RECALIBRATING DISASTER GOVERNANCE IN ASEAN

IMPLICATIONS OF THE 2018 CENTRAL SULAWESI EARTHQUAKE AND TSUNAMI

Policy Report

December 2019

Angelo Paolo L. Trias and Alistair D. B. Cook

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Executive Summary

The 2018 Central Sulawesi earthquake and tsunami highlights the complexity of simultaneous disasters, their compounding effects and cumulative impacts. It also emphasises the challenge of responding to disasters in a multi-hazard prone archipelago. More importantly, it underlines the need to protect and assist exposed and vulnerable communities from emerging and evolving disaster risks. From January to March 2019, the RSIS Humanitarian Assistance and Disaster Relief (HADR) Programme conducted desk research, key informant interviews and field observation in Indonesia to examine the humanitarian efforts during the emergency response phase in Palu from 28 September to 26 October 2018. This report summarises and presents the main challenges, good practices, broad trends and key opportunities that emerged from the study. It offers policy recommendations for developing key partnerships and enhancing disaster governance in Indonesia and the wider Southeast Asian region.

Introduction

Southeast Asia is one of the most disaster-prone and disaster-affected regions in the world.[1] It is home to several countries, like Indonesia, that are regularly subjected to frequently occurring natural hazards due to their geographical and physical features.[2]

On the evening of 28 September 2018, a shallow 7.5-magnitude earthquake struck Central Sulawesi.[3] The earthquake triggered near-field tsunamis with heights reaching above 6 metres, major landslides, and extensive soil liquefaction in several areas.[4] Collectively, it was the deadliest natural disaster in Indonesia and the world that year. The most affected areas were Donggala, Palu, Parigi Moutong and Sigi.

The compounding effects of simultaneous disasters in Central Sulawesi resulted in significant damage and loss of lives, livelihoods, properties and assets. At least 2,000 people died, 1,000 went missing, 4,000 were injured, and 200,000 displaced at the end of the emergency response phase.[5] It is estimated that about IDR 18 trillion in economic costs were incurred from the disaster impacts.[6]

Palu, in particular, is on top of a gradually slipping plate and the Palu-Koro fault that runs through it is considered the greatest seismic risk in eastern Indonesia.[7] Yet, the 2018 Central Sulawesi disaster seemed to have taken scientists, disaster managers, government officials and the local population by surprise. The initial

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1 UN ESCAP, "Leave No One Behind: Disaster Resilience for Sustainable Development", Asia-Pacific Disaster Report, UN ESCAP, 2017, https://www.unescap.org/publications/asia-pacific-disaster-report-2017-leave-no-one-behind.

2 UN Office for the Coordination of Humanitarian Affairs (UNOCHA), "Major natural Hazards in Asia and the Pacific", Retrieved from Reliefweb, https://reliefweb.int/map/world/major-natural-hazards-asia-and-pacific-0.

3 United States Geological Survey (USGS). "M 7.5 — 70 km N of Palu, Indonesia", USGS, https://earthquake.usgs.gov/earthquakes/eventpage/us1000h3p4/executive.

4 AHA Centre, "Situation Update No. 15: Sulawesi Earthquake, 26 October 2018", https://ahacentre.org/situation-update/situation-update-no-15-sulawesi-earthquake-26-october-2018/.

5 UNOCHA, "Asia and the Pacific: Weekly Regional Humanitarian Snapshot, 23–29 October 2018", https://reliefweb.int/report/indonesia/asia-and-pacific-weekly-regional-humanitarian-snapshot-23-29-october-2018.

6 CNN Indonesia, "BNPB reveals three Indonesian disasters as rare phenomena," CNN Indonesia, 31 December 2018, https://www.cnnindonesia.com/nasional/20181231163920-20-357573/bnpb-ungkap-tiga-bencana-indonesia-sebagai-fenomena-langka.

