

Public and Interagency Communication During the November 2025 Hat Yai Flooding Disaster: A Critical Analysis

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Received 3 July 2026 • Revised 30 September 2026 • Accepted 14 October 2026 • Published online 28 October 2026

Abstract:

The November 2025 flood in Hat Yai, Thailand, is one of the most severe climate-related emergencies in the region's recent history, affecting over 3 million people across southern provinces; it was a severe urban disaster that disrupted transport, healthcare, power, and telecommunications across Southern Thailand. This critical case analysis examines both public-facing and interagency communication using the Crisis and Emergency Risk Communication (CERC) model and the Protective Action Decision Model (PADM). Evidence was drawn from government reports, contemporaneous media coverage, and institutional response documentation. The case was distinctive because two successive rainfall episodes affected a major commercial and healthcare hub, digital communication failed during the critical response period, multiple command structures operated in parallel, and informal volunteer networks became central to rescue and relief. Warning information was available, but inconsistent risk interpretation and insufficiently actionable messages impeded protective action. During the acute phase, fragmented authority contributed to duplicated relief in some locations and inadequate coverage in others, whereas radio networks, community groups, and a centralized hospital War Room sustained essential coordination. The analysis supports a stage-specific communication system that links a unified interagency command, redundant communication infrastructure, verified community reporting, and explicit action guidance. These findings extend crisis communication analysis beyond message dissemination by showing that communication governance, which dictates who validates, prioritizes, and coordinates information, is itself a core disaster-response capability.

Keywords: crisis and emergency risk communication, early warning, flood, interagency coordination, protective action decision model, Thailand

This paper is part of the "Hat Yai Flooding 2025" collection

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J Health Sci Med Res 2026;44(6):e20261484

doi: 10.31584/jhsmr.20261484

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Introduction

Beginning on November 19, 2025, unprecedented rainfall devastated Hat Yai district in Songkhla province, Thailand, triggering one of the most severe flooding disasters in the region's documented history. More than 600 millimeters of rainfall fell within 72 hours, with water levels reaching 2.5 meters in urban areas¹. The disaster affected over 3 million people, with Hat Yai (a commercial hub of approximately 700,000) bearing the brunt of the catastrophe^{2,3}. Officials characterized it as the heaviest rainfall event in three centuries, with a single day recording 335 millimeters, exceeding the design capacity of existing drainage infrastructure².

Beyond its physical effects, the flood exposed weaknesses in both public communication and communication among response organizations. Cellular service, electricity, and digital platforms failed when timely information was most needed; at the same time, parallel command centers generated inconsistent situation reports and priorities². These failures affected not only what residents understood, but also how agencies, hospitals, military units, local authorities, and volunteers allocated rescue and relief resources.

This article uses two complementary frameworks: the Crisis and Emergency Risk Communication (CERC) model organizes communication across five stages—pre-crisis, initial event, maintenance, resolution, and evaluation—and emphasizes that communication tasks change as a disaster evolves⁴. The Protective Action Decision Model (PADM) explains how people process environmental and social cues, assess threat and protective actions, and decide whether action is feasible⁵. Together, these frameworks distinguish the existence of a warning from its interpretation, credibility, actionability, and operational coordination. The analysis asks how public and interagency communication performed, why available forecasts did not consistently produce protective action, how infrastructure failure altered coordination, and how formal and community networks interacted.

Background and distinctive case context

The flooding unfolded in two distinct phases. In the first phase, a stationary air mass produced sustained heavy rainfall from November 19–21, saturating the ground and filling drainage canals, with floodwaters inundating the city during the late hours of November 21 through November 22. The situation eased briefly before a second episode of intense rainfall occurred November 23–25, during which floodwaters surged into the city more severely from November 24 onward. Cumulative rainfall over the five-day critical window exceeded 881 millimeters at some monitoring stations, with the Khlong U–Tapao canal recording flows exceeding 2,654 cubic meters per second⁶. The flooding situation gradually began to subside from November 26 onward. These figures challenged all assumptions underlying Hat Yai's flood management infrastructure.

