# DISASTER INFORMATION PROVIDERS
## IN INDONESIA

International Development
Australian Broadcasting Corporation

# Background

This report has been prepared by the International Development Unit of the Australian Broadcasting Corporation (ABCID) based on background research, and discussions held between July and August 2014 with media organisations, disaster management authorities, and local and international non-government organisations. The overall focus of consultations was on community resilience, how citizens get information during disasters and opportunities to improve two-way communication between affected people and support providers via the media.

## Australian Broadcasting Corporation (ABC)

As Australia's national broadcaster the ABC functions as Australia's emergency broadcaster. The ABC uses its radio, television and online services to deliver timely, accurate and relevant information to affected communities during fires, floods and other natural disasters and emergencies. The ABC also plays an important role in building community resilience and the ability to prevent, prepare, respond and recover during times of adversity. Local radio (54 stations across the country) has an estimated national penetration rate of 99.4 per cent and is often the only source of vital weather and emergency service information for regional and rural Australians.

This emergency broadcasting role is supported by agreements with all state and territory emergency services. The ABC has formal and informal arrangements allowing emergency agencies and recovery specialists to use the local radio network to deliver emergency warnings. Local radio managers are active members of most state and local emergency management committees.

The ABC provides emergency broadcast training for its local radio staff to ensure that they are adequately prepared for emergency situations. In recent years, local radio has provided emergency broadcasting for fires, cyclones, flooding, storms, tsunami warnings, heatwaves, equine flu outbreaks and locust plagues. The ABC has provided emergency broadcasting in every state and territory, on numerous occasions.

Radio and television broadcasting are very effective methods of communicating important information to large groups of people before, during and after emergency situations. Local radio services are particularly effective, as broadcasters have established relationships with local communities and detailed local knowledge that may assist listeners.

# Acknowledgements

## Acronyms

| | |
|---|---|
| **AAP** | Accountability to Affected Populations |
| **ABCID** | Australian Broadcasting Corporation International Development |
| **ADRC** | Asian Disaster Reduction Centre |
| **AIFDR** | Australia – Indonesia Facility for Disaster Reduction |
| **BMKG** | Badan Meteorologi, Klimatologi dan Geofisika |
| **BNPB** | Badan Nasional Penanggulangan Bencana |
| **BPBD** | Badan Penanggulangan Bencana Daerah |
| **CSR** | Corporate Social Responsibility |
| **CwC** | Communications with Communities |
| **DM** | Disaster Management |
| **DRR** | Disaster Risk Reduction |
| **DRRM** | Disaster Risk Reduction and Management |
| **DSWD** | Department of Social Welfare and Development |
| **InaTEWS** | Indonesian Tsunami Early Warning System |
| **INGO** | International Non-Government Organisation |
| **KOMINFO** | Ministry of Information |
| **LIPI** | Lembaga Ilmu Pengetahuan Indonesia |
| **NGO** | Non-Government Organisation |
| **PPP** | Public-Private Partnership |
| **RI** | Republic of Indonesia |
| **RRI** | Radio Republik Indonesia |
| **TEWS** | Tsunami Early Warning System |
| **TVRI** | Televisi Republik Indonesia |
| **UNDP** | United Nations Development Programme |
| **UNOCHA** | United Nations Office for the Coordination of Humanitarian Affairs |

# Country context

The Republic of Indonesia is a country made up of approximately 238 million people and approximately 17,508 islands that sit along the equator in South East Asia. Close to 60 per cent of the population live on the main island of Java and the country shares land borders with Papua New Guinea, East Timor and Malaysia.

Indonesia's geographical, geological and demographic characteristics make it particularly susceptible to disasters. It is situated in the "Pacific Ring of Fire", between three Tectonic plates of Indo Australia, Eurasia and Pacific, and is estimated to experience 20 earthquakes per day although many of them are too small to feel. These earthquakes do on occasion lead to tsunamis, the most infamous being the 'Boxing Day Tsunami' of 2004 that affected the Aceh region, killing 168,000 Indonesians and displacing more than half a million.

