

## 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. April-July 2015 agroclimatic indicators and biomass by global Monitoring and Reporting Unit**

|    | 65 Global MRUs                     | RAIN            |                     | TEMP            |                      | RADPAR                          |                     | BIOMSS                               |                    |
|----|------------------------------------|-----------------|---------------------|-----------------|----------------------|---------------------------------|---------------------|--------------------------------------|--------------------|
|    |                                    | Current<br>(mm) | 14YA<br>dep.<br>(%) | Current<br>(°C) | 14YA<br>dep.<br>(°C) | Current<br>(MJ/m <sup>2</sup> ) | 14YA<br>dep.<br>(%) | Current<br>(gDM/<br>m <sup>2</sup> ) | 5YA<br>dep.<br>(%) |
| 1  | Equatorial central Africa          | 345             | -10                 | 25.7            | 1.0                  | 1140                            | 7                   | 1059                                 | -1                 |
| 2  | East African highlands             | 408             | -26                 | 21.4            | 0.5                  | 1191                            | 3                   | 1145                                 | -23                |
| 3  | Gulf of Guinea                     | 650             | 1                   | 28.9            | 0.5                  | 1107                            | 2                   | 1637                                 | -5                 |
| 4  | Horn of Africa                     | 211             | 7                   | 24.4            | 0.3                  | 1188                            | 4                   | 671                                  | 10                 |
| 5  | Madagascar (main)                  | 123             | -43                 | 23.0            | 0.6                  | 957                             | 4                   | 412                                  | -23                |
| 6  | Southwest Madagascar               | 23              | -69                 | 22.5            | 0.2                  | 995                             | 3                   | 103                                  | -53                |
| 7  | North Africa-Mediterranean         | 83              | -10                 | 22.6            | 1.0                  | 1549                            | 2                   | 332                                  | -12                |
| 8  | Sahel                              | 331             | 1                   | 33.0            | 1.0                  | 1407                            | 3                   | 953                                  | -1                 |
| 9  | Southern Africa                    | 80              | -17                 | 20.8            | 0.8                  | 1004                            | 3                   | 255                                  | -17                |
| 10 | Western Cape (South Africa)        | 106             | -41                 | 12.6            | -0.4                 | 665                             | -3                  | 342                                  | -40                |
| 11 | British Columbia to Colorado       | 318             | 18                  | 7.6             | 1.5                  | 1028                            | -2                  | 1013                                 | 7                  |
| 12 | Northern Great Plains              | 454             | 30                  | 17.0            | 0.3                  | 1297                            | -3                  | 1241                                 | 3                  |
| 13 | Corn Belt                          | 472             | 10                  | 16.6            | 0.0                  | 1211                            | -2                  | 1376                                 | -1                 |
| 14 | Cotton Belt to Mexican Nordeste    | 599             | 38                  | 24.2            | 0.3                  | 1274                            | -4                  | 1624                                 | 29                 |
| 15 | Sub-boreal America                 | 211             | -28                 | 11.4            | 0.7                  | 1252                            | 5                   | 900                                  | -25                |
| 16 | West Coast (North America)         | 82              | -28                 | 16.3            | 1.1                  | 1515                            | 1                   | 351                                  | -13                |
| 17 | Sierra Madre                       | 401             | 2                   | 20.9            | -0.3                 | 1410                            | -3                  | 1181                                 | 18                 |
| 18 | SW U.S. and N. Mexican highlands   | 182             | 57                  | 20.8            | -0.1                 | 1540                            | -2                  | 706                                  | 64                 |
| 19 | Northern South and Central America | 624             | -19                 | 28.3            | 0.6                  | 1167                            | 4                   | 1506                                 | -14                |
| 20 | Caribbean                          | 582             | -15                 | 27.7            | 0.5                  | 1377                            | 4                   | 1430                                 | -19                |
| 21 | Central-northern Andes             | 353             | -17                 | 16.7            | 1.2                  | 983                             | 2                   | 881                                  | 3                  |
| 22 | Nordeste (Brazil)                  | 203             | -8                  | 27.4            | 1.4                  | 1028                            | 1                   | 701                                  | 18                 |
| 23 | Central eastern Brazil             | 393             | 64                  | 24.6            | 0.4                  | 908                             | -3                  | 1126                                 | 46                 |
| 24 | Amazon                             | 681             | 4                   | 27.8            | 0.1                  | 954                             | 1                   | 1659                                 | 10                 |
| 25 | Central-north Argentina            | 194             | 87                  | 18.7            | 1.1                  | 675                             | -5                  | 492                                  | 21                 |
| 26 | Pampas                             | 478             | 20                  | 17.3            | 1.3                  | 670                             | -2                  | 1081                                 | -3                 |
| 27 | Western Patagonia                  | 292             | -43                 | 7.6             | 0.6                  | 474                             | -3                  | 860                                  | -6                 |
| 28 | Semi-arid Southern Cone            | 62              | -15                 | 10.8            | 1.2                  | 676                             | 0                   | 240                                  | -8                 |
| 29 | Caucasus                           | 183             | -24                 | 17.5            | 0.6                  | 1362                            | 1                   | 691                                  | -23                |
| 30 | Pamir area                         | 236             | 18                  | 17.9            | -0.1                 | 1446                            | -3                  | 732                                  | 0                  |
| 31 | Western Asia                       | 87              | -1                  | 24.2            | 0.9                  | 1479                            | 1                   | 356                                  | 4                  |
| 32 | Gansu-Xinjiang (China)             | 278             | 130                 | 18.2            | 0.6                  | 1395                            | -1                  | 885                                  | 69                 |
| 33 | Hainan (China)                     | 614             | -17                 | 28.7            | 0.6                  | 1245                            | 7                   | 1309                                 | -29                |
| 34 | Huanghuaihai (China)               | 255             | -36                 | 22.1            | -0.5                 | 1255                            | 0                   | 918                                  | -14                |
| 35 | Inner Mongolia (China)             | 267             | 3                   | 15.9            | -0.5                 | 1294                            | 1                   | 1038                                 | 0                  |
| 36 | Loess region (China)               | 217             | -20                 | 18.0            | -0.6                 | 1295                            | 1                   | 920                                  | -10                |

