mainland Southeast Asia	483	30	24.9	-0.3	896	-8	1014	25	
Eastern Siberia	164	-1	-11.2	-0.3	266	-5	291	-10	
Eastern Central Asia	51	-5	-15.3	0.9	360	1	178	-6	
Northern Australia	761	25	26.8	-0.7	1186	-8	1577	12	
Queensland to Victoria	250	1	21.4	0.4	1433	-3	936	13	
Nullarbor to Darling	106	6	19.5	-0.3	1539	-2	454	8	
New Zealand	145	-48	14.9	1.2	1229	-6	613	-36	
Boreal Eurasia	355	35	-3.8	-0.2	119	-9	494	-5	
Ukraine to Ural mountains	247	22	0.2	1.4	174	-14	679	8	
Mediterranean Europe and Turkey	203	-35	9.1	-0.2	551	3	745	-19	
W. Europe (non Mediterranean)	287	-1	5.9	0.0	288	-6	909	-2	
Boreal America	426	37	-5.6	2.3	131	-11	431	19	
Ural to Altai mountains	117	-13	-8.3	-0.2	268	4	380	-2	
Australian desert	141	46	21.6	-0.4	1535	-3	632	48	
Sahara to Afghan deserts	52	-16	17.5	-0.4	958	-0	172	-15	
Sub-arctic America	172	153	-14.8	3.6	35	-1	161	132	

Table A.2. October 2017 – January 2018 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 5YA Departure (%)
ARG	Argentina	394	-22	22.0	-1.0	1404	1	1194	-13
AUS	Australia	272	8	21.7	0.2	1438	-3	870	13
BGD	Bangladesh	364	63	22.2	-0.4	820	-11	872	69
BRA	Brazil	722	-1	26.3	-0.5	1159	-4	1744	1
CAN	Canada	276	18	-5.6	-0.0	295	-4	467	5
CHN	China	151	-5	6.4	-0.3	570	-12	474	7
DEU	Germany	336	33	5.8	1.2	209	-15	1060	14
EGY	Egypt	36	-35	17.8	-0.3	760	-5	145	-8
ETH	Ethiopia	109	-29	18.9	-1.2	1227	0	404	-26
FRA	France	218	-30	7.5	-1.6	320	-7	823	-20
GBR	United Kingdom	397	8	6.5	-1.9	185	-8	1038	-11
IDN	Indonesia	1134	1	25.6	-0.6	943	-5	2279	3
IND	India	147	4	22.1	0.2	937	-5	335	-5
IRN	Iran	157	-16	8.6	1.0	748	0	456	-19
KAZ	Kazakhstan	125	2	-6.6	-0.4	338	3	444	5
KHM	Cambodia	532	39	26.7	-0.7	945	-8	1253	34
MEX	Mexico	189	-2	18.9	-0.3	960	0	448	-11
MMR	Myanmar	261	13	22.7	0.2	894	-5	770	19
NGA	Nigeria	134	-26	26.0	-1.2	1137	-6	311	-27
PAK	Pakistan	36	-48	14.9	0.1	833	-3	118	-38
PHL	Philippines	1359	46	25.4	-0.4	861	-5	2091	20
POL	Poland	275	41	4.3	1.4	194	-15	950	17
ROU	Romania	244	9	4.2	1.2	352	-3	828	9
RUS	Russia	192	9	-4.6	0.9	213	-6	477	4
THA	Thailand	435	29	25.0	-0.4	914	-8	873	16
TUR	Turkey	270	-13	6.2	1.0	569	-2	864	-1
UKR	Ukraine	226	18	3.3	1.4	241	-13	787	8
USA	United States	278	-9	5.5	-0.1	563	-1	701	-3
UZB	Uzbekistan	149	-7	4.9	0.3	573	2	444	-11
VNM	Vietnam	621	38	21.7	-0.4	689	-14	1157	27
ZAF	South Africa	312	-14	20.1	-1.0	1441	2	957	-17

Table A.3. Argentina, October 2017 – January 2018 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 5YA Departure (%)
Buenos Aires	306	-30	19.4	-1.0	1475	-1	1106	-18
Chaco	464	-19	25.3	-0.9	1317	-2	1440	-7
Cordoba	360	-19	21.8	-1.1	1468	3	1233	-12
Corrientes	616	-22	24.0	-1.0	1390	2	1634	-8
Entre Rios	424	-29	22.3	-1.0	1487	4	1401	-12
La Pampa	276	-28	20.6	-1.0	1504	-2	1091	-15
Misiones	1202	31	23.7	-0.9	1264	-2	2251	13
Santiago Del Estero	333	-24	25.2	-0.9	1332	1	1152	-15
San Luis	289	-28	20.9	-1.2	1477	1	1093	-19
Salta	419	-9	24.1	-1.1	1191	-2	1130	-14
Santa Fe	364	-36	23.1	-0.9	1461	4	1242	-22
Tucuman	249	-41	23.4	-1.0	1262	3	899	-29

