

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). All tables illustrate current values for the indicators along with the departure from average (fourteen-year average for RAIN, TEMP, and RADPAR and five-year average for BIOMSS) in percentage or degrees Celsius.

Table A.1. January-April 2015 agroclimatic indicators and biomass by global Monitoring and Reporting Unit

	65 Global MRUs	RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	14YA dep. (%)	Current (°C)	14YA dep. (°C)	Current (MJ/m ²)	14YA dep. (%)	Current (gDM/m ²)	5YA dep. (%)
1	Equatorial central Africa	458	-13	26.4	1.1	1216	8	1425	-5
2	East African highlands	164	-29	21.2	0.6	1344	6	567	-24
3	Gulf of Guinea	175	-8	29.1	0.6	1231	1	568	-13
4	Horn of Africa	268	-27	25.4	0.9	1317	4	853	-17
5	Madagascar (main)	1110	11	25.3	0.7	1044	-4	1926	0
6	Southwest Madagascar	608	17	25.8	0.0	1171	-3	1374	7
7	North Africa-Mediterranean	138	-15	11.8	-0.2	960	-1	453	-22
8	Sahel	17	-29	30.1	0.7	1372	0	52	-35
9	Southern Africa	472	-7	25.1	1.1	1226	5	1227	-9
10	Western Cape (South Africa)	64	-43	19.6	1.1	1310	2	232	-43
11	British Columbia to Colorado	298	54	-1.0	2.2	762	-3	574	32
12	Northern Great Plains	224	37	0.4	0.7	785	-1	677	32
13	Corn Belt	459	38	-1.9	-2.7	731	1	625	-12
14	Cotton Belt to Mexican Nordeste	427	17	11.2	-0.8	811	-10	1110	14
15	Sub-boreal America	147	18	-8.8	-0.6	599	0	379	7
16	West Coast (North America)	170	-40	9.3	2.5	846	4	504	-26
17	Sierra Madre	155	139	16.0	0.5	1167	-8	577	140
18	SW U.S. and N. Mexican highlands	93	24	10.3	1.7	1022	-5	372	26
19	Northern South and Central America	220	-10	26.9	0.8	1097	1	632	-11
20	Caribbean	143	-29	25.2	1.1	1113	2	493	-25
21	Central-northern Andes	634	0	17.7	1.1	1055	4	1335	-2
22	Nordeste (Brazil)	385	-17	28.9	2.7	1253	3	1157	8
23	Central eastern Brazil	747	-2	26.9	1.3	1169	6	1884	4
24	Amazon	1015	-7	27.6	0.7	999	5	2162	-4
25	Central-north Argentina	697	55	25.7	1.1	1073	-1	1755	33
26	Pampas	617	10	24.0	1.2	1161	2	1615	4
27	Western Patagonia	66	-55	14.9	0.6	1200	3	268	-39
28	Semi-arid Southern Cone	197	30	19.2	0.8	1156	-3	592	21
29	Caucasus	286	6	3.2	0.0	782	-4	748	-2
30	Pamir area	292	26	3.9	0.4	916	-6	682	4
31	Western Asia	159	1	7.9	0.9	895	-3	532	-4
32	Gansu-Xinjiang (China)	82	86	-0.9	1.1	873	-3	326	79
33	Hainan (China)	78	-42	22.7	1.8	1023	12	257	-52
34	Huanghuaihai (China)	106	21	7.3	0.9	883	-2	440	31
35	Inner Mongolia (China)	76	91	-2.7	1.4	866	0	325	62
36	Loess region (China)	98	76	3.8	0.8	895	-4	401	54

