

Climate Impact Company Global Soil Moisture Outlook

Issued: Tuesday, September 12, 2017

Executive Summary: The Climate Impact Company global drought risk forecast is updated. For the last quarter of 2017 the outlook indicates a beginning of the end of drought in the western Canadian Prairies, developing dryness across the southern half of the U.S., expanding dryness in Western Europe and onset of erosion of the Australian drought. Brazilian dryness continues although with less amplitude. The global climate is propelled by an evolving weak La Nina.

Crop Country	SEP/OCT 2017	NOV/DEC 2017	JAN/FEB 2018
Canada	75%	55%	50%
United States	55%	50%	55%
Europe	65%	60%	55%
Ukraine	75%	65%	60%
Russia	45%	45%	45%
China	30%	35%	35%
India	35%	40%	40%
SE Asia	30%	35%	35%
Indonesia	45%	40%	35%
Australia	80%	60%	50%
South Africa	65%	55%	50%
Brazil	75%	65%	60%
Argentina	40%	40%	40%

Table 1: The Climate Impact Company drought forecast expressed in % risk for agriculture areas in countries listed for the next 6 months. Parenthesis indicates the June forecast. **Red indicates drought alert.**

Observational discussion: In the northern hemisphere during the JUN/JUL/AUG meteorological summer season large areas of much drier soils were observed in southwest Canada to the western U.S., northeast Canada, the Mediterranean Sea region and parts of northwest and east-central Russia. A wetter trend was observed in the northern Gulf of Mexico region in the U.S., Western Russia, India and most of eastern Asia. The drier climate in western North America was caused by a

persistent upper ridge pattern. The wet weather in the Gulf of Mexico region was related to both tropical influences and wet forcing caused by a persistent upper trough in the eastern Great Lakes region. The Canadian dryness was caused by an upper level pattern preventing a moisture influx from either the northeast Pacific or northwest Atlantic. Dry westerly flow south of the polar vortex caused the drier weather in Russia while subtropical ridging was the catalyst to severe drought in Southern Europe. A moist ocean fetch lead to a wetter regime in Eastern Asia.

In the southern hemisphere Australia drought accelerated while dryness was evident in South Africa, northeast Argentina, Western Brazil and southern Indonesia. The prevailing climate pattern during this time was neutral ENSO trending toward La Nina, neutral Pacific decadal oscillation trending toward the cool phase, warm phase of the Atlantic multi-decadal oscillation and neutral Indian Ocean Dipole.