7 Watkinson, Ian M., and Robert Hall, "Fault Systems of the Eastern Indonesian Triple Junction: Evaluation of Quaternary Activity and Implications for Seismic Hazards", Geological Society of London, Special Publications, no. 441 (2016): 71–120.

dominant narrative was that the tsunami early warning system had failed. Tsunamis like those that struck Palu are difficult to model and predict.[8] Available technology could not have accurately detected the tsunami and disseminated a warning quickly enough.[9]

The Palu tsunami was induced by a strike-slip fault, which is less likely to generate a tsunami because its horizontal grinding movement tends to displace less amounts of water compared to abrupt vertical movements in the earth's crust.[10] But other factors like the depth of the channel leading to the low-lying city and the shape of its bay amplified the intensity and size of the waves. The tsunami grew and accelerated as the bay became narrower and shallower along the coastline.[11]

Large gatherings of people in Palu were caught off guard. The earthquake and tsunami struck early evening on a Friday, a time when many pray at mosques along the bay. Several videos also show that attendees of the annual Palu Nomoni festival were still strolling along Talise Beach seconds before the earthquake and tsunami hit. Survivors suggest that many were unaware of the approaching tsunami and the disaster unfolding. Many houses along the Palu shoreline were wiped out upon impact. Also, several hotels, malls and places of worship collapsed, killing or trapping people. The city's airport and some seaports were inoperable for days and the main bridge and major roads to and from the city were rendered impassable.

[8] Hood, Marlowe, "Indonesia tsunami worsened by shape of Palu Bay: Scientists", Phys.Org, 2 October 2018, https://phys.org/news/2018-10-indonesia-tsunami-worsened-palu-bay.html.

[9] Scheffers, Anja. "Why Indonesia's tsunamis are so deadly", *The Conversation*, 3 October 2018. https://theconversation.com/why-indonesias-tsunamis-are-so-deadly-104158.

[10] Hunter, Dana, "A Very Unusual Tsunami: The 2018 Sulawesi Earthquake", *The Scientific American*, 1 October 2018, https://blogs.scientificamerican.com/rosetta-stones/a-very-unsual-tsunami-the-2018-sulawesi-earthquake/.

[11] Wei-Haas, Maya, "The Science of Indonesia's Surprise Tsunami", *National Geographic*, 1 October 2018, https://www.nationalgeographic.com/environment/2018/09/indonesia-tsunami-sulawesi-explained-science-geology/.

Mosque and other structures along the coast of Palu damaged by the tsunami.
Image Source: *Angelo Paolo L. Trias.*

Connecting roads to and from affected areas destroyed by the earthquake.
Image Source: *Angelo Paolo L. Trias.*

The most affected areas in Palu were relatively distant from the coast but were devastated by landslides and soil liquefaction.[12] A sinkhole effect swallowed the village of Balaroa. As much as 70 per cent of its population were confirmed dead or reported missing. In Petobo, hundreds of houses sank up to their roofs or were dragged away from their locations. Survivors from these areas not only lost loved ones and property but also land that they had inhabited or owned.

Remains of houses in Petobo devastated by landslides and liquefaction.
Image Source: *Angelo Paolo L. Trias.*

This policy report explores the multi-layered disaster governance system in place in Southeast Asia through the case of the 2018 Central Sulawesi earthquake and tsunami. It will reconsider the disaster management landscape and identify the challenges faced during the simultaneous disasters. It will also assess the performance of the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre) as it steps up to coordinate international and non-government offers of assistance despite constraints in organisational and operational capacity. By capturing the system in this manner, this policy report seeks to reconceptualise the disaster governance system to offer policy recommendations.

[12] Petley, Dave, "High Resolution Imagery of the Palu Landslides", American Geophysical Union, 3 October 2018, https://blogs.agu.org/landslideblog/2018/10/03/palu-landslides-1/.

Methodology

The RSIS HADR Programme used a combination of desk research, key informant interviews and field observation in this study (see Appendix 1). A framework based on Dorothea Hilhorst's concept of "Social Domains of Response to Risks and Disasters" (see Appendix 1) was used to analyse the structures, mechanisms and arrangements behind official and organised HADR efforts by the Indonesian government and its key partners.

Two main questions are addressed in this report: *What are the factors that facilitate or limit the coordination, movement, and distribution of actors, information and resources during emergency response? What are the processes that facilitate or limit effective and inclusive disaster governance?*

Interview Findings and Field Observations

In response to the main shock and tsunamis that struck settlements in Palu and surrounding areas, Indonesia's National Disaster Management Authority (BNPB) deployed its senior officials and rapid response team to initiate an impact and needs assessment.[13] A web portal to share disaster updates and information with partners was established.[14] Concurrently, BNPB's spokesman actively engaged the public by posting updates on social media, issuing press releases and fielding interviews.

Immediate HADR efforts were concentrated on Palu for three reasons: (i) it was the most affected area in terms of fatalities and missing persons; (ii) it is the centre of social, economic and political activities, being capital of Central Sulawesi; (iii) as the seat of the provincial government, it is mandated to lead the emergency response (see Appendix 2).

