

LIS-Hydro: A Comprehensive Framework for Flood Prediction, Analysis, and Management

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- U.S. military forces are often tasked to participate in a variety of transboundary water-related decision-making activities;
- There is limited established information available on the baseline performance of current practices in such cases, as most such operations are done in an ad-hoc manner, due to the lack of routine availability of required inputs;
- Furthermore, there is a need for an integrated operational service, with the capacity to combine and synthesize hydrological modeling, assimilation, forecasting, and visualization capabilities across the U.S. Government (USG);
- Interstate strategic competition, not terrorism, is now the primary concern in U.S. national security;
- Such transboundary water issues are projected to intensify in the future under increasingly complex population dynamics, political tensions due to parallel issues, and a changing climate;
- At this time, an operational authoritative source of **global** hydro-intelligence information supporting OCONUS war-fighters, planners, and decision makers at all echelons and services of the US military, Federal government, and intelligence community does not exist;
- By providing a high quality, observation-driven, operational hydrologic modeling environment, the LIS-Hydro system will significantly aid in providing timely information about the transboundary water security related challenges and vulnerabilities.