By November 27, 2025, government reports documented 10,668 people evacuated to temporary shelters, with cumulative figures reaching 14,160 individuals⁶. Of five major hospitals serving the region, only Songklanagarind Hospital, which is located on higher ground, remained operational, leaving a single facility to serve 700,000 people³. This crisis necessitated the airlift evacuation of approximately 90 critical patients, including 20 ventilator-dependent patients requiring helicopter transport under continuous life support⁶.

Conceptual framework and communication landscape

Thailand's disaster management framework establishes a hierarchical command structure for emergency response. During the Hat Yai flooding, multiple emergency operations centers activated simultaneously: national coordination centers, provincial emergency management offices, water management authorities, and military-led command structures². This multi-layered structure created challenges for unified messaging. The simultaneous activation of parallel command centers resulted in what

analysts described as a “diffusion of command during the most critical window of the first 48 to 72 hours”², mirroring complexities observed during Thailand’s Coronavirus disease 2019 (COVID-19) pandemic response.

The communication system included government agencies, healthcare institutions, military and rescue units, media organizations, volunteer networks, community leaders, and affected residents. Public communication concerned warnings, evacuation, service availability, and reassurance. Interagency communication concerned report validation, task allocation, route status, patient transfer, supply distribution, and command authority. Treating these as linked information flows clarifies why a message could be publicly visible yet operationally ineffective when no agency was assigned to verify or act on it.

Early warning systems and pre-crisis communication

One of the most significant findings is that meteorological data and early warning information existed prior to crisis escalation. The critical question is not whether warning information was available, but why it failed to translate into adequate preparedness². National broadcasts advised residents to prepare for severe weather, while some local authorities initially provided reassurances that the situation was manageable². In one instance, only hours after local officials released a video assuring residents that conditions were under control, floodwaters surged through southern districts.

Early warnings from independent meteorological sources were publicly disputed by some authorities before later proving accurate², eroding public trust precisely when it was most essential. This highlights a fundamental principle of crisis communication: information is only as effective as the trust it commands and the clarity with which it is communicated². Even when warnings were issued and received, significant barriers prevented translation

into protective action, as residents received ambiguous, contradictory, or insufficiently specific guidance about what actions to take.

PADM helps explain why exposure to a warning did not necessarily lead to evacuation or other protective action⁵. Residents had to interpret conflicting social cues, judge the source’s credibility, assess whether the threat applied to their location, identify a feasible action, and determine whether transport, shelter, family circumstances, and time permitted that action. Public disagreement over independent forecasts and vague instructions increased uncertainty at several points in this decision process². The principal failure was therefore not simply insufficient information, but insufficiently consistent, credible, and actionable information.

Communication breakdown: the digital infrastructure collapse

As floodwaters surged through Hat Yai on November 21 and 22, the city experienced catastrophic failure of its digital communication infrastructure. Power stations shut down, mobile networks collapsed, and entire communities were left without reliable communication for extended periods². Families could not contact relatives, emergency responders struggled to coordinate rescues, and hospital staff faced challenges coordinating patient evacuations. Those with remaining battery power posted Global Positioning System (GPS) coordinates on social media platforms, while others entered their locations into a community application for volunteer rescue coordination².

Songklanagarind Hospital’s disaster response documentation highlighted the critical role of point-to-point radio networks when cellular and digital infrastructure became paralyzed⁶. Handheld radio systems became the “central nervous system of disaster response”, enabling coordination between hospital command centers, rescue teams, and evacuation sites. This reversion to analog technology underscores a critical lesson: redundancy and

technological diversity are essential, as systems that function effectively under normal conditions may fail catastrophically during disasters, necessitating backup channels operating on different infrastructure.

Interagency communication and fragmented command

Multiple command centers issued situation reports and operated through separate communication channels, creating overlapping and at times contradictory information streams². Without a common operating picture and unified task-allocation mechanism, organizations could not reliably determine which requests had been verified, assigned, completed, or remained unmet. The resulting diffusion of command during the first 48–72 hours contributed to delayed decisions, rumors, duplicated deployments, and geographic gaps in assistance. For affected residents, uncertainty about which source to trust influenced whether and when they evacuated; for responders, uncertainty about task ownership affected where resources were sent.

