User Feedback on Potential Changes to the ENSO Alert System

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1. Background

In 2007 the National Oceanic and Atmospheric Administration (NOAA) Climate Prediction Center (CPC) introduced an alert classification system for the ENSO cycle (Kousky and Higgins 2007). The system included watches and advisory for warm and cold phases of the ENSO cycle. A watch is issued when conditions are favorable for the formation of an El Niño or La Niña within the next 6 months. An advisory is issued when El Niño or La Niña conditions are present, based on NOAA’s operational definitions.

For decades, the NWS has used the Watch, Warning, and Advisory (WWA) system to alert users of forecasted hazards. While it has been effective at protecting life and property, extensive social science research has uncovered widespread misunderstanding of the “Advisory” term. In addition, users are sometimes confused about how to interpret and distinguish among the large number of individual WWA “products” (e.g., Wind Advisory, Flood Watch, and Winter Storm Warning).

To address these issues, the Hazards Simplification (Haz Simp) project was established and proposed a simple and streamlined system. The new proposed system would retain the two main headline terms - "Watch" and "Warning" - to alert on significant weather, water, or climate events that threaten life and/or property. The “Advisory” and "Special Weather Statement (SPS)" headlines would be discontinued in favor of plain language headlines. These new headline messages would convey information for less significant events that are not reaching either the “Watch” or “Warning” levels. As it relates to the ENSO Alert System, NWS engaged partners and users to gather feedback on interpretation of the current ENSO Alert System’s headlines and potential changes to these headlines.

2. Methodology

User feedback on the interpretation of current headlines in the El Niño-Southern Oscillation (ENSO) Alert System (Fig. 1) and potential changes to the headlines was collected via a survey during March 20 and May 19, 2020. In particular, the survey solicited feedback on eliminating the term “Advisory”, from the Alert System, which will help to ensure consistency across the suite of NWS products, one of the goals of the Haz Simp project.

In addition to general questions, such as job category and locations, the survey provided examples of the current ENSO Alert System Status headlines (A) and a proposal alternative as a replacement (B), and asked users to describe what the current headline meant to them, compare A and B, and select the best option. Affiliations identified on the survey responses were research, academia, weather forecasting, emergency management, water resources, among other occupations.

3. Major outcomes

The survey respondents are from 57 U.S. states and territories. The greatest percentage (22.3%) were from the state of California (CA), followed by Texas (10.3%), Florida (7.2%), and Washington (6.3%). Other states and territories contributed between 3.9% to 0.1%. The analysis also included stratification of feedback by user occupation.
An El Niño or La Niña Advisory is issued when conditions are observed and expected to continue. Only a small number of external users identified the correct interpretation of the current headlines, with a slightly greater number of the Emergency Management community with a clear understanding of the ENSO Advisory definition.

The low number of correct responses on the survey question regarding the “Advisory” interpretation (20%, see Fig. 2) confirms the need to better communicate when El Niño or La Niña conditions are occurring.

Within NWS, a significant number of users indicated that they have a good understanding of the correct interpretation of the term “Advisory” in the headline, which was expected. With respect to proposed changes to remove the word “Advisory” from the headline, the overwhelming majority of partners and users (95%) that participated in the survey favored changes using the proposed alternative headlines. Some partners and users provided additional suggestions for alternatives, such as 1) “El Niño is Occurring”, 2) “El Niño is Ongoing”, 3) “El Niño has Ended”.

4. Lesson learned

The current ENSO Alert system does not provide information on significant hazards that threaten life and/or property, which is significantly different from the current NWS WWA system. Therefore, the use of the term “Advisory” in the ENSO Alert system does not have the same concerns as the term “Advisory” does in the current NWS WWA system. However, many of the comments provided by the survey respondents do raise serious concerns about the understanding of the term “Advisory” in the ENSO Alert system, as well as the proposed changes. The recommendations at this time are to simplify and use terms in the Alert System that are easier to understand and clearly represent that ENSO is either occurring or has ended.

Reference