CLIMAS-CPC Collaborative Development of an Interactive Web Tool for 3-Month Outlooks

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The National Weather Service Climate Prediction Center has long provided maps for their probabilistic seasonal climate outlooks for temperature and precipitation. The maps, necessarily limited in their depiction of probabilities associated with tercile classes, have been supplemented by probability of exceedance (POE) outlooks that depict the seasonal outlooks as cumulative density functions, enabling users to identify probabilities for temperature or precipitation thresholds and intervals not limited by the tercile classes. However, as static diagrams supplemented with substantial ancillary information, the POE outlooks have proved nearly intractable for uses to interpret. To improve the usefulness of the POE outlooks, we developed an interactive version, the Dynamic POE Outlook Tool. The Dynamic POE Outlook Tool allows users to depict the seasonal climate outlooks as POE, probability of non-exceedance, or probability density graphs, and to extract outlooks for specific thresholds or intervals, identified on the basis of the variable or the probability. The tool also provides simple statements about the customized outlooks, including comparisons to the climatological reference period. The tool was developed using collaborative software development processes to ensure ease of transition from research to CPC operations.