| 65 Global MRUs |                                 | RAIN            |                     | TEMP            |                      | RADPAR                          |                     | BIOMSS                               |                    |
|----------------|---------------------------------|-----------------|---------------------|-----------------|----------------------|---------------------------------|---------------------|--------------------------------------|--------------------|
|                |                                 | Current<br>(mm) | 14YA<br>dep.<br>(%) | Current<br>(°C) | 14YA<br>dep.<br>(°C) | Current<br>(MJ/m <sup>2</sup> ) | 14YA<br>dep.<br>(%) | Current<br>(gDM/<br>m <sup>2</sup> ) | 5YA<br>dep.<br>(%) |
| 37             | Lower Yangtze (China)           | 1148            | 41                  | 23.3            | -0.6                 | 989                             | -8                  | 2109                                 | 13                 |
| 38             | Northeast China                 | 268             | -25                 | 16.2            | -0.1                 | 1213                            | 2                   | 1015                                 | -17                |
| 39             | Qinghai-Tibet (China)           | 760             | 15                  | 11.6            | -0.1                 | 1209                            | 1                   | 1191                                 | 1                  |
| 40             | Southern China                  | 817             | -9                  | 24.7            | 0.4                  | 1039                            | 2                   | 1747                                 | -9                 |
| 41             | Southwest China                 | 645             | 9                   | 20.8            | 0.1                  | 1016                            | -2                  | 1559                                 | 0                  |
| 42             | Taiwan (China)                  | 526             | -44                 | 25.1            | 0.4                  | 1195                            | 5                   | 1402                                 | -18                |
| 43             | East Asia                       | 250             | -49                 | 15.5            | 0.3                  | 1172                            | 3                   | 974                                  | -27                |
| 44             | Southern Himalayas              | 986             | 17                  | 26.9            | -0.1                 | 1144                            | 0                   | 1578                                 | 1                  |
| 45             | Southern Asia                   | 748             | 13                  | 30.1            | -0.1                 | 1155                            | 0                   | 1318                                 | -4                 |
| 46             | Southern Japan and Korea        | 827             | 11                  | 19.7            | 0.4                  | 1063                            | -5                  | 1781                                 | 2                  |
| 47             | Southern Mongolia               | 417             | 195                 | 17.0            | 0.6                  | 1424                            | -2                  | 1156                                 | 85                 |
| 48             | Punjab to Gujarat               | 286             | -11                 | 32.2            | -0.4                 | 1341                            | -1                  | 858                                  | 19                 |
| 49             | Maritime Southeast Asia         | 761             | -18                 | 26.7            | 0.3                  | 1026                            | 2                   | 1684                                 | -21                |
| 50             | Mainland Southeast Asia         | 834             | -11                 | 29.5            | 0.7                  | 1128                            | 5                   | 1774                                 | -9                 |
| 51             | Eastern Siberia                 | 238             | 0                   | 10.0            | 0.2                  | 1131                            | -2                  | 1013                                 | 0                  |
| 52             | Eastern Central Asia            | 175             | -26                 | 11.3            | 0.4                  | 1293                            | 4                   | 799                                  | -18                |
| 53             | Northern Australia              | 142             | -40                 | 24.7            | 0.3                  | 1034                            | 4                   | 407                                  | -42                |
| 54             | Queensland to Victoria          | 133             | -18                 | 12.2            | -0.5                 | 656                             | -5                  | 521                                  | -21                |
| 55             | Nullarbor to Darling            | 192             | -14                 | 13.9            | -0.2                 | 652                             | -4                  | 758                                  | 10                 |
| 56             | New Zealand                     | 183             | -46                 | 9.2             | 0.1                  | 464                             | -2                  | 729                                  | -28                |
| 57             | Boreal Eurasia                  | 354             | 27                  | 9.1             | -0.1                 | 1014                            | -6                  | 1149                                 | 7                  |
| 58             | Ukraine to Ural mountains       | 242             | 2                   | 14.9            | -0.5                 | 1129                            | 0                   | 1034                                 | 11                 |
| 59             | Mediterranean Europe and Turkey | 153             | -7                  | 17.0            | 0.3                  | 1419                            | 0                   | 610                                  | -14                |
| 60             | W. Europe (non Mediterranean)   | 230             | -22                 | 15.1            | 0.0                  | 1179                            | 2                   | 925                                  | -20                |
| 61             | Boreal America                  | 318             | 18                  | 7.6             | 1.5                  | 1028                            | -2                  | 1013                                 | 7                  |
| 62             | Ural to Altai mountains         | 284             | 39                  | 15.2            | 0.8                  | 1214                            | 0                   | 1087                                 | 37                 |
| 63             | Australian desert               | 97              | 4                   | 14.5            | -0.2                 | 690                             | -6                  | 418                                  | -4                 |
| 64             | Sahara to Afghan deserts        | 41              | -1                  | 30.1            | 0.6                  | 1566                            | 1                   | 148                                  | -24                |
| 65             | Sub-arctic America              | 182             | 183                 | -5.2            | 1.5                  | 489                             | -7                  | 633                                  | 185                |

