

CASE STUDY

Myanmar M7.7 Earthquake Response

28 March 2025

From days to hours: PDC rapid impact analytics and connectivity accelerate life-saving response

M7.7 Myanmar Earthquake Synopsis

On March 28, 2025, a devastating earthquake sent shock waves across the isolated nation of Myanmar all the way to Thailand 800 miles away. Recorded at M7.7 at the epicenter of Myanmar's second most populous city, Mandalay, the earthquake caused widespread loss of life and destruction, with impacts concentrated most heavily in Myanmar.



Rescue workers clear rubble within the Mandalay region of Myanmar. Source: ScienceDirect

LATEST ESTIMATES

- Magnitude: **7.7**
- Epicenter: **Mandalay, Myanmar**
- Population Exposed: **48 million+**
- Vulnerable: **9 million+**
- Displaced: **200,000+**
- Reported Deaths: **3,800+** Injuries: **5,100+**
- Damages: **US \$11 Billion** (14% of GDP)



The ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)'s emergency operations center (EOC) based in Jakarta collaborates with its In-Country Liaison Team (ICLT) in Myanmar using a custom version of Pacific Disaster Center's DisasterAWARE technology—disseminating timely and accurate information needed for its coordination of ten ASEAN member states. Photo source: AHA Centre

Key Response Challenges

One of the biggest challenges in any major disaster response is not just sending aid—it's sending the right aid at a speed fast enough to save lives.

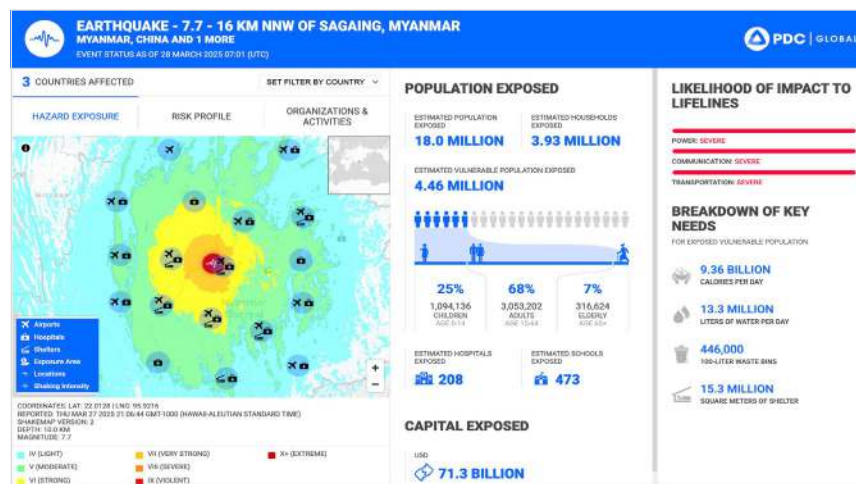
Challenge 1 - Data Poor Environment: The importance of early warning and near-real-time impact analytics for an isolated nation like Myanmar.

Challenge 2 - Matching Aid to Needs: Applications for modeling and data-sharing to ensure vulnerable groups are not left behind.

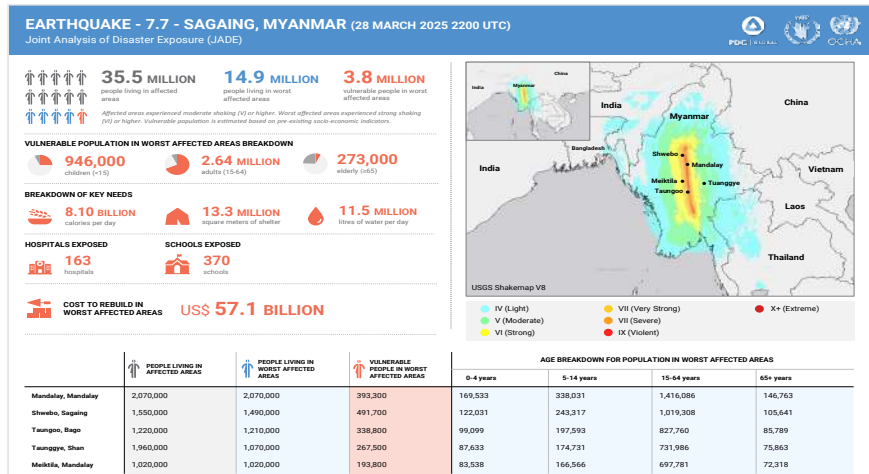
Challenge 3 - Response Coordination: The role of situational awareness technologies for enabling continuous coordination among diverse response teams and providing a common operational picture.