A range of national government actors — ministries and other agencies, state-owned companies, military and police — activated their disaster management functions to support sub-national capacity in Palu. Within a week, hundreds of representatives and volunteers from foreign governments, international organisations, country-based NGOs, faith-based groups and the private sector converged on the affected areas. Close to 30 states and more than 100 organisations outside of the country reached out to Indonesia to help. Indonesia released a list of six initial needs that it was willing to accept with conditions. It eventually narrowed the list down to five after excluding medical assistance teams, a need it was able to meet (see Appendix 3). The emergency response stage officially ended on 26 October 2018.[15]

This policy report presents its findings and observations under three categories: outer layer support, inner layer support, and core support (see Appendix 4). The outer layer refers to assistance provided by "offshore" actors (the international community). The inner layer refers to assistance provided by national actors within Indonesia. The core support refers to assistance provided by local actors in disaster-affected areas or those related to disaster-affected populations.

[13] AHA Centre, "Situation Update No. 1: Sulawesi Earthquake, 29 September 2018", https://ahacentre.org/situation-update/situation-update-no-1-sulawesi-earthquake-29-september-2018/.
[14] BNPB. "Web Portal." BNPB, https://bnpb.go.id/gempasulteng.html.
[15] AHA Centre, "Situation Update No. 15: Sulawesi Earthquake, 26 October 2018", (2018), https://ahacentre.org/situation-update/situation-update-no-15-sulawesi-earthquake-26-october-2018/.

I. Outer Layer Support

On multilateral support: Adopt and promote a demand-driven, localised and relational approach to aid

Indonesia's disaster management capacities have significantly improved since the 2004 Indian Ocean earthquake and tsunami.[16] Continued progress is leading to a growing preference for a nationally led, regionally supported and international-as-necessary emergency response model. Government-affiliated and other national actors had minimal issues in mobilising their personnel and material resources in affected areas during the Central Sulawesi disaster. Indonesia was very particular about offers of assistance and only accepted a limited number of offers that were targeted in scope.

Foreign actors cleared to operate demonstrated that they had either niche capabilities that filled gaps or enough capacity to deliver at scale and supplement national-led efforts. For instance, the American-based NGO GER3 handled debris management using heavy equipment, a task relatively few are specialised in. Team Rubicon, an international NGO, deployed emergency teams that blended skills of military veterans with the experience of civilian first responders. Both organisations have structure, personnel and tools to carry out specific services without posing an additional burden to the Indonesian government.

Foreign organisations operating in Palu had three common characteristics: they were nationally registered in Indonesia, continuously operated in-country during "peace time" and had a record of assisting the government in previous disasters. Some of these actors created an Indonesian identity by adopting Bahasa names like Yayasan Sayangi Tunas Cilik (Save the Children). They also invested in building a roster of competent and experienced local staff. Moreover, they actively engaged the government before and after disasters, not just during the emergency phase. This enabled them to reorient themselves from aid provision to capacity building and technical support as national disaster management priorities changed.

Another feature of foreign actors that gained access was their capability to balance working in a "system-type" response model concentrating on operations and a "network-like" response model functioning around relations. Those without

[16] Suppasri, A., et al, "A Decade after the 2004 Indian Ocean Tsunami: The Progress in Disaster Preparedness and Future Challenges in Indonesia, Sri Lanka, Thailand and the Maldives", *Pure and Applied Geophysics* 172, no. 12 (2015): 3313–41.

social connections were not able to mobilise in the disaster sites even if they had the operational capacity. While several actors did not have disaster management offices and programmes in Indonesia, they had embedded themselves in positions that allowed them to leverage people-to-people links. This was evident in their direct and long-standing partnerships with key contacts in ministries (e.g., the Ministry of Health and the Ministry of Social Affairs). Such actors were sensitised to the constraints officials faced and the limits of their authority and thereby were able to put forward proposals that considered the intersection of interests.

On regional support: Enable the operationalisation of phase 2.0 of One ASEAN One Response

ASEAN 2.0 refers to "The ability to mobilise the required assets and capacities to collectively respond to disasters in the region with increased speed, scale and solidarity, coordinated by the AHA Centre." [17] It is one of the phases in One ASEAN One Response, a roadmap for adapting to an ever-evolving regional humanitarian landscape.

