



# Sunda Strait Tsunami Disaster News: Seeing the Production Process to the Selection of News Sources

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**Abstract.** In reporting on the tsunami that occurred in the Sunda Strait in 2018, journalists faced changing information from government agencies that have authority in the field of disaster. Unequal and changing information has created new challenges in the practice of disaster journalism in Indonesia. This is especially true in upholding the principle of accuracy in reporting and speed in presenting information for disaster mitigation. This study seeks to find out how journalism practices at KompasTV, CNN Indonesia, MetroTV, and Trans7 in the news production process to how journalists choose news sources when in a disaster situation, especially when a tsunami occurs in the Sunda Strait. This study finds that the four leading mass media in Indonesia prioritize aspects of verifying disaster information, enforcing a journalistic code of ethics, and the competence of journalists in disaster coverage. Journalists trust and use information sourced from government agencies that have disaster authority and other mass media. Journalists avoid and do not use the information available on social media because the accuracy of the information cannot be guaranteed.

**Keywords:** Sunda Strait tsunami reporting · Disaster journalism practices · News production · News sources

## 1 Introduction

Since 1990, there have been at least ten tsunami disasters in Indonesia. Nine of them were tsunamis that were destructive and caused loss of life and material, namely the tsunamis in Flores (1992), Banyuwangi, East Java (1994); Biak (1996); Maluku (1998); Proud; North Sulawesi (2000); Aceh (2004); Nias (2005); West Java (2006); Bengkulu (2007); and Mentawai (2010). The impact caused by the tsunami was that around 170,000 people died (Fauzi, 2020). Tectonic factors caused all tsunamis that occurred.

The Sunda Strait tsunami disaster occurred on 22 December 2018. The Sunda Strait is a strait that separates the islands of Java and Sumatra. This tsunami came suddenly

without any early warning from the authorities; it claimed the lives of more than 430 people and caused damage to infrastructure in coastal areas.

The tsunami waves in the area reached 1–6 m in height with an inundation reach of 200 m from the shoreline. The source of the tsunami was the collapse of the cliff material of Mount Anak Krakatau due to increased volcanic activity and generating tsunami waves around the Sunda Strait. Research conducted by Tubagus Solihuddin et al. on disaster mitigation in the Sunda Strait area shows that the level of community preparedness for disasters is still considered low, causing many victims (Solihuddin et al., 2020).

The lack of disaster mitigation is ironic, considering an active Krakatoa volcano in the Sunda Strait. Historically, in the Sunda Strait, there have been many tsunami disasters recorded in the tsunami catalog. Several geological phenomena caused the tsunami that occurred, including the eruption of the undersea volcano Krakatoa in 416, 1883, and 1928; earthquakes in 1722, 1852, and 1958; and other causes suspected of land failure in the form of landslides both in the coastal area and on the seabed in 1851, 1883, and 1889 (Yudhicara, 2008).

In a situation of uncertainty caused by a disaster, the public's need for disaster news will increase sharply. This rapidly increasing need for information about disasters prompted intensive disaster coverage from the mass media. Research from Muzayin Nazarudin shows that the media in Indonesia still show euphoria when reporting on disasters. Most of the media only exploit disasters as 'entertaining satirical stories,' with various dramatization practices, for the sake of mere capital accumulation (Nazaruddin, 2015).

News about disasters resulting from disaster-related coverage, or can be referred to as disaster communication mediated by the mass media, generally consist of disaster warning messages and mass media news coverage of disasters. News coverage of disasters usually gets more attention than other issues. Disaster coverage significantly influences or shapes the way citizens and governments perceive, understand, and respond to hazards and disasters. At the same time, mass-mediated disaster coverage is limited because it usually involves messages created by a single source and disseminated to large audiences, with little opportunity for audience response and participation (Houston et al., 2015).

News about disasters has been conceptualized as a social process consisting of three elements: evaluation, dissemination, and response (Beck, 1975). Evaluation includes the processes that occur from the initial identification of environmental hazards; dissemination is the delivery or transmission of threatening messages to the public; and response is a function of the public's assessment of the spread of news (Beck, 1975). For the mass media in Indonesia, this confusion of information from government agencies is a problem in reporting disasters. It makes it difficult for the mass media to report valid and accurate information.

This information problem occurs in the people around the Sunda Strait. They are confused with the current information because of the media, the authority (Meteorology, Climatology and Geophysics Agency (BMKG)), and Center for Volcanology and Geological Hazard Mitigation (PVMBG) provide different information related to disaster terms or the potential for the next disaster to occur. The confusion in the community is

compounded by “fake” accounts that often provide information far from the facts that are happening or what will happen.

The media also experience the confusion experienced by the community. Reporting on the Sunda Strait tsunami is an event that is quite difficult to report by the mass media in terms of accuracy. This is due to information from different and changing government agencies. On Saturday (22/12/2018) night at 22.07, the Meteorology, Climatology, and Geophysics Agency (BMKG) released a statement via its Twitter account if the incident was not a tsunami. However, at 23:55, the BMKG corrected the statement. BMKG said that the tidal wave in Serang, Pandeglang, and South Lampung was a tsunami through its Twitter account. This incident was not due to tectonic earthquake activity but due to the activity of Mount Anak Krakatau.

