



U.S. Army Corps of Engineers Institute for Water Resources

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U.S. and Indonesia Exchange Knowledge on Structural Engineering Considerations to Promote Safety in Urban Search & Rescue Operations

SENTUL, INDONESIA. June 1, 2013 – The sun beats down relentlessly on another habitual afternoon, as those that cannot escape the heat wipe the sweat from their brow with a heavy and tired hand. Despite the warmth, the scene is tranquil and undisturbed. However, this static calm is thrust into a dynamic upheaval of chaos from the collision of tectonic plates. The ground shakes in a violent fit, and buildings fall wearily to the ground, lying in the shadows they once drew. The earthquake has caused a desperate need for emergency responders and survivors to report to the scene of the disaster and attempt to rescue those that remain trapped in the debris. Time is of the essence and the responders must react quickly to the situation.

In most instances, we take those that run towards the scene of an emergency for granted. These brave and courageous individuals are our first responders that help rescue victims and save lives. If they are not properly trained and do not understand how to navigate collapsed structures, then it remains likely they will become victims themselves. Those tasked with urban search and rescue continuously prepare. They leverage experience and knowledge from around the world to enhance their capabilities and increase safe practices. Indonesia is no exception.

From 27-30 May, representatives from Indonesia's BNPB (National Disaster Management Agency) BASARNAS (National Search & Rescue Agency) and TNI (National Military) worked with subject matter experts from the U.S. Army Corps of Engineers on structural engineering and collapse technician considerations in Urban Search and Rescue (US&R) practices. The workshop featured 27 participants from across Indonesia. Topics such as monitoring tools and techniques, collapse patterns, load paths, shoring, moving and lifting, breaching and breaking, anchors, heavy equipment and rigging awareness were presented. These topics were aligned with International Search and Rescue Advisory Group (INSARAG) standards. Additionally, lessons learned from recent rescue and recovery experiences in the US, Haiti and New Zealand were shared.

“We saw a passion in the students from Indonesia that is indicative of the same passion we see in America and other countries we have worked with over the past decade,” stated Tom Niedernhofer, USACE US&R Program Manager. “All rescuers have to have that passion to enter the world of rescue response. It’s a prerequisite we learn from the fire and rescue communities at all levels across the globe. The time spent for training and readiness follow without resistance by the individuals who have a

passion for Urban Search and Rescue. The passion for US&R by the Indonesian participants is without question...it exists!"

The USACE US&R Program deploys specially rescue-trained and equipped structural engineers (Structures Specialists) to augment the Federal Emergency Management Agency (FEMA) Urban Search & Rescue Task Forces, incident support teams, military technical rescue organizations, and general purpose troops during structural collapse incidents and other disaster response missions. This rescue engineering capability provides technical support and advice to task force leaders and commanders to assess damage, mitigate hazards, enable safe entry and assure mobility throughout a disaster site to enable rescue and lifesaving operations. Additionally, the US&R Program develops doctrine, training programs and national standards for structural collapse response operations, conducts initial training courses, advanced coursework, exercises and continuing education for all FEMA Urban Search & Rescue Structures Specialists and others, under Emergency Support Function (ESF) #9 of the National Response Framework. USACE works closely with the FEMA US&R Structures Sub-Group and the US&R Branch Office in Washington, DC. A strong alliance has been forged since the National US&R Response System was initiated over 20 years ago.

The U.S. and Indonesia will continue to partner on urban search and rescue practices in the future. Each year, an annual disaster response field exercise takes place between the countries where participants can practice search and rescue techniques side-by-side to enhance capabilities. The U.S. looks forward to a continued partnership with Indonesia to ensure the safety of its first responders and the ability for them to extract and recover victims in an efficient and secure manner.

USACE IWR Geographer Justin Pummell is assigned to U.S. Army Pacific (USARPAC) and acts as a liaison between USARPAC, USACE Pacific Ocean Division (POD) and IWR. He is responsible for USACE's International Capacity Development Program in the U.S. Army Pacific Command (USPACOM) area of responsibility. As part of IWR's International Capacity Development Program, he works directly with the USARPAC, USPACOM, U.S. Embassies and partner nations. He provides theater security cooperation support, geographic information system (GIS) technical expertise and disaster management planning to USARPAC, USPACOM and POD. He participated in this workshop.

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