Early Warning and Rapid Impact Analytics

As soon as scientific authorities detected the quake, real-time early warning notifications were disseminated by PDC to its ecosystem of national, regional, and international DisasterAWARE users. Within minutes, DisasterAWARE provided reliable estimates of impacts and likely needs to facilitate early action and rapid deployment of response teams.



PDC's Event Brief details early exposure estimates and impacts based on initial data received from scientific authorities.



Refined impact estimates were quickly made available across the DisasterAWARE ecosystem through data-sharing relationships between PDC, UNOCHA and World Food Programme.

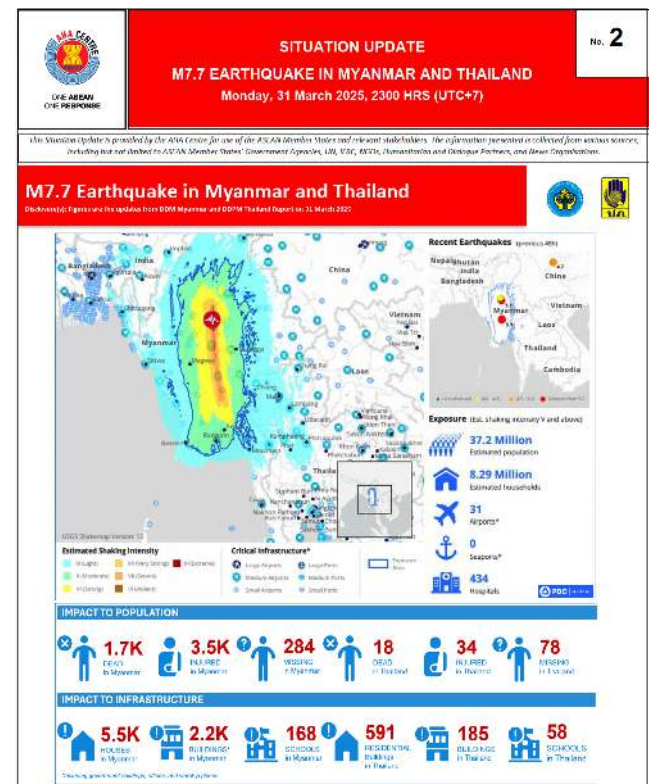
Teams who immediately deployed with access to DisasterAWARE technology included the regional AHA Centre, international teams from the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) and the International Federation of Red Cross (IFRC), and national response teams from Indonesia.

On-the-ground situational awareness was shared among responders who were a part of the DisasterAWARE ecosystem, which included DisasterAWARE Pro for the international community, a custom version of DisasterAWARE known as the Disaster Monitoring and Response System (DMRS) for the AHA Centre, and Indonesia's localized system, InAWARE. Each of the systems were able to receive updates seamlessly and share new information as it became available.



The ASEAN Emergency Response and Assessment Team (ASEAN-ERAT) deployed all ten ASEAN Member States for field operations in Myanmar, leveraging rapid impact and needs estimates from PDC through its DisasterAWARE technology solutions ecosystem.

Photo source: AHA Centre



Member State subscribers of DMRS, including Myanmar's national disaster management organization (NDMO), Department of Disaster Management (DDM), received real-time early warnings, PDC's latest impact analytics, and shared situational awareness during response.

OUTCOMES

- ✓ **PDC's early warning and immediate impact insights enabled a rapid, lean, and synchronized response** to the M7.7 Myanmar earthquake by UNOCHA, the AHA Centre, and numerous other members of the DisasterAWARE technology ecosystem.
- ✓ **AHA Centre executives had the information and tools necessary to immediately deploy** the Centre's remote ICLT and confidently direct the ASEAN-ERAT Member State field team in close coordination with Myanmar's DDM and the Center's own EOC in Jakarta.
- ✓ **DisasterAWARE technology enabled greater disaster management independence** and ensured humanitarian assistance was paired with priority needs on the ground.