During the Central Sulawesi disaster, Indonesia for the first time assigned the AHA Centre, a regional body, to coordinate offers of international and non-government assistance.[18] This created opportunities and challenges for different actors. For the government and national actors, it was a convenience because of their proximity to and familiarity with the AHA Centre. Offshore and foreign actors, however, generally viewed ASEAN 2.0 as a complication as it added another layer of bureaucracy. For multilateral institutions like the United Nations, the AHA Centre challenged their adaptive capacity and flexibility to change. For the AHA Centre, the Central Sulawesi disaster provided the platform to test ASEAN 2.0 capabilities and interoperability agreements with the United Nations.

The findings suggest that there was some consensus that ASEAN 2.0 had proved operational. For instance, the AHA Centre modified its Joint Operating Coordination Centre for Assistance (JOCCA) structure to process incoming assistance from external sources. It also established the Joint Effort for Assessment and Information Management structure with partners to consolidate information that Indonesia needed to understand the extent, gaps and nature of aid on the ground.

[17] AHA Centre, "Operationalising One ASEAN One Response", AHA Centre, March 2018, https://ahacentre.org/publication/operationalising-one-asean-one-response/.

[18] AHA Centre, "Situation Update No. 1: Sulawesi Earthquake, 29 September 2018", https://ahacentre.org/situation-update/situation-update-no-1-sulawesi-earthquake-29-september-2018/.

However, current AHA Centre functions are limited because it is mainly based on government-to-government (G2G) mechanisms. For instance, during the Central Sulawesi disaster, the AHA Centre used a form, the SASOP Form, which provided a standard operating procedure for capturing and consolidating offers of assistance by ASEAN member states. But there was a lot confusion among non-ASEAN members and first-time users about what type of information was needed and how to use it.

A feasible step to resolve this issue is to proactively reach out to potential partners by training them on the use of SASOP. This will not only facilitate offers of assistance in the future but may also increase the visibility of the AHA Centre. Despite its active role in recent disasters, several actors — international and local — were still not aware of the AHA Centre's mandate, role and ways of working.

On bilateral support: Continue building and strengthening military-to-military relations and civil-military dialogue between ASEAN member states

Preference for offering and receiving bilateral aid through foreign militaries was evident during the Central Sulawesi disaster. There were no significant issues in this regard. Defence diplomacy continued to play a vital role in facilitating HADR operations, especially between foreign governments. Our interviewees largely viewed military-to-military cooperation as good practice. Militaries were able to operate for longer periods of time yet limited their physical presence that could create negative perceptions.

The Indonesian National Armed Forces (TNI) coordinated all foreign military assets through bilateral channels and civil-military meetings. A military-controlled air-bridge between Balikpapan and Palu was considered the most efficient and safest way to reach Palu. It was operated with the support of 17 international assets under TNI leadership. Civilian organisations that actively engaged in dialogue with the military encountered few constraints in transit and transportation of human and material resources.

II. Inner Layer Support

On national government response: Implement national response frameworks that enhance existing intra- and inter-government coordination mechanisms

Improvements in national capacities could be observed in the way Indonesian ministries joined efforts and coordinated clusters with their international partners such as the World Health Organization (WHO), the World Food Program (WFP) and the International Organization for Migration (IOM). However, such improvements have not trickled down to the sub-national level, which is the critical link to the affected population. There is therefore a need to develop clear procedures for localising policies, appropriating adequate funds and building sufficient sub-national institutional capacity.

Another key finding is that there was no active national response framework at the time that guided the overall coordination. This created several issues from the beginning because the lack of clarity blurred the responsibilities of stakeholders. For instance, the AHA Centre was appointed to handle offers of assistance but the Indonesian Red Cross (PMI) was also tasked to accept cash donations. Those offering international assistance pointed out that their enquiries were passed around between the two quite often.

The list of needs released by Indonesia defined the scope for offers of international assistance, yet, insufficient detail led to sub-optimal results. In future, donors should be provided with detailed specifications, such as the kinds of equipment preferred (e.g., type of generators) and the conditions for accepting services (e.g., duration of support). Transactions would be eased if the government laid out such specifications, as it eventually did when it pin-pointed that it preferred C130s or something similar instead of simply asking for air transport capable of landing on a 2-kilometre airstrip.