65 Global MRUs		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	14YA dep. (%)	Current (°C)	14YA dep. (°C)	Current (MJ/m ²)	14YA dep. (%)	Current (gDM/ m ²)	5YA dep. (%)
37	Lower Yangtze (China)	367	-16	11.7	0.8	754	-3	1071	-1
38	Northeast China	71	-2	-5.0	1.6	776	-1	323	21
39	Qinghai-Tibet (China)	151	-7	2.3	0.5	1037	-3	399	1
40	Southern China	250	9	16.8	1.0	883	3	812	22
41	Southwest China	237	59	10.9	1.3	752	-5	755	63
42	Taiwan (China)	113	-45	17.5	0.6	939	3	446	-36
43	East Asia	113	-38	-1.0	1.1	763	-4	435	-4
44	Southern Himalayas	198	23	19.4	0.3	1043	-4	665	40
45	Southern Asia	135	35	26.0	0.5	1201	-3	457	45
46	Southern Japan and Korea	289	-27	7.3	0.5	770	-6	912	-11
47	Southern Mongolia	32	33	-4.9	2.7	830	-2	165	32
48	Punjab to Gujarat	83	63	23.0	0.5	1132	-5	335	60
49	Maritime Southeast Asia	983	-10	26.2	0.8	1017	2	2026	-6
50	Mainland Southeast Asia	143	-10	27.1	1.0	1202	4	526	-5
51	Eastern Siberia	158	26	-8.2	2.5	575	-6	353	21
52	Eastern Central Asia	50	3	-11.8	1.8	683	-3	223	19
53	Northern Australia	664	-21	27.3	0.9	1133	4	1568	-12
54	Queensland to Victoria	240	8	21.2	0.7	1206	-2	848	-3
55	Nullarbor to Darling	128	49	21.9	1.2	1283	-2	557	63
56	New Zealand	133	-52	15.5	1.2	1050	2	565	-38
57	Boreal Eurasia	274	52	-2.8	2.5	398	-7	518	23
58	Ukraine to Ural mountains	176	9	-0.3	1.7	485	-4	655	15
59	Mediterranean Europe and Turkey	190	-29	7.8	0.0	779	-2	641	-28
60	W. Europe (non Mediterranean)	190	-19	5.5	1.0	572	-1	743	-6
61	Boreal America	251	17	-7.2	1.6	442	-9	369	20
62	Ural to Altai mountains	136	26	-6.2	1.4	594	-2	452	19
63	Australian desert	141	49	22.9	0.4	1293	-2	595	22
64	Sahara to Afghan deserts	67	-15	18.5	1.2	1156	-1	232	-17
65	Sub-arctic America	54	86	-21.4	3.5	177	0	56	173

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 fourteen-year average (14YA) for the same period between January and April.

Table A.2. January-April 2015 agroclimatic indicators and biomass by country

31 Countries		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
[ARG]	Argentina	584	21	23.4	1.1	1150	0	1519	13
[AUS]	Australia	255	-2	21.9	0.8	1213	-1	812	-1
[BGD]	Bangladesh	275	36	23.6	0.6	1060	-4	824	54
[BRA]	Brazil	803	-6	26.8	1.2	1127	5	1883	1
[CAN]	Canada	257	38	-7.0	-0.5	632	0	423	8
[CHN]	China	217	5	8.2	1.2	813	-2	587	25
[DEU]	Germany	212	-1	4.7	0.4	533	3	878	16
[EGY]	Egypt	50	-17	15.7	-0.6	1040	-1	197	9
[ETH]	Ethiopia	141	-25	21.9	0.4	1338	6	507	-22
[FRA]	France	137	-46	8.1	1.8	608	-2	571	-27
[GBR]	U. Kingdom	329	21	6.5	1.0	477	3	945	2
[IDN]	Indonesia	1106	-7	26.4	0.7	1001	2	2232	-2
[IND]	India	133	32	23.6	0.3	1151	-4	457	52

31 Countries		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
[IRN]	Iran	188	-6	8.5	1.0	985	-2	581	-10
[KAZ]	Kazakhstan	135	23	-5.5	0.4	654	-2	473	17
[KHM]	Cambodia	144	-18	29.0	1.2	1234	6	530	-16
[MEX]	Mexico	173	114	19.7	0.2	1098	-8	571	101
[MMR]	Myanmar	99	8	24.7	1.1	1176	-1	416	24
[NGA]	Nigeria	123	-12	29.4	0.7	1307	1	317	-24
[PAK]	Pakistan	188	16	15.5	0.3	1022	-5	435	-5
[PHL]	Philippines	334	-41	26.0	0.6	1121	6	834	-36
[POL]	Poland	183	7	3.9	1.4	494	-1	818	14
[ROU]	Romania	194	-2	3.6	0.6	618	-3	792	5
[RUS]	Russia	155	12	-4.0	1.6	531	-3	494	15
[THA]	Thailand	173	-11	27.1	0.7	1203	5	639	-1
[TUR]	Turkey	326	10	4.2	0.1	806	-5	828	-6
[UKR]	Ukraine	169	-3	2.8	1.4	542	-3	774	15
[USA]	U.S.A.	356	24	4.8	-0.4	800	-4	747	10
[UZB]	Uzbekistan	215	11	6.6	0.3	785	-5	727	18
[VNM]	Vietnam	156	-7	23.0	1.1	999	6	556	-6
[ZAF]	South Africa	304	-6	21.1	1.3	1266	5	999	-6