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 April and July.

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

| 31 Countries |            | RAIN            |                          | TEMP            |                           | RADPAR                          |                          | BIOMSS                           |                         |
|--------------|------------|-----------------|--------------------------|-----------------|---------------------------|---------------------------------|--------------------------|----------------------------------|-------------------------|
|              |            | Current<br>(mm) | 14YA<br>Departure<br>(%) | Current<br>(°C) | 14YA<br>Departure<br>(°C) | Current<br>(MJ/m <sup>2</sup> ) | 14YA<br>Departure<br>(%) | Current<br>(gDM/m <sup>2</sup> ) | 5YA<br>Departure<br>(%) |
| [ARG]        | Argentina  | 252             | 18                       | 16.0            | 1.4                       | 658                             | -1                       | 663                              | -2                      |
| [AUS]        | Australia  | 133             | -22                      | 13.5            | -0.3                      | 688                             | -3                       | 539                              | -17                     |
| [BGD]        | Bangladesh | 2350            | 71                       | 29.0            | -0.5                      | 932                             | -9                       | 2408                             | 15                      |
| [BRA]        | Brazil     | 443             | 22                       | 25.1            | 0.5                       | 921                             | -2                       | 1181                             | 24                      |
| [CAN]        | Canada     | 216             | -30                      | 11.6            | 0.7                       | 1250                            | 4                        | 894                              | -23                     |
| [CHN]        | China      | 671             | 11                       | 20.8            | -0.2                      | 1104                            | -2                       | 1341                             | 0                       |
| [DEU]        | Germany    | 218             | -24                      | 14.9            | -0.2                      | 1107                            | 1                        | 935                              | -19                     |
| [EGY]        | Egypt      | 7               | 13                       | 23.4            | -0.7                      | 1594                            | 2                        | 42                               | 13                      |
| [ETH]        | Ethiopia   | 449             | -25                      | 22.8            | 0.6                       | 1209                            | 4                        | 1230                             | -22                     |
| [FRA]        | France     | 179             | -38                      | 15.0            | 0.5                       | 1249                            | 4                        | 699                              | -36                     |
| [GBR]        | U. Kingdom | 289             | 0                        | 10.4            | -1.1                      | 1000                            | -2                       | 1067                             | -7                      |
| [IDN]        | Indonesia  | 768             | -19                      | 26.7            | 0.3                       | 1002                            | 3                        | 1632                             | -23                     |
| [IND]        | India      | 732             | 11                       | 29.9            | -0.2                      | 1195                            | 0                        | 1251                             | 0                       |