The country has more than 21,000 kilometres of coastline making it particularly susceptible to storm surges and rises in sea levels. Additionally, there are around 500 volcanoes, of which 128 are active. The yearly wet season brings regular flooding, landslides and the 'Typhoon Super Highway' brings 20 to 30 typhoons per year. Mountainous areas, particularly in the west coast of Sumatra, West Java, Kalimantan, Sulawesi and Papua receive the highest rainfall.

There are around 300 distinct native ethnic groups in Indonesia, and 742 different languages and dialects. 23 million people speak Bahasa as their mother tongue with more than 140 million speaking it as a secondary language.

Indonesia has a particularly vibrant and crowded media landscape with more than 1,200 radio stations and 350 local TV stations operating within the country. While Government owned national broadcasters do remain relevant in the media landscape, they are increasingly losing audience to their commercial competitors.

The Indonesian National Board for Disaster Management, or the Badan Nasional Penanggulangan Bencana (BNPB) is the central governing body for Disaster Management (DM) in the country. This body is represented at the provincial and district levels by the Badan Penanggulangan Bencana Daerah (BPBD) agencies. The national meteorological organisation, Badan Meteorologi, Klimatologi dan Geofisika (BMKG) issues warnings to BNPB, the media, civil society and humanitarian agencies from their tsunami, flood and earthquake warning centres.

# Major disaster risks

Indonesia is a particularly disaster prone nation. It experiences high numbers of earthquakes, typhoons and has more than one hundred active volcanoes. Communities situated along the coast are susceptible to storm surges, tsunamis and rises in sea levels. The nation is also susceptible to slow onset disasters such as droughts.

According to a report by the Asian Disaster Reduction Centre (ADRC) in 2012, from 2000 – 2010 the annual cost of the direct damage from disasters ranges from $US 100 billion to 110 billion, equivalent to 5 per cent of the national (GDP). There are on average 1,002 casualties annually and flooding was the most common disaster during the last 5 years (ADRC, 2012).

## Summarised Table of Natural Disasters in Indonesia from 1900 to 2014

|  |  | # OF EVENTS | KILLED | TOTAL AFFECTED | DAMAGE (000 US$) |
|---|---|---|---|---|---|
| Drought | Drought | 9 | 9329 | 4804220 | 160200 |
| Earthquake | Ground movement | 105 | 30115 | 8536402 | 7189326 |
|  | Tsunami | 9 | 168372 | 580520 | 4506600 |
| Flood | Unspecified | 51 | 1802 | 2549600 | 90638 |
|  | Coastal flood | 1 | 11 | 2000 | – |
|  | Flash flood | 32 | 2037 | 1236455 | 247500 |
|  | Riverine flood | 83 | 2692 | 6044056 | 5556909 |
| Landslide | Landslide | 49 | 2270 | 393188 | 120745 |
| Mass movement (dry) | Landslide | 1 | 131 | 701 | 1000 |
| Storm | Unspecified | 3 | 35 | 12000 | – |
|  | Convective storm | 3 | 25 | 12950 | 1000 |
|  | Tropical cyclone | 6 | 1953 | 5298 | – |
| Volcanic activity | Ash fall | 56 | 18310 | 1333213 | 530390 |
| Wildfire | Forest fire | 9 | 300 | 3034478 | 9329000 |

*Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université Catholique de Louvain - Brussels - Belgium"*

# Media consumption

Indonesia has a vibrant and crowded media market with more than 1,200 radio stations, more than 1,000 print media publications and numerous small scale community radio stations.