III. Core Support

On community and local response: Encourage local NGOs to consolidate and complement each other's efforts

Managing a highly diverse and very large Indonesian NGO ecosystem during emergency response remains a major challenge. There are close to 3,000 Indonesian NGOs, about 2,000 of which are considered active. The different cultures and interests of such NGOs offer a wide coverage of services. But managing multiple partners is challenging when resources are stretched thin. Groups of NGOs operating in networks rather than as multiple separate entities appeared to be more effective in acquiring and mobilising local humanitarian action and resources.

For example, Humanitarian Forum Indonesia (HFI) was an enabler because it represented numerous groups yet presented as one voice through membership of the UN Humanitarian Country Team (HCT), the central in-country humanitarian coordinating body supporting the Indonesian government. Similarly, the Muhammadiyah Disaster Management Centre (MDMC) and Nahdlatul Ulama Disaster Management and Climate Change Institute (LPBI NU) have cross-sectoral membership and rosters of volunteers down to the village level. MDMC and LPBI NU played essential roles in managing numerous players offering informal and spontaneous assistance that could have further disrupted emergency operations.

Conclusion

Overall, the 2018 Central Sulawesi humanitarian efforts present three key insights. First, the move towards a “nationally led, regionally supported and international-as-necessary” disaster response model is expected to continue as national disaster management capacities further improve in the region. Second, the next challenge for national governments in this region is to integrate existing disaster management structures, mechanisms and arrangements so that institutional capacities converge and empower sub-national government. Third, much more work needs to be done to sensitise stakeholders to the processes and procedures of the AHA Centre as it becomes a key node in ASEAN disaster governance.

Policy Recommendations

The following policy recommendations could improve disaster governance in Southeast Asia, particularly Indonesia.

Regional Level

- Design a regional framework for localisation to build sub-national government capacity in Southeast Asia and ensure that there is commitment to humanitarian work beyond the national level.
- Further develop training and education programmes to raise awareness of ASEAN's role in disaster governance. An online educational module on the role of the AHA Centre and its processes and procedures would facilitate multi-stakeholder engagement.
- Capture lessons learnt from the military-to-military logistics cooperation in the response to Central Sulawesi to facilitate future humanitarian operations.

National Level

- Ensure that national disaster management authorities develop strong institutional links with sub-national governments as the main nodes to deliver humanitarian assistance to affected communities.
- Facilitate the sharing of disaster preparedness and response experiences for local governments to strengthen institutional capacity.

Sub-national Level

- Identify a focal point within each local government to serve as the relationship manager to NGOs to facilitate cooperation in humanitarian contexts.
- Engage local NGOs with a view to understanding their expertise, identifying niche capacities and consolidating and complementing disaster response efforts.
- Incentivise local governments to exercise their local disaster preparedness and response plans with a view to improving and adapting their capacity.

Appendix

Appendix 1: Research framework and methodology

Methodology

Desk Research

Government updates, humanitarian bulletins, situation reports, expert commentaries, and press releases were reviewed to gain context of the event and to grasp the prevailing narrative.

Key Informant Interviews

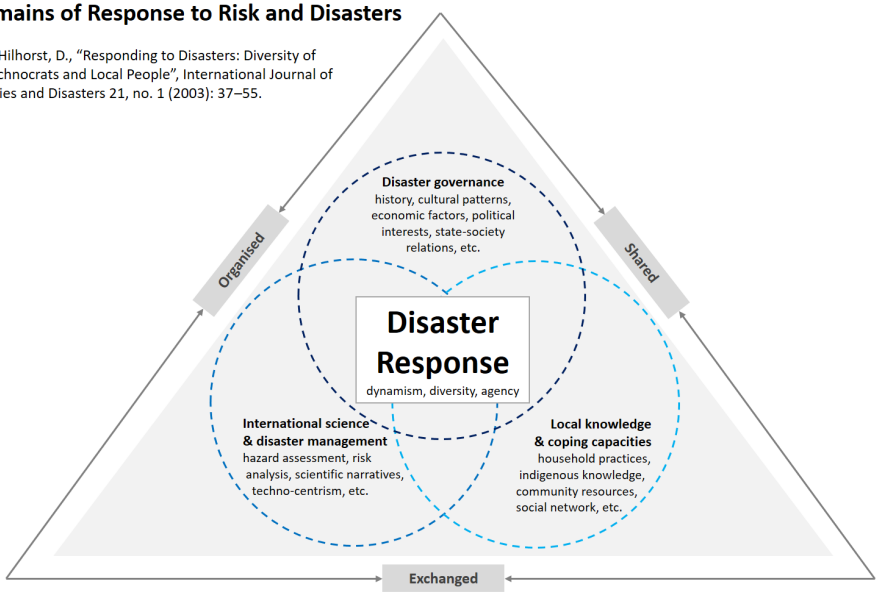
Thirty (30) semi-structured in-person and online interviews were conducted with key informants representing national and foreign governments, multilateral and international organizations, regional bodies, Red Cross and Red Crescent societies, NGOs, faith-based groups, academics, and local communities.