| 31 Countries |              | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|--------------|--------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|              |              | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| [IRN]        | Iran         | 53           | -41                | 23.3         | 1.4                 | 1524                         | 2                  | 215                           | -33               |
| [KAZ]        | Kazakhstan   | 230          | 41                 | 16.9         | 0.7                 | 1276                         | 1                  | 907                           | 42                |
| [KHM]        | Cambodia     | 815          | -3                 | 30.6         | 0.8                 | 1168                         | 5                  | 2006                          | -5                |
| [MEX]        | Mexico       | 423          | -4                 | 24.9         | -0.1                | 1377                         | -2                 | 1133                          | 14                |
| [MMR]        | Myanmar      | 909          | -12                | 27.9         | 0.5                 | 1049                         | 1                  | 1750                          | -6                |
| [NGA]        | Nigeria      | 608          | 0                  | 30.0         | 0.5                 | 1197                         | 3                  | 1423                          | -10               |
| [PAK]        | Pakistan     | 241          | 17                 | 27.5         | -0.8                | 1430                         | -3                 | 669                           | 19                |
| [PHL]        | Philippines  | 879          | -5                 | 27.6         | 0.4                 | 1203                         | 5                  | 1737                          | -15               |
| [POL]        | Poland       | 202          | -26                | 14.4         | -0.7                | 1100                         | 1                  | 920                           | -24               |
| [ROU]        | Romania      | 246          | -25                | 17.0         | 0.2                 | 1248                         | 3                  | 970                           | -23               |
| [RUS]        | Russia       | 255          | 8                  | 14.5         | 0.1                 | 1158                         | 0                  | 1040                          | 14                |
| [THA]        | Thailand     | 584          | -24                | 29.5         | 0.8                 | 1165                         | 8                  | 1658                          | -13               |
| [TUR]        | Turkey       | 214          | 14                 | 17.1         | 0.1                 | 1411                         | -1                 | 788                           | -5                |
| [UKR]        | Ukraine      | 206          | -20                | 16.7         | -0.5                | 1190                         | 2                  | 886                           | -15               |
| [USA]        | U.S.A.       | 495          | 33                 | 19.4         | 0.2                 | 1293                         | -4                 | 1295                          | 19                |
| [UZB]        | Uzbekistan   | 110          | 12                 | 23.5         | 0.9                 | 1470                         | 2                  | 432                           | 28                |
| [VNM]        | Vietnam      | 814          | -2                 | 28.1         | 1.0                 | 1138                         | 4                  | 1769                          | -10               |
| [ZAF]        | South Africa | 48           | -50                | 14.6         | 0.8                 | 843                          | 0                  | 214                           | -42               |

See note table A.1.

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

|                     | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|---------------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|                     | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Buenos Aires        | 290          | 40                 | 13.1         | 1.5                 | 605                          | 1                  | 807                           | 3                 |
| Chaco               | 396          | 71                 | 19.7         | 1.4                 | 670                          | -4                 | 989                           | 17                |
| Cordoba             | 151          | 30                 | 15.2         | 1.7                 | 678                          | -1                 | 464                           | 5                 |
| Corrientes          | 286          | -27                | 18.9         | 1.1                 | 676                          | -2                 | 939                           | -22               |
| Entre Rios          | 260          | -16                | 16.6         | 1.5                 | 685                          | 5                  | 669                           | -29               |
| La Pampa            | 213          | 78                 | 13.0         | 1.6                 | 604                          | -3                 | 623                           | 36                |
| Misiones            | 980          | 51                 | 19.3         | 1.2                 | 690                          | -4                 | 1980                          | 15                |
| Santiago Del Estero | 116          | 19                 | 18.4         | 1.6                 | 682                          | -3                 | 399                           | -4                |
| San Luis            | 109          | 19                 | 13.7         | 1.6                 | 674                          | -2                 | 351                           | 10                |
| Salta               | 112          | 92                 | 17.9         | 0.9                 | 722                          | -5                 | 286                           | 23                |
| Santa Fe            | 180          | -15                | 17.4         | 1.9                 | 687                          | 2                  | 624                           | -17               |
| Tucuman             | -1           | 0                  | -1.0         | 0.0                 | -1                           | 0                  | -1                            | 0                 |

See note table A.1.