Table A.4. Australia, October 2017 – January 2018 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 5YA Departure (%)
New South Wales	262	7	22.1	0.4	1463	-3	1022	24
South Australia	151	36	19.7	0.4	1442	-6	698	39
Victoria	187	-4	18.7	0.9	1387	-6	784	3
W. Australia	171	39	20.2	-0.3	1527	-3	492	11

Table A.5. Brazil, October 2017 – January 2018 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 5YA Departure (%)
Ceara	194	12	29.0	0.4	1284	-7	610	22
Goias	755	-10	25.7	-0.6	1214	-1	1997	-4
Mato Grosso Do Sul	915	31	26.3	-1.3	1170	-8	2217	16
Mato Grosso	915	-8	27.1	-0.7	1104	-4	2238	-2
Minas Gerais	706	-13	24.8	-0.0	1220	-2	1785	-4
Parana	1118	44	22.8	-0.9	1157	-5	2188	12
Rio Grande Do Sul	699	-10	22.7	-0.4	1319	0	1741	-2
Santa Catarina	961	15	20.8	-0.5	1139	-5	2134	8
Sao Paulo	826	5	24.4	-0.5	1197	-3	2010	2

Table A.6. Canada, October 2017 – January 2018 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 5YA Departure (%)
Alberta	127	17	-6.5	0.1	263	-5	423	6
Manitoba	120	-7	-7.7	-0.4	304	-3	415	-4
Saskatchewan	121	16	-7.4	0.1	292	-5	407	2

Table A.7. India, October 2017 – January 2018 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 5YA Departure (%)
Andhra Pradesh	218	-1	25.1	-0.2	1033	-1	484	-9
Assam	284	61	22.6	0.9	792	-6	746	49
Bihar	36	-52	20.7	-0.9	844	-9	106	-59
Chhattisgarh	78	-23	22.5	0.4	996	-3	251	-25
Daman and Diu	170	259	24.8	-1.0	1018	-6	479	188
Delhi	4	-92	19.3	-0.0	843	-7	21	-88
Gujarat	73	127	24.6	0.1	996	-6	249	129
Goa	153	-24	25.0	0.1	1057	-6	490	-9
Haryana	19	-60	18.2	-0.3	828	-8	90	-51
Jharkhand	102	-5	20.5	-0.3	882	-10	290	-15
Kerala	443	-15	25.1	-0.4	1006	-7	1100	-4
Karnataka	239	24	23.9	-0.4	1063	-4	507	-6
Meghalaya	363	49	19.0	1.0	800	-9	825	75
Maharashtra	144	51	24.4	0.5	1023	-4	367	23
Manipur	256	37	16.9	0.7	842	-5	703	24
Madhya Pradesh	27	-52	22.1	0.7	957	-5	118	-44
Mizoram	412	60	18.6	0.3	878	-6	985	49
Nagaland	258	54	16.9	1.3	805	-4	678	20
Orissa	250	47	23.2	0.2	949	-6	564	25
Puducherry	951	10	26.6	-0.5	922	-6	1364	11
Punjab	40	-39	17.2	0.1	789	-7	189	-24
Rajasthan	10	-50	21.1	-0.1	908	-7	40	-48
Sikkim	67	-52	6.3	1.3	861	-3	304	-17
Tamil Nadu	415	-21	26.2	-0.3	968	-4	1032	-8
Tripura	565	124	21.8	-0.0	825	-10	1042	77
Uttarakhand	37	-67	10.8	2.7	879	-2	176	-47
Uttar Pradesh	13	-80	20.1	-0.0	853	-9	49	-79
West Bengal	212	25	22.5	-0.1	825	-12	580	35

Table A.8. Kazakhstan, October 2017 – January 2018 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 5YA Departure (%)
Akmolinskaya	114	11	-8.4	-0.4	280	5	403	3
Karagandinskaya	108	8	-8.5	-0.7	339	3	393	-0
Kustanayskaya	91	-16	-7.3	-0.3	275	8	418	1
Pavlodarskaya	91	10	-8.9	-0.9	265	1	393	7
Severo kazachstanskaya	90	-16	-8.1	0.0	246	12	390	1
Vostochno kazachstanskaya	143	-9	-10.1	-1.0	376	3	358	-2
Zapadno kazachstanskaya	145	13	-2.5	0.5	271	-4	602	11