Television is an increasingly popular and commercial market. There are 11 national TV channels and 10 privately owned channels as well as one public channel complemented by more than 350 local TV stations. Cable and satellite are still relatively small markets with only 2.5 million customers in 2012.
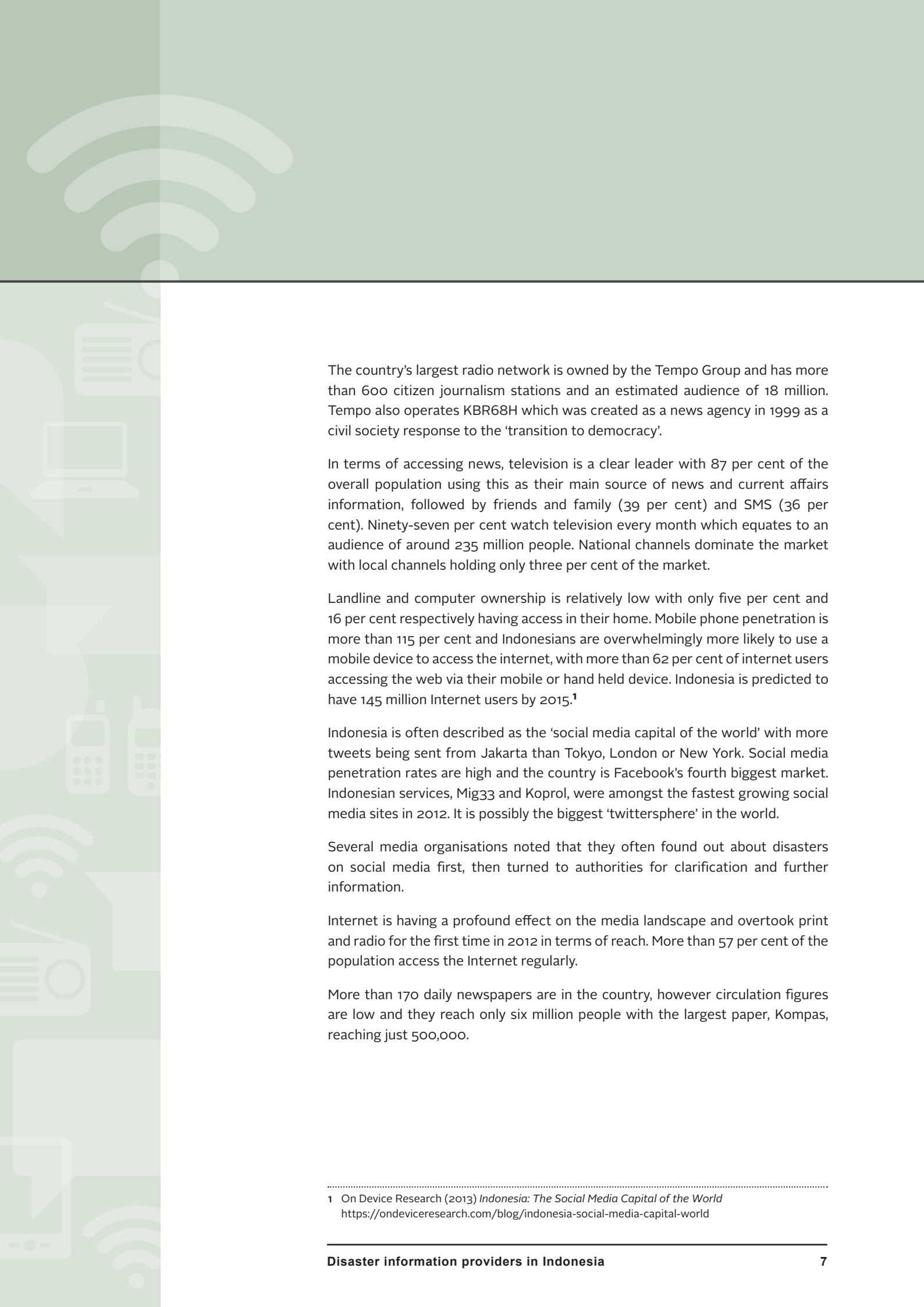
Research conducted by Gallup for the Voice of America in 2012 shows that 98 per cent of urban citizens and 91 per cent of people in regional areas have access to a TV. Following regional trends, radio has been decreasing in popularity over recent years. In 2010, 50 per cent of the population had access to a radio at home. Just two years later, only 38 per cent of households had a radio.

Media ownership in Indonesia is dominated by 13 entities, the state and two other privately funded media organisations that each have a range of television, radio and online platforms. A key programming strategy is to aggregate content across all stations in a company group. Six groups own all 10 TV networks, the largest being the MNC group which has a 37 per cent share of the market including RCTI, Global TV and MNCTV. Some of these conglomerates have clear political ties and wield enormous power over political dialogue in the country.

These commercial outlets are complemented by state funded public service broadcasters, Radio Republik Indonesia (RRI) and Televisi Republik Indonesia (TVRI), which are supported by dozens of regional bureaus.