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

|                 | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|-----------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|                 | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| New South Wales | 164          | 5                  | 11.7         | -0.5                | 664                          | -6                 | 602                           | -5                |
| South Australia | 111          | -36                | 12.4         | -0.5                | 569                          | -6                 | 475                           | -34               |
| Victoria        | 107          | -50                | 10.2         | -0.7                | 528                          | -4                 | 462                           | -43               |
| W. Australia    | 182          | -15                | 14.8         | -0.1                | 684                          | -3                 | 730                           | 8                 |

See note table A.1.

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

|                    | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|--------------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|                    | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Ceara              | 226          | -36                | 28.2         | 1.0                 | 1112                         | 3                  | 853                           | -5                |
| Goias              | 343          | 138                | 24.6         | 0.3                 | 997                          | -3                 | 1069                          | 114               |
| Mato Grosso Do Sul | 519          | 74                 | 23.9         | 0.0                 | 839                          | -7                 | 1517                          | 41                |
| Mato Grosso        | 419          | 107                | 27.4         | 0.5                 | 989                          | -3                 | 1239                          | 79                |
| Minas Gerais       | 170          | 28                 | 22.7         | 0.7                 | 898                          | -4                 | 668                           | 37                |
| Parana             | 896          | 70                 | 20.1         | 0.9                 | 753                          | -4                 | 1631                          | 8                 |
| Rio Grande Do Sul  | 590          | -1                 | 17.5         | 1.1                 | 648                          | -4                 | 1554                          | -1                |
| Santa Catarina     | 668          | 14                 | 17.3         | 1.2                 | 654                          | -6                 | 1666                          | 5                 |
| Sao Paulo          | 386          | 45                 | 21.9         | 0.7                 | 833                          | -5                 | 1228                          | 30                |

See note table A.1.

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

|              | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|--------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|              | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Alberta      | 136          | -49                | 12.2         | 1.3                 | 1333                         | 6                  | 650                           | -45               |
| Manitoba     | 224          | -27                | 13.0         | 0.9                 | 1288                         | 5                  | 983                           | -22               |
| Saskatchewan | 136          | -49                | 12.5         | 1.0                 | 1330                         | 7                  | 659                           | -45               |

See note table A.1.

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

|                        | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|------------------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|                        | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Arunachal Pradesh      | 1417         | -10                | 22.6         | 0.2                 | 889                          | 3                  | 2201                          | 2                 |
| Andhra Pradesh         | 404          | -3                 | 31.7         | 0.0                 | 1216                         | 2                  | 1061                          | -14               |
| Assam                  | 1898         | 27                 | 28.4         | -0.1                | 887                          | -3                 | 2551                          | 4                 |
| Bihar                  | 897          | 35                 | 31.5         | -0.7                | 1206                         | -1                 | 1503                          | 8                 |
| Chandigarh             | -1           | 0                  | -1.0         | 0.0                 | -1                           | 0                  | -1                            | 0                 |
| Chhattisgarh           | 898          | 36                 | 30.6         | -0.4                | 1168                         | 0                  | 1560                          | 6                 |
| Daman and Diu          | 396          | -6                 | 31.1         | 1.6                 | 1236                         | -1                 | 411                           | -46               |
| Delhi                  | 337          | 20                 | 32.0         | -0.9                | 1351                         | -1                 | 1158                          | 38                |
| Dadra and Nagar Haveli | 271          | -74                | 29.2         | 0.5                 | 1199                         | 3                  | 653                           | -43               |
| Gujarat                | 224          | -51                | 32.5         | 0.7                 | 1298                         | 0                  | 477                           | -37               |
| Goa                    | 411          | -70                | 28.8         | 0.5                 | 1116                         | 7                  | 1247                          | -21               |
| Himachal Pradesh       | 769          | 35                 | 16.0         | -0.6                | 1340                         | -5                 | 1260                          | 0                 |
| Haryana                | 400          | 36                 | 31.1         | -1.1                | 1354                         | -2                 | 1259                          | 44                |
| Jharkhand              | 1022         | 60                 | 30.3         | -0.4                | 1167                         | -4                 | 1635                          | 12                |
| Kerala                 | 902          | -31                | 27.7         | 0.5                 | 972                          | 2                  | 2020                          | -9                |
| Karnataka              | 491          | -27                | 27.7         | 0.2                 | 1144                         | 4                  | 1203                          | -12               |
| Meghalaya              | 3093         | 35                 | 24.6         | -0.4                | 865                          | -8                 | 2467                          | 5                 |
| Maharashtra            | 416          | -37                | 30.3         | 0.1                 | 1202                         | 3                  | 991                           | -18               |
| Manipur                | 1013         | -8                 | 23.1         | -0.2                | 937                          | -4                 | 2247                          | 3                 |
| Madhya Pradesh         | 537          | -2                 | 31.6         | -0.3                | 1224                         | -1                 | 1080                          | -5                |
| Mizoram                | 1697         | 16                 | 25.1         | -0.4                | 983                          | -5                 | 2349                          | 3                 |

