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Enhancing Timeliness of EWS with new technology: Case Study

The time lead of alerting information provides a time window for communication and decision making. Reported by science and business, with the support of new technical means, the alerting meteorological disasters such as flood, heat wave, cold wave and drought can provide even longer time lead with even higher precision. However, the gap between scientific research and actual operational systems does not attract enough attention, their differences need to be addressed.

We examine how early warnings have evolved in terms of their timeliness and content, linking these changes to the integration of new technologies. Our research shows that the performance of early warning systems (EWS) varies significantly across different types of disasters and geographical regions. For example, some systems can provide ample advance notice for events like heavy rain and cold waves, while others, particularly for hail and frost, offer less lead time or accuracy.

This study underscores the gap between scientific progress in EWS and their actual application, highlighting the need for better communication and decision-making within the warning system framework. We explore the reasons behind these disparities, such as differences in technological adoption rates, regional infrastructure, and policy implementation challenges.

Presentation Theme: From Research to Practice: Challenges and Solutions in Enhancing the Effectiveness of Disasters Communication.

Collaborators, Advisor(s) and Department(s) that assisted with this research: Lichao, public meteorological service center, China.