RRI is the national public service radio broadcaster made up of 86 stations across the country. The 2002 broadcasting law states that RRI 'has an independent, neutral, non-commercial character and functions to provide services in the people's interest'. RRI's flagship radio service is Jaringan Berita Nasional (The National News Network) or 'Pro 3'.

Few urban Indonesians tune in to RRI due to the wide choice of commercial alternatives available, however the station remains popular in rural and remote areas.

The country's largest radio network is owned by the Tempo Group and has more than 600 citizen journalism stations and an estimated audience of 18 million. Tempo also operates KBR68H which was created as a news agency in 1999 as a civil society response to the 'transition to democracy'.

In terms of accessing news, television is a clear leader with 87 per cent of the overall population using this as their main source of news and current affairs information, followed by friends and family (39 per cent) and SMS (36 per cent). Ninety-seven per cent watch television every month which equates to an audience of around 235 million people. National channels dominate the market with local channels holding only three per cent of the market.

Landline and computer ownership is relatively low with only five per cent and 16 per cent respectively having access in their home. Mobile phone penetration is more than 115 per cent and Indonesians are overwhelmingly more likely to use a mobile device to access the internet, with more than 62 per cent of internet users accessing the web via their mobile or hand held device. Indonesia is predicted to have 145 million Internet users by 2015.[1]

Indonesia is often described as the 'social media capital of the world' with more tweets being sent from Jakarta than Tokyo, London or New York. Social media penetration rates are high and the country is Facebook's fourth biggest market. Indonesian services, Mig33 and Koprol, were amongst the fastest growing social media sites in 2012. It is possibly the biggest 'twittersphere' in the world.

Several media organisations noted that they often found out about disasters on social media first, then turned to authorities for clarification and further information.

Internet is having a profound effect on the media landscape and overtook print and radio for the first time in 2012 in terms of reach. More than 57 per cent of the population access the Internet regularly.

More than 170 daily newspapers are in the country, however circulation figures are low and they reach only six million people with the largest paper, Kompas, reaching just 500,000.

1  On Device Research (2013) *Indonesia: The Social Media Capital of the World*
   https://ondeviceresearch.com/blog/indonesia-social-media-capital-world

# Observations on media as disaster information providers

The media has an advanced response to the coverage of disasters and clear guidelines as to how it must react before, during and after disasters. Specifically, earthquakes and tsunamis are mentioned in broadcasting laws issued by the Ministry of Information (KOMINFO).

The regulation states that '*to ensure effectiveness and efficiency of early warning for tsunamis or other disasters there is a need to enact a national policy on early warning for tsunamis and other disasters through Broadcasting Services by way of a Regulation of the Minister for Communication and Information*'.[2]

In Article 19 of the Law of the Republic of Indonesia Number 24 of 2007 Concerning Disaster Management, in relation to the media's role in early warning, it states:

*2. (5) Upon deciding on early warning ..., government institutions, private broadcasting agencies, and the mass media shall disseminate it to mobilize resources.*