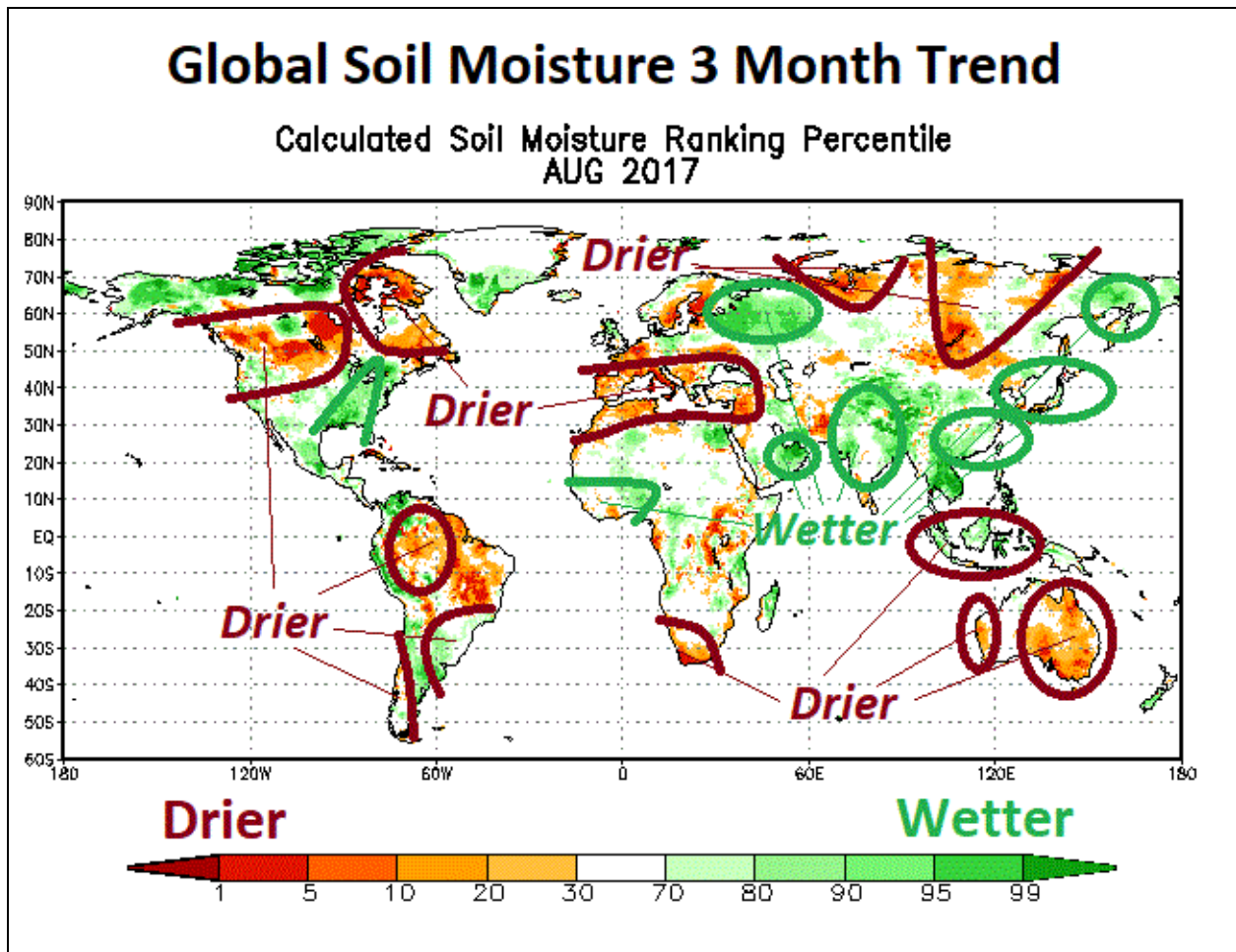


Fig. 1: Global soil moisture ranking percentile for August 2017 and the 3-month soil moisture trend.

Forecast discussion: A -PDO and weak La Nina is likely to fade western Canadian Prairie drought during the last quarter of 2017. Central to northeast Canada drought continues. In the U.S. oncoming dryness across the southern half of the nation could be aggressive. Developing drought is slowed by leftover ground moisture left behind by tropical events. The Northwest U.S. should trend wetter. In Europe an upper ridge pattern crests over western sections causing southern Europe dryness to evolve and expand western parts of Europe. The Ukraine dryness is likely to hang on into the winter season. Elsewhere in Russia a mixed condition with wet soils Western Russia to dry soils across the central sections. Due to La Nina there is no unusual dryness expected in India, Southeast Asia to Indonesia. The Australian drought is expected to weaken. Brazilian drought continues although less intense while Argentina voids drought for summer.

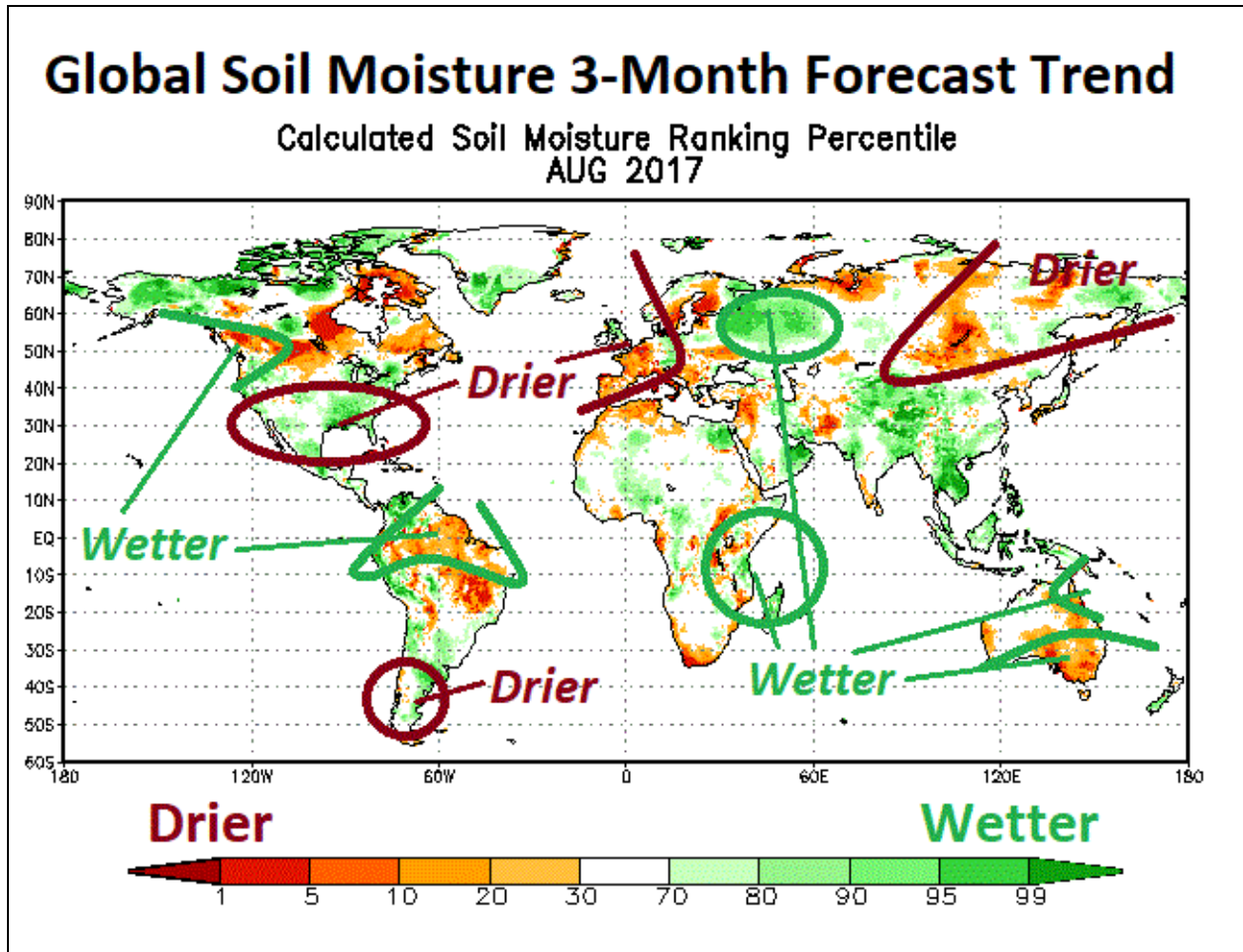


Fig. 2: Global soil moisture ranking percentile for August 2017 and annotated 3-month forecast