See note table A.1.

Table A.3. Argentina, January-April 2015 2014 agroclimatic indicators and biomass (by province)

		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Buenos Aires		449	3	21.1	0.9	1200	2	1372	5
Chaco		742	36	26.5	1.2	1155	0	1799	19
Cordoba		617	39	22.8	1.2	1138	-1	1750	27
Corrientes		696	13	25.6	0.9	1169	1	1657	2
Entre Rios		541	-8	23.9	1.1	1203	3	1452	-4
La Pampa		491	33	22.1	1.4	1181	-3	1439	20
Misiones		869	26	25.1	1.0	1136	2	1772	-3
Santiago del Estero		630	41	25.8	1.3	1081	-1	1684	25
San Luis		531	38	22.1	1.4	1138	-3	1621	31
Salta		866	72	24.3	0.8	1019	0	1820	41
Santa Fe		623	15	24.5	1.4	1167	0	1713	11
Tucuman		-1	0	-1.0	0.0	-1	0	-1	0

See note table A.1.

Table A.4. Australia, January-April 2015 agroclimatic indicators and biomass (by state)

		RAIN		TEMP		RADPAR		BIOMSS	
		Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
New South Wales		273	19	21.8	0.8	1216	-2	943	4
South Australia		128	33	19.5	0.3	1212	-4	567	5
Victoria		211	22	18.4	0.4	1159	-4	829	5
W. Australia		179	48	22.4	1.2	1281	-2	599	55

See note table A.1.

Table A.5. Brazil, January-April 2015 agroclimatic indicators and biomass (by state)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Ceara	547	-19	28.4	1.5	1179	3	1550	7
Goias	780	-7	26.1	1.0	1217	8	2100	5
Mato Grosso Do Sul	702	3	27.5	0.9	1204	6	1951	3
Mato Grosso	1016	-1	27.5	0.9	1114	7	2396	4
Minas Gerais	586	-9	25.8	2.0	1231	7	1548	5
Parana	699	4	25.0	1.7	1137	6	1970	5
Rio Grande Do Sul	698	14	23.8	0.9	1130	1	1679	-2
Santa Catarina	777	10	22.9	1.6	1076	2	1923	-2
Sao Paulo	715	-5	25.7	1.7	1173	7	1984	2

See note table A.1.

Table A.6. Canada, January-April 2015 agroclimatic indicators and biomass (by province)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Alberta	131	23	-4.0	2.1	596	-3	518	29
Manitoba	103	1	-8.7	-0.2	661	-2	397	11
Saskatchewan	106	12	-7.1	1.0	644	-2	442	20

See note table A.1.

Table A.7. India, January-April 2015 agroclimatic indicators and biomass (by state)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Arunachal Pradesh	422	-18	16.3	0.8	884	0	1172	6
Andhra Pradesh	69	15	27.7	0.4	1238	-1	289	44
Assam	300	-18	22.4	0.8	954	1	997	12
Bihar	106	52	23.2	-0.3	1089	-7	474	68
Chandigarh	-1	0	-1.0	0.0	-1	0	-1	0
Chhattisgarh	82	6	24.9	0.3	1177	-3	397	17
Daman and Diu	-1	0	-1.0	0.0	-1	0	-1	0
Delhi	130	41	20.7	-0.5	1061	-6	595	34
Dadra and Nagar Haveli	23	422	25.7	0.4	1252	-3	120	516
Gujarat	23	340	26.4	1.1	1235	-4	111	263
Goa	6	-69	27.0	-0.1	1298	-2	33	-37
Himachal Pradesh	323	27	4.1	-0.4	1003	-9	662	6
Haryana	159	48	19.7	-0.5	1050	-6	648	43
Jharkhand	87	12	23.5	0.4	1131	-6	401	24
Kerala	342	33	28.1	1.5	1244	-1	901	20
Karnataka	102	26	26.5	0.6	1281	-1	350	27
Meghalaya	446	0	19.2	0.6	1015	-3	1200	51
Maharashtra	69	100	25.9	0.0	1231	-3	331	98
Manipur	363	14	17.8	0.4	1043	-3	1061	39
Madhya Pradesh	117	142	23.5	-0.4	1147	-6	513	139
Mizoram	317	29	20.7	0.3	1098	-3	896	40