|               | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|---------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|               | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Nagaland      | 932          | -23                | 23.3         | 0.1                 | 980                          | -1                 | 2160                          | -4                |
| Orissa        | 904          | 20                 | 30.2         | -0.3                | 1142                         | 0                  | 1716                          | 0                 |
| Puducherry    | 1232         | -30                | 28.3         | 1.3                 | 1021                         | 3                  | 2275                          | 5                 |
| Punjab        | 327          | 6                  | 30.6         | -0.9                | 1354                         | -2                 | 1086                          | 25                |
| Rajasthan     | 301          | 14                 | 32.9         | -0.6                | 1356                         | -1                 | 941                           | 34                |
| Sikkim        | 1993         | 64                 | 15.2         | -0.7                | 1123                         | -4                 | 1567                          | 3                 |
| Tamil Nadu    | 350          | 4                  | 30.3         | 0.3                 | 1221                         | 0                  | 1138                          | 8                 |
| Tripura       | 2971         | 93                 | 28.0         | -0.4                | 912                          | -7                 | 2621                          | 12                |
| Uttarakhand   | 1034         | 55                 | 19.9         | -0.6                | 1305                         | -1                 | 1385                          | 7                 |
| Uttar Pradesh | 573          | 18                 | 32.3         | -0.2                | 1313                         | 1                  | 1174                          | 7                 |
| West Bengal   | 1665         | 75                 | 30.2         | -0.5                | 1078                         | -6                 | 2115                          | 14                |

See note table A.1.

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

|                           | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|---------------------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|                           | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Akmolinskaya              | 213          | 32                 | 15.4         | 0.2                 | 1222                         | 0                  | 952                           | 39                |
| Karagandinskaya           | 224          | 33                 | 15.4         | 0.6                 | 1279                         | 2                  | 993                           | 38                |
| Kustanayskaya             | 187          | 24                 | 16.2         | 0.2                 | 1217                         | 0                  | 848                           | 41                |
| Pavlodarskaya             | 188          | 17                 | 16.4         | 0.7                 | 1234                         | 1                  | 850                           | 40                |
| Severo kazachstanskaya    | 281          | 44                 | 15.2         | 0.6                 | 1167                         | -1                 | 1148                          | 44                |
| Vostochno kazachstanskaya | 347          | 80                 | 14.6         | 0.9                 | 1329                         | 1                  | 1124                          | 44                |
| Zapadno kazachstanskaya   | 99           | -12                | 19.1         | 0.6                 | 1252                         | 0                  | 486                           | 27                |

See note table A.1.

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

|                       | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|-----------------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|                       | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Bashkortostan Rep.    | 298          | 37                 | 14.2         | 0.0                 | 1121                         | -4                 | 1205                          | 54                |
| Chelyabinskaya Oblast | 299          | 37                 | 14.2         | 0.1                 | 1130                         | -2                 | 1202                          | 49                |
| Gorodovikovsk         | -1           | 0                  | -1.0         | 0.0                 | -1                           | 0                  | -1                            | 0                 |
| Krasnodarskiy Kray    | 265          | -2                 | 15.8         | 0.4                 | 1209                         | 1                  | 1077                          | 1                 |
| Kurganskaya Oblast    | 344          | 68                 | 14.7         | 0.4                 | 1127                         | -3                 | 1295                          | 61                |
| Kirovskaya Oblast     | 310          | 31                 | 13.4         | 0.0                 | 1096                         | 0                  | 1252                          | 40                |
| Kurskaya Oblast       | 201          | -13                | 15.7         | -0.7                | 1165                         | 2                  | 906                           | 3                 |
| Lipetskaya Oblast     | 226          | 7                  | 15.7         | -0.4                | 1134                         | -1                 | 938                           | 20                |
| Mordoviya Rep.        | 202          | -9                 | 15.1         | -0.1                | 1134                         | -1                 | 944                           | 18                |
| Novosibirskaya Oblast | 246          | 15                 | 14.5         | 1.3                 | 1180                         | 1                  | 1038                          | 22                |
| Nizhegorodskaya O.    | 270          | 16                 | 14.4         | -0.3                | 1098                         | -2                 | 1171                          | 38                |
| Orenburgskaya Oblast  | 178          | 10                 | 16.1         | 0.1                 | 1195                         | -2                 | 802                           | 52                |
| Omskaya Oblast        | 290          | 33                 | 14.5         | 1.3                 | 1149                         | -1                 | 1167                          | 31                |
| Permskaya Oblast      | 324          | 26                 | 13.0         | 0.2                 | 1043                         | -5                 | 1332                          | 31                |
| Penzenskaya Oblast    | 168          | -19                | 15.7         | 0.1                 | 1167                         | 0                  | 820                           | 16                |
| Rostovskaya Oblast    | 205          | 2                  | 18.9         | 0.0                 | 1230                         | 1                  | 880                           | 6                 |