As mentioned in broadcasting law UU No. 32/2002 on Article 4 the functions of the broadcast media are information, education, social entertainment, control and social cohesiveness.
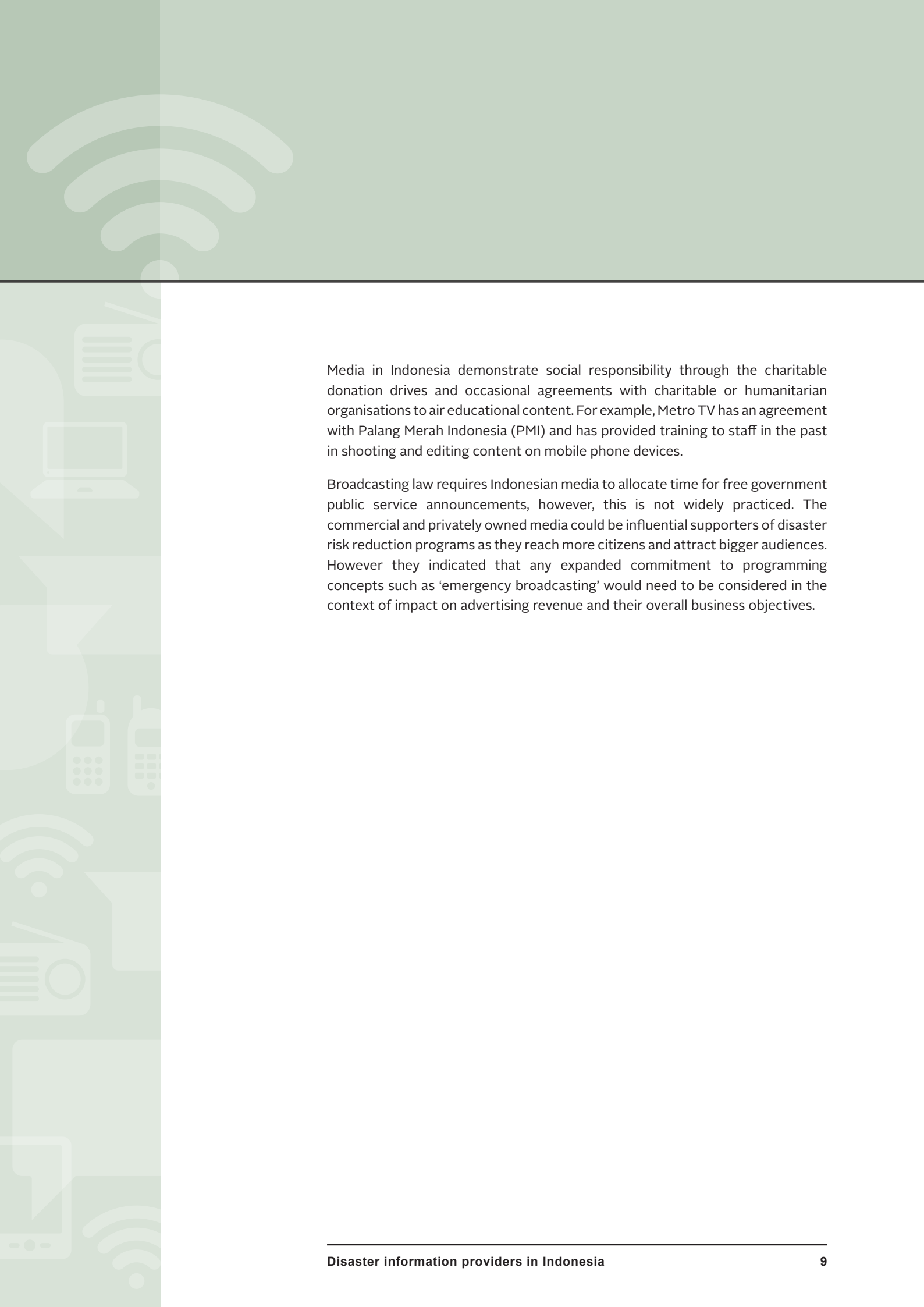
Amongst 'traditional' media in Indonesia, television is most popular and is the first point of call for disaster related information. However, as electricity is often either disconnected in areas predicted to be affected by disasters or infrastructure is damaged in the disaster itself, radio is seen as a more reliable platform. It is widely accessible across metropolitan and rural areas, can be listened to on battery powered transistors, mobile phones or village speaker systems and can facilitate two-way interaction with citizens.

Community radio is present across the majority of the country but is particularly active in disaster prone areas. There are several dynamic community stations, staffed by volunteers, who actively provide disaster related information to their communities on air and via social media.

---

2  Ministry of Information Republic of Indonesia (2006) Number20/P/M.Kominfo/8/2006
http://www.gitews.org/tsunami-kit/en/E3/further_resources/Perkominfo%2020-2006_
Early%20warning%20for%20tsunamis%20or%20other%20disasters%20through
%20nationwide%20broadcasting%20service.pdf

Media in Indonesia demonstrate social responsibility through the charitable donation drives and occasional agreements with charitable or humanitarian organisations to air educational content. For example, Metro TV has an agreement with Palang Merah Indonesia (PMI) and has provided training to staff in the past in shooting and editing content on mobile phone devices.

Broadcasting law requires Indonesian media to allocate time for free government public service announcements, however, this is not widely practiced. The commercial and privately owned media could be influential supporters of disaster risk reduction programs as they reach more citizens and attract bigger audiences. However they indicated that any expanded commitment to programming concepts such as 'emergency broadcasting' would need to be considered in the context of impact on advertising revenue and their overall business objectives.