Community-led communication networks

One of the most striking features of the disaster was the speed and effectiveness with which informal,

community-based communication networks mobilized. By the time formal disaster response mechanisms were mobilized, volunteer networks had already been operating for hours². Social media platforms transformed into improvised command-and-control systems, with community members using Facebook groups and LINE messaging to create real-time maps of flooded areas, coordinate rescues, and share critical information about safe routes and available resources². PSU students and local residents opened makeshift kitchens to feed families awaiting rescue at the gymnasium of Prince of Songkla University (Figure 1).

Despite their effectiveness, community-led networks faced significant coordination challenges. Without integration into formal command structures, volunteer teams sometimes duplicated efforts or operated without awareness of official rescue operations in the same areas². Information flowing through informal networks was not always accurate, creating potential for confusion. Nevertheless, the consistent emergence of effective community-led responses across multiple Thai crises suggests that formal emergency management should support and coordinate with these networks rather than replace them. Indeed, in Thailand, communities consistently move first².



Figure 1 Prince of Songkla University was modified to be a shelter and kitchen for people. Photograph taken by the author on 25 November 2025, 19:30, Prince of Songkla University, Songkhla, Thailand

Healthcare communication under system-wide constraint

The collapse of Hat Yai's healthcare infrastructure created an unprecedented communication challenge: managing public expectations when a single hospital had to serve 700,000 people³. Songklanagarind Hospital's response involved a fundamental shift from patient-centered messaging to community-centered messaging, emphasizing "the greatest good for the greatest number with limited resources"⁶. The hospital suspended elective surgeries, established special flood victim clinics in two daily shifts, and implemented a daily "War Room" meeting structure to dynamically allocate beds and staff, expanding adult Intensive Care Unit (ICU) capacity from 76 to 91 beds and pediatric ICU from 41 to 56 beds⁶. This centralized communication model—with clear accountability, unified decision-making, and rapid command execution through the War Room structure—represents the most appropriate and necessary approach in crisis situations of this magnitude.

Healthcare authorities publicly articulated the severity of the situation and urged the public to assess urgency before seeking care³. The scale of medical evacuation

was unprecedented: approximately 90 critical patients were airlifted, including 20 ventilator-dependent patients requiring continuous advanced life support during helicopter transport⁶. A field hospital was also established at the gymnasium of Prince of Songkla University to manage the surge in patients (Figure 2). By November 27, military operations had evacuated 275 emergency patients, with cumulative figures reaching 453 patients⁶. Coordinating these complex operations required reliable communication channels at a time when the general infrastructure had failed, underscoring the importance of dedicated emergency communication systems operating independently of civilian infrastructure.

The progression of the Hat Yai flood and its associated communication challenges is summarized in Figure 3. The infographic illustrates how communication priorities and operational consequences evolved across five periods, from pre-crisis warning and the initial flood event to system adaptation and recovery. It highlights the transition from inconsistent early warnings and infrastructure failure to fragmented interagency coordination, followed by the adaptive use of the hospital War Room and radio networks.