|                      | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|----------------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|                      | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Ryazanskaya Oblast   | 281          | 24                 | 15.1         | -0.2                | 1093                         | -4                 | 1139                          | 37                |
| Stavropolskiy Kray   | 261          | 0                  | 19.9         | 0.6                 | 1241                         | 2                  | 995                           | -8                |
| Sverdlovskaya Oblast | 351          | 43                 | 13.5         | 0.5                 | 1068                         | -3                 | 1327                          | 41                |
| Samarskaya Oblast    | 202          | 12                 | 16.2         | 0.4                 | 1176                         | -1                 | 935                           | 63                |
| Saratovskaya Oblast  | 148          | -4                 | 17.8         | 0.5                 | 1214                         | 1                  | 702                           | 37                |
| Tambovskaya Oblast   | 226          | 12                 | 16.0         | 0.0                 | 1144                         | -2                 | 962                           | 32                |
| Tyumenskaya Oblast   | 373          | 65                 | 14.2         | 0.9                 | 1113                         | -2                 | 1325                          | 43                |
| Tatarstan Rep.       | 259          | 27                 | 15.1         | 0.1                 | 1133                         | -3                 | 1101                          | 62                |
| Ulyanovskaya Oblast  | 183          | -11                | 15.8         | 0.4                 | 1165                         | 0                  | 868                           | 33                |
| Udmurtiya Rep.       | 307          | 32                 | 13.5         | 0.0                 | 1089                         | -3                 | 1248                          | 45                |
| Volgogradskaya O.    | 171          | 17                 | 18.6         | 0.0                 | 1242                         | 2                  | 769                           | 35                |
| Voronezhskaya Oblast | 204          | 8                  | 17.1         | 0.3                 | 1191                         | 2                  | 862                           | 17                |

See note table A.1.

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

|              | RAIN         |                    | TEMP         |                     | RADPAR                       |                    | BIOMSS                        |                   |
|--------------|--------------|--------------------|--------------|---------------------|------------------------------|--------------------|-------------------------------|-------------------|
|              | Current (mm) | 14YA Departure (%) | Current (°C) | 14YA Departure (°C) | Current (MJ/m <sup>2</sup> ) | 14YA Departure (%) | Current (gDM/m <sup>2</sup> ) | 5YA Departure (%) |
| Arkansas     | 726          | 56                 | 23.7         | 0.4                 | 1240                         | -6                 | 1997                          | 48                |
| California   | 98           | 29                 | 17.2         | 0.6                 | 1589                         | -1                 | 383                           | 39                |
| Idaho        | 188          | 28                 | 13.4         | 1.2                 | 1485                         | 0                  | 830                           | 32                |
| Indiana      | 640          | 33                 | 19.2         | -0.3                | 1183                         | -8                 | 1640                          | 11                |
| Illinois     | 730          | 59                 | 19.7         | -0.1                | 1219                         | -7                 | 1731                          | 18                |
| Iowa         | 574          | 15                 | 18.1         | -0.3                | 1227                         | -6                 | 1632                          | 7                 |
| Kansas       | 560          | 36                 | 20.9         | -0.2                | 1306                         | -7                 | 1554                          | 31                |
| Michigan     | 273          | -26                | 14.4         | -0.4                | 1244                         | -2                 | 1021                          | -23               |
| Minnesota    | 391          | 1                  | 15.4         | 0.2                 | 1244                         | -1                 | 1370                          | 1                 |
| Missouri     | 944          | 91                 | 21.2         | 0.1                 | 1215                         | -9                 | 2073                          | 42                |
| Montana      | 211          | -6                 | 13.8         | 0.7                 | 1367                         | -2                 | 877                           | -10               |
| Nebraska     | 615          | 67                 | 18.0         | -0.2                | 1268                         | -9                 | 1730                          | 37                |
| North Dakota | 291          | 0                  | 14.9         | 0.5                 | 1297                         | 0                  | 1121                          | -2                |
| Ohio         | 473          | 7                  | 18.6         | 0.2                 | 1192                         | -6                 | 1435                          | -5                |
| Oklahoma     | 955          | 126                | 22.9         | -0.5                | 1270                         | -8                 | 2099                          | 69                |
| Oregon       | 114          | -24                | 15.0         | 1.6                 | 1458                         | 3                  | 556                           | -9                |
| South Dakota | 496          | 59                 | 16.9         | 0.3                 | 1303                         | -3                 | 1496                          | 23                |
| Texas        | 607          | 101                | 25.0         | -0.4                | 1289                         | -8                 | 1512                          | 74                |
| Washington   | 76           | -50                | 15.9         | 2.2                 | 1441                         | 7                  | 373                           | -45               |
| Wisconsin    | 375          | -15                | 15.5         | -0.1                | 1242                         | -1                 | 1297                          | -12               |