# Media coverage of disasters

Indonesia has a competitive news environment and reporting around disasters is often treated as 'breaking news' rather than as a service to the public. As the country experiences regular disasters, this 'breaking news' approach means that many smaller or medium impact disasters get little to no coverage by the media. Coverage is heavily focused on the impact of the disaster and immediately after the event, with very little focus on providing DRR information or following communities through the relief and reconstruction phase. The voracious competition can also mean that the rights of the affected community are sometimes not respected by journalists reporting from disaster-affected regions.

Attracting the largest audience numbers, commercial media plays an important role in alerting the public to a possible disaster. However, very few have any detailed standard operating procedures in relation to their disaster response and reactions and commitment to providing emergency information varies. Metro TV is a good example of a commercial media organisation dedicated to providing information during a disaster. Research from Lembaga Ilmu Pengetahuan Indonesia (LIPI) shows they are often the first to air warnings from BMKG, and then if the event is large enough they will shift to a breaking news format of rolling coverage until the threat has passed or diminished. While any journalist may report on disasters, they have trained four to five 'hot spot' reporters that are equipped to report safely in hazardous environments and are outfitted with appropriate protective and survival equipment in the field so as not to act as a burden on affected communities. Metro TV has an ongoing relationship with both Indonesian Red Cross (PMI) and Australia-Indonesia Facility for Disaster Reduction (AIFDR) to air disaster related programming, however, this has had a varying level of commitment in recent times.

Major commercial broadcaster RCTI is investigating the possibility of creating a 24/7 weather channel, which would also screen documentaries, news and feature reports on disaster and climate change related topics. Another commercial broadcaster, Kompas, has a particularly creative approach to addressing disaster related issues. Their 'Ring of Fire' project was a company wide initiative that mapped more than 100 active volcanoes in Indonesia and delivered content across several formats including a series of high quality coffee-table books, an interactive website that displayed panoramic images and information on each volcano and documentaries and feature articles.

State owned media has a more traditional approach to the reporting of disasters and relies heavily on government officials and experts for commentary.

Most national television stations and major radio stations have a 24/7 feed directly from BMKG displaying graphics reflecting earthquake incidents. When an earthquake is recorded, BMKG have a five minute window where they will determine the strength of the earthquake and whether a tsunami warning is required. Warning number one is then delivered and it will indicate either a 'Major Warning', a 'Warning', an 'Advisory' or 'No Threat' message. There are three further warnings in the process that deliver further information about threat to communities up until 'Warning 4' which determines the end of a threat.

If the earthquake has a magnitude larger than 6, the Tsunami Warning will immediately be issued and television and radio stations are regulated to 'stop press' and display the warning graphic fed from BMKG and alert their audience. This message, along with a high-pitched siren, must be played for at least 30 seconds immediately after receiving this message. Broadcasters are required to conduct practice tests at least twice a year.

However research from LIPI shows that the response from broadcasters is *ad hoc*, sometimes taking from one to six minutes to display the message and the warning sound, following with varying levels of further information and repeat of the warnings. As tsunamis can form and strike within minutes from an earthquake, reducing this time delay is crucial in providing effective warning to communities.

Currently, emergency information is delivered directly to national media providers who then, along with district BPBD offices, alert the local media. This workflow seems time consuming and would result in the delay of information to these providers and then on to the affected population.

## Warning Receiver System Mode

Several media organisations note that they and the public are likely to hear about a disaster first on social media. Social media is becoming an important tool in the dissemination of disaster information and for the coordination and scrutiny of response. Community media played an important role in highlighting the inadequacies of the relief effort for the affected communities of the 2010 Mt Merapi volcanic eruption. It is widely considered that the mass media response to the disaster, particularly the television coverage, contributed to panic amongst the public.