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Nagaland	268	-11	17.7	0.5	992	-1	990	27
Orissa	100	14	25.6	0.6	1181	-2	410	11
Puducherry	176	39	27.8	0.8	1212	-1	469	13
Punjab	166	20	18.7	-0.3	991	-7	647	31
Rajasthan	55	92	23.1	0.4	1148	-5	242	84
Sikkim	335	73	7.2	0.8	976	-9	603	6
Tamil Nadu	130	11	28.5	1.3	1247	-2	468	46
Tripura	340	39	22.9	0.2	1060	-2	835	29
Uttarakhand	299	47	9.9	0.4	1024	-9	803	29
Uttar Pradesh	151	85	21.9	-0.5	1076	-8	670	70
West Bengal	198	68	24.2	0.8	1093	-5	706	65

See note table A.1.

Table A.8. Kazakhstan, January-April 2015 agroclimatic indicators and biomass (by province)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Akmolinskaya	108	23	-8.0	0.1	613	-2	398	10
Karagandinskaya	126	38	-7.3	0.5	659	-5	431	18
Kustanayskaya	100	-1	-7.3	0.1	605	1	427	8
Pavlodarskaya	79	10	-6.9	1.4	603	-4	398	25
Severo kazachstanskaya	102	7	-7.3	1.0	570	1	415	11
Vostochno kazachstanskaya	149	20	-8.1	0.7	699	-4	386	17
Zapadno kazachstanskaya	113	-7	-4.3	-0.8	612	0	512	-1

See note table A.1.

Table A.9. Russia, January-April 2015 agroclimatic indicators and biomass (by oblast)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Bashkortostan Rep.	156	3	-5.7	1.0	526	0	443	7
Chelyabinskaya Oblast	92	-16	-5.4	1.9	547	2	440	14
Gorodovikovsk	-1	0	-1.0	0.0	-1	0	-1	0
Krasnodarskiy Kray	194	-3	-1.0	2.0	567	-3	601	15
Kurganskaya Oblast	91	-6	-5.9	1.8	537	0	450	14
Kirovskaya Oblast	200	26	-4.1	1.7	439	1	494	14
Kurskaya Oblast	168	3	0.6	1.6	514	-5	724	15
Lipetskaya Oblast	167	4	-0.4	1.7	506	-6	669	17
Mordoviya Rep.	179	18	-2.6	1.2	482	-3	555	10
Novosibirskaya Oblast	144	46	-7.3	2.4	517	-6	427	22
Nizhegorodskaya O.	194	27	-2.1	2.0	450	-2	577	18
Orenburgskaya Oblast	144	2	-6.0	-0.2	574	-2	456	2
Omskaya Oblast	129	29	-7.1	2.3	531	-1	429	17
Permskaya Oblast	173	12	-5.6	1.6	443	0	451	13
Penzenskaya Oblast	154	-1	-3.1	0.7	516	-3	548	7
Rostovskaya Oblast	179	-15	2.0	0.4	583	-1	709	-2