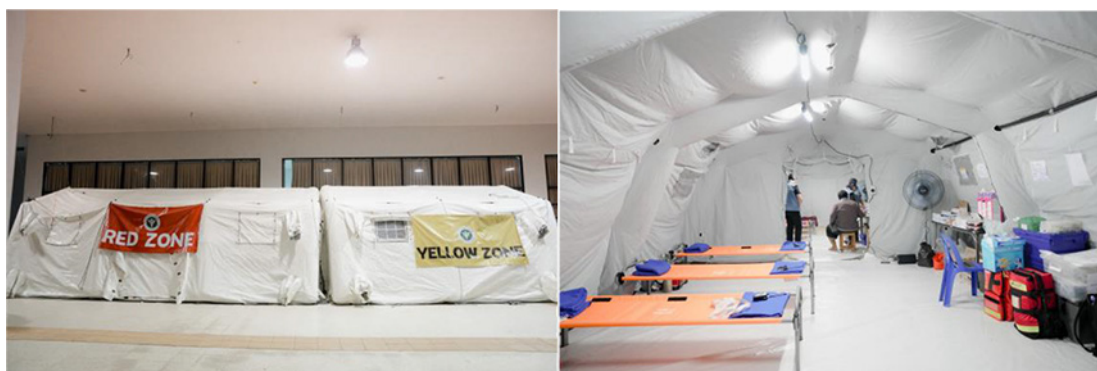


Figure 2 Field hospital at PSU gymnasium. Photograph taken by the author on 25 November 2025, 19:30, Prince of Songkla University, Songkhla, Thailand



Figure 3 Timeline of key events, communication challenges, and operational consequences during the November 2025 Hat Yai flood

Discussion: Lessons and implications

The Hat Yai case shows that crisis communication is an operational system, rather than a one-way flow of public messages. CERC helps locate distinct communication tasks across the disaster cycle, while PADM explains why receiving a warning alone did not ensure protective action^{4,5}. The pre-crisis weakness was the absence of sufficiently consistent and actionable guidance; the acute-phase weakness was loss of infrastructure and unified command; the maintenance-phase weakness was fragmented verification and task allocation; and the recovery-phase risk was an unclear transition from emergency messaging to sustained public-health and rebuilding information (Figure 4).

The findings are consistent with flood-risk research showing that communication effectiveness depends on trust,

audience understanding, channel choice, and the connection between risk information and feasible action⁷. Experience from Thailand's 2011 flood similarly emphasizes the importance of credible, comprehensible risk communication adapted to local conditions⁸. Studies of traditional and social media show that multiple channels can extend reach but may also fragment attention and authority when messages are not coordinated⁹. Social media can support rapid situational awareness and public participation, yet it raises verification, access, and ethical challenges¹⁰.

Comparative cases reinforce the value of institutional-community collaboration. Collaborative communication in Puerto Rico linked technical knowledge with local experience¹¹, participatory approaches in the Philippines addressed cultural and access barriers¹², and research in Yangon identified both institutional good practices and persistent



Figure 4 The stage-specific crisis and emergency risk communication (CERC) framework

coordination gaps in natural-hazard communication¹³. Reviews of flood mitigation in health facilities further support resilient infrastructure and coordinated preparedness¹⁴, while recent synthesis highlights timeliness and clarity as recurring public concerns¹⁵. Hat Yai is distinctive because these challenges converged in a two-wave urban flood affecting a regional commercial and healthcare center while digital networks failed and community volunteers assumed major operational roles. The case therefore provides evidence that resilient communication requires the integration of public guidance, interagency command, healthcare coordination, and community-generated information.

Stage-specific recommendations for future crisis communication

Implementation should begin with an interagency communication protocol that designates decision authority, establishes a shared incident-information structure, and formally links trained community coordinators to the command system. Exercises should test total mobile-network failure, simultaneous high-volume rescue requests, hospital evacuation, and transition to recovery. Performance indicators should include warning-to-action time, proportion of verified requests assigned and closed, geographic coverage of relief, message consistency across agencies, and public comprehension.

Conclusion

The November 2025 Hat Yai flood demonstrates that crisis communication succeeds only when public guidance and interagency coordination function as one system. Available forecasts did not consistently translate into protective action because messages varied in credibility, specificity, and feasibility. During the acute event, digital infrastructure failure and parallel command structures impaired verification, prioritization, and resource allocation. Community networks and radio communication restored some local capacity, while Songklanagarind Hospital's War Room showed the value of centralized decisions within a defined operational structure.

Applying CERC and PADM clarifies both when communication failed and why residents or organizations could not always act on available information^{4,5}. The study's principal contribution is to show that communication governance—the authority to validate information, assign responsibility, maintain a common operating picture, and close the feedback loop—is a core disaster-management capability. Future preparedness should combine a unified command protocol, redundant channels, actionable warnings, formal community integration, and stage-specific evaluation. These measures are especially important for rapidly evolving urban floods in which essential services and the communication infrastructure may fail simultaneously.

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