A community-based group, JALIN Merapi, used their twitter account (@jalinmerapi) to make responding agencies aware of the widespread destruction and connect community members to assist each other. JALIN Merapi also used their website, as well as Facebook groups and community radio, to mobilise a team of volunteers to respond to the specific needs of citizens. This system was extremely successful and the community radio stations, along with the JALIN Merapi social media presence, have continued to support these communities through their network of volunteers. JALIN Merapi has developed editorial standards that dictate the use of these social media platforms during a disaster to avoid misinformation or panic as well as a number of hashtags to make it easy to thematically search disaster related issues. For example, #SUPPLY to inform of the programs and responses of humanitarian actors, #ALERT for warnings related to the disaster and #DEMAND to inform responders to the needs of the affected population.

Indonesian media have been involved in the development stages of the Tsunami Early Warning System (TEWS) since its inception in 2009. There have been several simulation exercises, such as the Indian Ocean Wave exercise in 2009 and 2014 and the Pacific Ocean wave exercise in 2013. However, only select media have been involved in these region-wide simulations.

# Observations on disaster managers as information providers

Indonesia has three administrative levels of governance: national, provincial and regency/municipal. Each level of government has its own disaster management organisations, policy frameworks and budgets.

Emergency information providers in Indonesia understand the important role that mass media can play in the effective dissemination of emergency and disaster related information to the public. Traditional media, along with social media can be the fastest way to reach communities threatened by natural disaster, pandemic or civil unrest.

In building local resilience to disasters, the role of local government is crucial. Indonesian law requires provincial and district administrations to be at the forefront of disaster management. The National Agency for Disaster Management (BNPB) and military provide backup when requested.

BNPB is the leading DM agency tasked with coordinating disaster response, DRR activities and relief. Formed just five years ago, the BNPB is represented at the provincial and district levels by local organisations. However, nationally formulated policies have not created systemic changes at local levels. This transition is being supported by a capacity building project with AIFDR. In addition, there seems to be a strong sense of dependency on the national government to provide the necessary support, where the local government lacks capacity and resources.

The New Zealand government is currently supporting the creation of a National Response Framework to clarify roles and responsibilities of ministries and emergency service providers before, during and after disasters.

The defense forces (TMI) and the Indonesian Red Cross (PMI) play an important role as first responders after a disaster with PMI playing a vital role in assisting communities to understand and plan for disasters along with their network of volunteers across the country.

Within BNPB, the information and public relations office have been merged to reduce delays in the effective delivery of information to the public. The head of the Data, Information and Public Relations division, Dr Sutopo Purwo Nugroho, is a well-known figure in the community through his very open and accessible approach to the media and information dissemination. When a severe-weather related disaster has been identified by BMKG, a press release will be available to the local, regional and international media within 30 minutes with government responses and detailed information.

BMPB and BMKG use several channels of communication to warn the public about a possible disaster including social media. It is becoming a powerful tool for citizens to act as information providers and disseminators. Social media sites, along with tools such as the Google Crisis Response (GCR) team, are growing in relevance and being further embraced by both government information providers along with the humanitarian community. There is currently no nation-wide short message service (SMS) alert system.

BNPB has a good relationship with media organisations and has in the past organised training around reporting on disasters. The office also produces a semi-regular talk show about disaster related issues that is shown on a number of TV networks including Metro TV, TV1 and Kompas TV. When a community is affected by a disaster, BNPB will establish a media hub to assist with communications, informational and technological support for journalists.

To encourage better disaster reporting, BNPB has also established annual 'disaster reporting' awards that are issued to media organisations that support communities in need by generating engaging, accurate disaster reporting.

# Observations on international actors

Many national and international NGOs are working on effective programs to increase government and community capacity to respond to disasters in Indonesia. However, engagement with the media is limited both in terms of providing interviews and expert analysis as well as programs to support the media in the three phases of a disaster.

Conversely, the development of government early warning systems is quite a crowded donor area in Indonesia with the German, Korean and Japanese governments investing heavily in a variety of projects.

## Summary

There are opportunities to increase community resilience, improve how citizens get information during disasters and enhance two-way communication between affected people and support providers via the media. This can be achieved by improving strategic connections between all information providers, and remembering that disaster prevention is as important as response and recovery phases.

Indonesia's disaster authorities have invested in communication infrastructure to improve the reach and access of disaster information, especially using mobile and social media – extremely popular communication tools within a competitive, vibrant media environment. There are opportunities for advanced training around emergency broadcasting to improve the efficiency of information flows and deepen relationships and knowledge.