See note table A.1.

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

|                | RAIN            |                          | TEMP            |                           | RADPAR                          |                          | BIOMSS                           |                         |
|----------------|-----------------|--------------------------|-----------------|---------------------------|---------------------------------|--------------------------|----------------------------------|-------------------------|
|                | Current<br>(mm) | 14YA<br>Departure<br>(%) | Current<br>(°C) | 14YA<br>Departure<br>(°C) | Current<br>(MJ/m <sup>2</sup> ) | 14YA<br>Departure<br>(%) | Current<br>(gDM/m <sup>2</sup> ) | 5YA<br>Departure<br>(%) |
| Anhui          | 905             | 39                       | 22.7            | -1.2                      | 1092                            | -7                       | 1833                             | 18                      |
| Chongqing      | 596             | -8                       | 21.4            | 0.1                       | 953                             | -5                       | 1578                             | -9                      |
| Fujian         | 1125            | 20                       | 23.1            | -0.1                      | 971                             | -6                       | 2200                             | 7                       |
| Gansu          | 264             | 3                        | 15.5            | -0.3                      | 1257                            | -1                       | 1024                             | 8                       |
| Guangdong      | 1110            | 5                        | 26.1            | 0.4                       | 1016                            | 2                        | 2055                             | -3                      |
| Guangxi        | 1286            | 34                       | 25.6            | 0.4                       | 955                             | -2                       | 2134                             | 6                       |
| Guizhou        | 839             | 25                       | 21.4            | 0.3                       | 923                             | -4                       | 1709                             | 4                       |
| Hebei          | 219             | -29                      | 19.7            | -0.5                      | 1278                            | 0                        | 864                              | -20                     |
| Heilongjiang   | 266             | -18                      | 15.5            | -0.3                      | 1195                            | 2                        | 1001                             | -15                     |
| Henan          | 307             | -26                      | 22.1            | -0.9                      | 1223                            | -1                       | 1120                             | -1                      |
| Hubei          | 772             | 20                       | 21.8            | -0.9                      | 1054                            | -6                       | 1885                             | 14                      |
| Hunan          | 1025            | 32                       | 23.1            | -0.7                      | 940                             | -9                       | 2100                             | 14                      |
| Jiangsu        | 681             | 27                       | 21.9            | -1.1                      | 1127                            | -5                       | 1583                             | 17                      |
| Jiangxi        | 1392            | 50                       | 24.3            | -0.4                      | 954                             | -11                      | 2283                             | 11                      |
| Jilin          | 275             | -27                      | 16.9            | 0.2                       | 1239                            | 4                        | 1077                             | -14                     |
| Liaoning       | 275             | -31                      | 18.5            | 0.1                       | 1245                            | 2                        | 1009                             | -20                     |
| Inner Mongolia | 269             | 5                        | 15.2            | -0.4                      | 1279                            | 1                        | 1025                             | -1                      |
| Ningxia        | 195             | 19                       | 17.2            | -0.4                      | 1355                            | 0                        | 839                              | 14                      |
| Shaanxi        | 345             | -2                       | 18.9            | -0.6                      | 1222                            | 1                        | 1151                             | -3                      |
| Shandong       | 219             | -44                      | 21.9            | -0.2                      | 1277                            | 0                        | 832                              | -21                     |
| Shanxi         | 198             | -26                      | 17.6            | -0.5                      | 1318                            | 1                        | 824                              | -21                     |
| Sichuan        | 585             | 6                        | 19.7            | 0.3                       | 1041                            | 0                        | 1475                             | -3                      |
| Yunnan         | 388             | -36                      | 20.5            | 0.5                       | 1104                            | 2                        | 1220                             | -18                     |
| Zhejiang       | 1061            | 39                       | 22.2            | -0.6                      | 968                             | -11                      | 2078                             | 7                       |

See note table A.1.