



About EWB Australia

At Engineers Without Borders (EWB) Australia, our purpose is to harness the potential of engineering to create an equitable reality for the planet and its people. We work across the Asia Pacific region and in Australia to support the engineering aspirations of communities at risk from disasters. We strongly believe that every engineer can be a change agent for a socially just and sustainable world. This belief drives EWB to lead a movement of like-minded individuals and companies working together to ensure technology is developed to make the world a better place for all.

Increasingly, EWB is responding to the engineering needs of humanitarian crises during the recovery phase. Most recently this has included the Dili Water Supply Repair Program in Timor-Leste, and assisting flood-affected communities in the Northern Rivers area of NSW in Australia.

Our perspectives

This submission reflects our perspective as Australia's leading for-purpose organisation that aims to create social value through engineering. It is grounded in our experience working with volunteers, partners and communities to support the unmet engineering needs of Northern Rivers communities affected by 2022 floods in NSW. EWB's experience and key takeaways from this project are summarised in this submission.

Engineering as an enabler of emergency management

In EWB's experience, engineering services are a critical enabler of effective emergency management. This is commonly understood for structural and hydrological services, but is particularly (and often less overtly) true of geotechnical engineering assessment capacity. In the case of the 2022 Northern Rivers floods, geotechnical engineering services were required in the assessment of landslides, slope stability, and road access - each having direct impact on community safety and wellbeing.

There is opportunity for the Commonwealth to better target and enable its capabilities in support of engineering services.

Reframing ADF support

Involvement of the ADF in relief operations should not be approached with a binary 'yes' or 'no', but rather through a strengths-based approach that highlights its capacity to support civil society. A clear example of the ADF's value-add during emergencies is its capacity to support the provision of engineering services offered by external parties. This is particularly true of geotechnical engineering services, which can directly benefit from ADF capacities for earthworks and heavy machinery required for engineering assessments.

- It is recommended that the ADF's significant capacity to mobilise earthmoving equipment be made available in support of engineering services offered by relief organisations.

Strategic industry partnerships

Not-for-profits can act as brokers between communities and the private sector. With strong links to pro-bono engineering services and capabilities as well as ongoing relationships with communities, organisations like EWB can play a pivotal role in linking people in need of technical assistance with organisations willing to provide it.

- It is recommended that pre-existing relationships between not-for-profit and for-profit organisations and communities be leveraged in the event of disasters to take advantage of strong existing working relationships, including pro bono partnerships.

Information and knowledge sharing

It is important to ensure that communities and organisations supporting emergency management have access to realtime information and data, including access to a comprehensive list of existing projects and organisational services across disaster-affected areas, including national, state, regional and local areas. During the 2022 Floods, communities reported local councils often lacked information on available services or projects within their local government area. This knowledge is essential for initial scoping of community (engineering) needs at the onset of disaster as well as ongoing monitoring and understanding how to leverage and support existing services and/or reduce redundancies or duplicate services/projects.

Promoting information sharing at this level facilitates the development of strength based collaborative partnerships between not-for-profit and for-profit organisations and local communities to better coordinate actions and bridge gaps in available services.

- It is recommended that NGOs, local organisations and/or community groups involved in emergency management have access to realtime information on services and project supports available within disaster-affected communities.
 - A publically available geographical information system (GIS) that allows government agencies, organisations and communities to map ongoing or temporary emergency support available, disaggregated by type of services, could support ongoing information sharing. NB: Within emergency

management, GIS currently provide information about disasters, but not information about organisations or communities supporting emergency management, such as temporary support services.

Supporting volunteers and a surge capacity workforce

Volunteers are vital to Australia's crisis response and have the potential to provide a surge capacity workforce, including access to the right capabilities across sectors to support response and recovery following disasters, and ensure essential service provision to vulnerable communities and the general Australian population.