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Ryazanskaya Oblast	175	8	-1.0	1.9	460	-7	634	18
Stavropolskiy Kray	182	-7	3.6	-0.2	621	-2	763	2
Sverdlovskaya Oblast	109	-3	-5.2	2.3	479	2	470	17
Samarskaya Oblast	148	3	-4.7	0.1	556	2	498	3
Saratovskaya Oblast	126	-13	-3.0	0.1	571	-2	568	4
Tambovskaya Oblast	184	17	-1.5	1.1	507	-7	617	10
Tyumenskaya Oblast	105	4	-6.6	2.1	516	1	442	15
Tatarstan Rep.	142	-1	-4.3	1.0	508	0	496	8
Ulyanovskaya Oblast	132	-9	-4.1	0.5	524	-1	508	6
Udmurtiya Rep.	166	10	-4.7	1.5	464	2	476	13
Volgogradskaya O.	163	5	-0.5	0.3	579	-3	667	4
Voronezhskaya Oblast	179	13	0.0	1.2	530	-5	702	13

See note table A.1.

Table A.10. United States, January-April 2015 agroclimatic indicators and biomass (by state)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Arkansas	677	47	8.5	-1.5	762	-10	1302	3
California	120	-48	10.3	2.7	960	4	404	-33
Idaho	249	52	1.1	2.5	805	1	592	12
Indiana	484	30	1.3	-2.7	759	-2	825	-11
Illinois	417	22	1.7	-2.1	785	0	861	-4
Iowa	306	24	0.0	-0.8	815	2	773	8
Kansas	220	14	5.4	0.2	891	1	735	18
Michigan	412	45	-4.0	-3.2	731	4	531	-12
Minnesota	278	66	-4.1	-0.2	732	0	572	17
Missouri	455	26	4.8	-1.1	802	0	1011	-2
Montana	254	149	0.2	2.1	748	-2	721	70
Nebraska	231	48	2.9	1.0	853	0	823	41
North Dakota	227	129	-3.7	1.0	725	-4	582	47
Ohio	510	52	0.3	-3.0	746	0	766	-14
Oklahoma	360	32	8.4	-0.7	841	-6	1071	35
Oregon	167	-35	5.7	2.1	738	3	616	-11
South Dakota	259	98	0.7	1.4	792	-2	781	52
Texas	296	35	12.6	-0.8	856	-11	881	52
Washington	329	34	5.0	2.1	650	1	862	32
Wisconsin	370	46	-3.4	-1.5	750	4	590	-1

See note table A.1.

Table A.11. China, January-April 2015 agroclimatic indicators and biomass (by province)

	RAIN		TEMP		RADPAR		BIOMSS	
	Current (mm)	14YA Departure (%)	Current (°C)	14YA Departure (°C)	Current (MJ/m ²)	14YA Departure (%)	Current (gDM/m ²)	5YA Departure (%)
Anhui	309	-2	9.8	0.4	810	-4	885	0
Chongqing	161	-14	10.8	1.8	644	-2	612	2
Fujian	258	-47	13.1	0.9	821	3	877	-24
Gansu	97	95	2.6	0.7	910	-5	350	61
Guangdong	197	-43	17.4	1.3	826	6	691	-27
Guangxi	428	51	16.4	1.5	690	-1	1118	46
Guizhou	286	53	11.6	1.5	624	-9	925	67
Hebei	74	64	3.3	1.2	894	0	325	50
Heilongjiang	72	6	-6.8	1.6	742	-2	318	31
Henan	139	21	8.5	0.8	863	-3	583	38
Hubei	319	14	9.7	0.9	752	-5	926	21
Hunan	388	-7	11.6	1.0	654	-8	1208	14
Jiangsu	205	-3	8.8	0.4	837	-4	753	4
Jiangxi	404	-28	12.7	0.8	749	-2	1181	-8
Jilin	77	1	-3.9	1.2	818	1	352	18
Liaoning	71	-12	0.1	1.5	844	-1	341	1
Inner Mongolia	71	81	-4.8	1.7	825	0	308	66
Ningxia	43	36	2.2	0.8	920	-5	200	18
Shaanxi	140	90	5.4	0.6	825	-5	540	73
Shandong	105	40	6.9	1.0	891	-2	446	40
Shanxi	79	52	2.0	0.9	907	-2	348	42
Sichuan	147	43	10.1	1.2	793	-4	571	49
Yunnan	289	178	13.7	0.7	1019	-1	818	126
Zhejiang	292	-36	10.5	0.8	792	-1	950	-19

See note table A.1.