Table A.9. Russia, October 2017 – January 2018 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 5YA Departure (%)
Bashkortostan Rep.	148	-21	-5.2	1.0	194	-3	460	3
Chelyabinskaya Oblast	80	-31	-7.3	-0.3	223	4	372	-7
Gorodovikovsk	292	20	4.4	0.9	319	-2	955	15
Krasnodarskiy Kray	209	-7	-2.9	0.5	277	-2	529	2
Kurganskaya Oblast	67	-42	-7.4	0.3	217	12	334	-15
Kirovskaya Oblast	234	3	-3.3	2.1	114	-12	511	10
Kurskaya Oblast	293	54	0.9	1.3	179	-21	733	8
Lipetskaya Oblast	284	49	0.1	1.3	167	-22	684	6
Mordoviya Rep.	245	21	-1.7	1.3	159	-13	589	3
Novosibirskaya Oblast	125	-13	-9.8	0.0	201	3	331	-8
Nizhegorodskaya O.	243	15	-1.6	1.7	131	-14	591	7
Orenburgskaya Oblast	142	-8	-4.8	0.5	240	-3	497	3
Omskaya Oblast	102	-20	-9.2	0.3	194	6	347	-5
Permskaya Oblast	165	-22	-5.3	1.9	136	-3	447	8
Penzenskaya Oblast	240	20	-2.0	1.0	178	-13	581	2
Rostovskaya Oblast	218	2	3.0	1.1	274	-9	836	12
Ryazanskaya Oblast	293	47	-0.7	1.4	144	-20	640	5
Stavropolskiy Kray	220	13	4.6	0.8	342	-3	853	13
Sverdlovskaya Oblast	81	-42	-6.6	1.3	167	6	381	-2
Samarskaya Oblast	208	22	-3.0	1.1	196	-9	552	5
Saratovskaya Oblast	201	25	-1.7	0.6	217	-12	612	5
Tambovskaya Oblast	289	45	-0.6	1.3	173	-19	647	4
Tyumenskaya Oblast	94	-27	-8.1	0.9	189	11	369	-2
Tatarstan Rep.	203	7	-2.9	1.5	165	-8	544	5
Ulyanovskaya Oblast	211	21	-2.6	1.0	181	-10	560	3
Udmurtiya Rep.	197	-6	-3.7	2.0	136	-7	502	9
Volgogradskaya O.	222	33	0.6	0.8	239	-13	736	11
Voronezhskaya Oblast	268	44	0.8	1.5	197	-18	732	10

Table A.10. United States, October 2017 – January 2018 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 5YA Departure (%)
Arkansas	332	-34	9.5	-0.5	631	1	1131	-10
California	172	-29	8.8	0.8	653	1	541	-11
Idaho	284	30	-1.2	0.7	458	-6	607	11
Indiana	404	6	4.0	-0.6	481	-5	989	-1
Illinois	310	-11	4.0	-0.3	497	-4	955	-0
Iowa	316	39	1.0	-0.2	475	-7	804	10
Kansas	159	-10	5.4	0.2	614	-2	466	-25
Michigan	404	28	0.7	-0.4	368	-7	775	0
Minnesota	322	71	-3.4	-0.6	391	-5	583	5
Missouri	258	-26	5.9	-0.1	563	-0	935	-5
Montana	245	78	-2.4	-0.4	420	-5	597	27
Nebraska	221	57	2.1	0.2	544	-5	637	16
North Dakota	195	51	-3.9	0.1	401	-4	559	25
Ohio	381	9	3.7	-0.7	469	-2	968	-2
Oklahoma	226	-15	8.8	-0.3	684	3	732	-12
Oregon	236	-33	3.7	0.2	407	-7	781	3
South Dakota	225	61	-0.0	0.4	470	-5	700	42
Texas	180	-32	12.8	-0.5	740	1	560	-23
Washington	361	1	2.4	0.2	328	-9	776	6
Wisconsin	342	27	-1.2	-0.4	404	-4	685	-1

Table A.11. China, October 2017 – January 2018 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 5YA Departure (%)
Anhui	204	-5	9.0	-0.6	559	-16	830	14
Chongqing	175	1	8.7	-0.5	410	-18	637	4
Fujian	215	-12	13.7	0.3	668	-10	534	-25
Gansu	128	100	0.1	-0.3	629	-9	414	68
Guangdong	199	10	16.8	-0.3	693	-15	600	10
Guangxi	188	-13	15.4	-0.4	571	-21	611	-5
Guizhou	106	-43	10.0	-0.0	447	-17	462	-25
Hebei	79	54	-0.1	-0.4	553	-10	315	34
Heilongjiang	110	12	-11.2	-0.8	429	-4	328	5
Henan	165	45	7.0	-0.4	548	-18	658	42
Hubei	165	-10	8.3	-0.6	510	-20	640	-4
Hunan	127	-51	10.3	-0.7	496	-24	516	-36
Jiangsu	214	30	8.5	-0.6	570	-13	829	37
Jiangxi	224	-24	11.9	-0.3	581	-18	750	-13
Jilin	97	-5	-7.3	-0.5	502	-3	387	6
Liaoning	75	-25	-2.5	-0.4	543	-5	331	-18
Inner Mongolia	59	8	-9.0	-0.5	507	-2	262	18
Ningxia	105	110	-0.7	-0.1	638	-7	347	69
Shaanxi	199	81	2.8	-0.5	534	-15	651	56
Shandong	107	28	5.7	-0.2	567	-12	436	25
Shanxi	150	126	-0.7	-0.1	578	-12	486	63
Sichuan	92	-11	8.1	-0.1	554	-7	384	-2
Yunnan	131	-18	12.1	-0.0	738	-5	504	-5
Zhejiang	201	-32	10.8	-0.1	558	-16	724	-18