Field Observation

Fieldwork was carried out in Jakarta and Palu, Indonesia to directly engage key informants and observe their activities in natural settings.

Social Domains of Response to Risk and Disasters

Adapted from: Hilhorst, D., "Responding to Disasters: Diversity of Bureaucrats, Technocrats and Local People", International Journal of Mass Emergencies and Disasters 21, no. 1 (2003): 37–55.



Appendix 2: Emergency response priorities outlined by the Indonesian government during the emergency response stage

Emergency response priorities of the Indonesian government
• To continue evacuation, Search and Rescue (SAR), and victim retrieval efforts; • To continue provision of medical services, strengthen field hospitals and perform mass burial; • To speed up the distribution of food and relief items to Internally Displaced Persons (IDPs); • To rehabilitate infrastructure and restore critical services such as power and telecommunications; • To set up a staging area and logistics hub that will run 24 hours; and • To reactivate the market in Palu city with security support from the police.

Adapted from AHA Centre, Situation Update No. 7: M 7.4 Earthquake & Tsunami — Sulawesi, Indonesia, 5 October 2018, https://ahacentre.org/wp-content/uploads/2018/10/AHA-Situation_Update-no7-Sulawesi-EQ-rev2.pdf

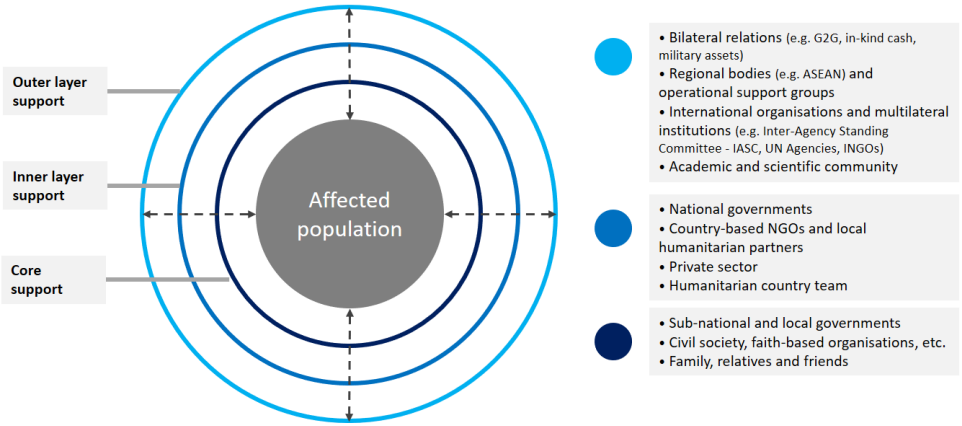
Appendix 3: List of needs identified by the Indonesian government

List of the six initial needs (as of 1 October 2918)	**List of the five needs** **(**as of 3 October 2018)
(1) Air transport capable of landing in short runway (2-km strip); (2) Family tents; (3) Water purification sets; (4) Generator sets; (5) Medical assistance; (6) Environmental management for mosquito-borne diseases (malaria).	(1) Air transportation (preferably C-130 or similar); (2) Tents (shelter kits); (3) Water treatment; (4) Electricity generators; (5) Financial donations, i.e., from foreign governments and international organisations, preferably to National Disaster Management Authority (BNPB) and Indonesian Red Cross (PMI).

Adapted from AHA Centre, Situation Update No. 5: M 7.4 Earthquake & Tsunami — Sulawesi, Indonesia, 3 October 2018, https://ahacentre.org/wp-content/uploads/2018/10/AHA-Situation_Update-no5-Sulawesi-EQ-rev.pdf

Appendix 4: Layers of HADR support

Governance levels of humanitarian assistance and disaster relief (HADR) support



Adapted from: UNOCHA. *Disaster Response in Asia and the Pacific: A Guide to International Tools and Services*. Bangkok, Thailand: UNOCHA, 2018

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