Mobilising a skilled volunteering workforce (such as engineers) supports surge capacity during disasters. However, the declining rates of volunteer participation, changing demands between formal and informal volunteer roles, and unclear national arrangements for involving the not-for-profit sector in crisis response must be addressed to ensure a sustainable model for the future. The 2022 Floods is an example of a crisis affecting multiple jurisdictions and industry sectors that involved a technical skills shortage due to the increased demand for engineering services in the region. The following recommendations are proposed:

- Support coordination and engagement of skills based and spontaneous volunteers through provision of ongoing investment in volunteer management systems and processes.
- Investigate human resource requirements when engaging with different disasters. For example, EWB identified that during the 2022 flood recovery process, residents required more engineers with geotechnical expertise, rather than structural engineering expertise. It is essential to ensure that appropriate personnel are mobilised to better support emergency management.
- Undertake further research into disaster mobilisation models that specifically deploy technical personnel and resources is undertaken, taking into account both Australian local and overseas best practice models.

It is also notable that to some extent, the Royal Commission into National Natural Disaster Arrangements, which recommended the inclusion of volunteers in national arrangements via national coordination forums, has helped to encourage and 'convene regular and ongoing national forums for charities, non-government organisations and volunteer groups, with a role in natural disaster recovery'¹. However these forums appear to be less accessible to many Australia-based organisations involved in local and international disaster management efforts and/or organisations transitioning into the sector, such as EWB.

¹ McDermott, Jack (May 2022) *Volunteering and Australia's crisis resilience*, 11-13. Volunteering Australia, <https://www.volunteeringaustralia.org/wp-content/uploads/Volunteering-and-Australias-crisis-resilience_web.pdf>

- Promote sector wide involvement in national disaster arrangements by raising awareness of open forums and inviting not-for-profit organisations and community groups to participate in decision-making.

Prioritise Strategic funding mechanisms and investment in mobilising services

From a human rights perspective, it is not the responsibility of those who have suffered the effects of disasters to meet their own critical needs. It is the responsibility of the state for rights such as shelter, food and security to be realised and protected, including before, during and after a disaster event. A disaster situation does not negate human rights, even when it becomes more difficult to meet them when a crisis is acute.² The Commonwealth's commitment to 'leave no-one behind' has significant practical implications for Commonwealth management of relief packages, including grants.³

In EWB's experience of the 2022 Northern Rivers flooding, multiple residents reported paradoxical barriers to accessing grants funding and/or insurance claims, hinging on a lack of access to engineering assessments and services. In such cases, the release of relief funding to households was reliant on engineering assessments, which were both expensive and scarce.

EWB's provision of engineering services free of charge, enabled through the generous support of pro-bono partners, exemplified a successful mechanism to overcome these barriers. Yet the mobilisation of engineering services itself requires significant investment to ensure quality and compliance, and EWB was not able to find donor funding to support these activities. The mobilisation of engineering services through EWB - a non-profit organisation - were in this case self-funded, severely curtailing the possibility of expanding services to greater community reach.

- It is recommended that the Commonwealth strengthen mechanisms for non-government organisations to access funding for mobilisation of support services, including engineering.
- It is recommended that essential services (such as engineering support or assessments that impact community safety) are provided directly to residents where possible to resolve resident's immediate needs free of charge, cognisant of the limitations of individual grants that can increase burden on disaster-affected residents.

² Inter-Agency Standing Committee (2008) *Human Rights and Natural Disasters: Operational Guidelines and Field Manual on Human Rights Protection in Situations of Natural Disaster*, Washington.

³ UN Sustainable Development Group (2023) *Universal Values Principle Two: Leave No One Behind*, <<https://unsdg.un.org/2030-agenda/universal-values/leave-no-one-behind>>

To support leaving no one behind, due consideration should be given to providing interest free loans (over a specified period of years) to disaster-affected residents who may not be eligible for existing services or grants.

To discuss anything in this submission or for more information, please contact the key contacts provided on the submission.