The Center for Earthquake and Tsunami and the Meteorology, Climatology, and Geophysics Agency stated that before the tsunami, they had issued an early warning of high waves from 22 to 25 December 2018. Meanwhile, another government agency, the Center for Volcanology and Geological Hazard Mitigation (PVMBG), stated that an eruption of Mount Anak Krakatau occurred on Saturday (22/12/2018) 17:22. Finally, it was discovered that the tsunami that occurred was volcanic, not tectonic. This is what distinguishes it from previous tectonic tsunamis.

Based on this, the community’s need for correct information and the confusion experienced by the community regarding information that comes after the disaster becomes essential. This is where the position of the media is needed. Thus, this article will look at how the news production process is carried out in the media, from journalistic practice to determining news sources that can be trusted.

Why should we know about the news production process when a disaster occurs? Because the position of the media is crucial in disaster conditions, especially during the mitigation process. Communication is an essential aspect of disaster mitigation, preparedness, response, and recovery. In terms of protecting people and reducing harm, journalists and news organizations have essential parts to play. Perhaps the most fundamental of these is to relay any warnings ahead of a disaster and to report on an incident when it occurs (by describing what happened or what is happening). Journalists may also be engaged before, during, and after an event, examining mitigation and preparedness initiatives, facilitating long-term recovery, and fostering resilience among individuals and the community (Houston et al., 2019).

In addition to having an important role in the mitigation process, the media must also continue to be monitored because, on the other hand, it can also cause panic and provide various “myths” that actually cause fear in the community around the disaster location. The media can play a critical role before, during, and after such incidents. Media have to be monitored and handled with care because media reports distort what happens in a disaster and lead to misunderstandings. Failure by media reporting may result from myths created by the media (Jayasekara, 2015).

This is in line with research conducted by Rudianto Nurdin on the relation of mass media coverage in Indonesia regarding disaster communication, which stated that the mass media, in an emergency situation, really need credible sources of information so that the news that is disseminated provides benefits to the broader community (Rudianto, 2015).

Research by Chris Piotrowki and Terry R. Armstrong showed that during natural disasters, the importance of an information and media position, dissemination of information about natural conditions, the extent of the disaster, and the duration of vigilance which becomes an early warning from government agencies are the most critical aspects. The mass media and other sources of information have a responsibility to influence the community in mitigation through reporting on disasters (Piotrowski and Armstrong, 1998).

The importance of the media's position is also related to how the media can build optimism into a need for disaster-affected communities. Research conducted by Filosa Gita Sukmono and Fajar Junaedi also provides a perspective on disaster reporting in Indonesia, where the media needs to prioritize optimistic journalism. A journalism model that encourages disaster coverage can display accurate information, hopes, and optimism for disaster victims (Sukmono and Junedi, 2018).

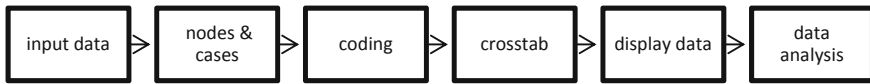
Based on the problems regarding the confusion of information during the Sunda Strait tsunami disaster and the importance of the media's position in the disaster mitigation process, this article will discuss something important related to the news production process and the selection of news sources that are used as references by the media in producing a coverage.

This article also offers novelty because none of the several studies that have been described in the background shows the process of producing a news story on the selection of news sources which are used as media references, such as Kompas TV, CNN Indonesia, Metro TV, and Trans7 in the news, especially in the case of the tsunami that occurred in the Sunda Strait in 2018.

## 2 Method

This research harnessed Bourque & Bourdon's (2017) curriculum of social research methods and humanities, a basic qualitative approach. This approach is also popular in several fields of study where text data are manually analyzed. In this approach, several terms are known in the development of applied social research methods, such as QDA with narrative data (Michael Rich, 2002). Thus, this study uses a software-based qualitative approach for data structure, data analysis, and data reduction. The data in the study were sourced from structured and in-depth interviews with the media in Indonesia. We explored how the national media provided information about the tsunami in Pandeglang Indonesia from the perspective of journalism. In addition, the news was related to the disaster journalism approach in providing information to the public. The use of computer-based text analysis aims to integrate the two qualitative and quantitative approaches (Wegerif and Mercer, 1997) in a social scientific study (Roberts, 2000). This analysis is based on an in-depth literature review to determine research indicators. Then, the researcher builds a framework according to the categories and indicators in the research. Nvivo as an analytical tool is built on in-depth systematics by determining indicators from in-depth literature reviews.

By choosing the qualitative method as the approach used to analyze the data, this study uses a software-based qualitative research tool to multiply the qualitative data into quantitative data. As a research tool, Sotiriadou et al. (2014) asserted that NVivo



**Fig. 1.** Stages Analysis Using Nvivo

has been widely used and compared with other qualitative research tools, as it can answer basic questions from research. Edwards-Jones (2014) believed the use of NVivo in interdisciplinary research is a guide to starting a structured research phase. In NVivo, the stages of data analysis consist of; input data; making nodes and cases; coding steps, crosstab, data display, and data analysis. This research follows Dowling, Lloyd and Suchet-Pearson's (2016) conceptual framework on a qualitative method using qualitative data from in-depth interviews. Furthermore, we used NVivo as a tool of qualitative data analysis. This research combating a qualitative method on NVivo, as Brandão (2015) explains, that NVivo is to support to design qualitative method and deep literature with the clear and deep steps analysis (Fig. 1).

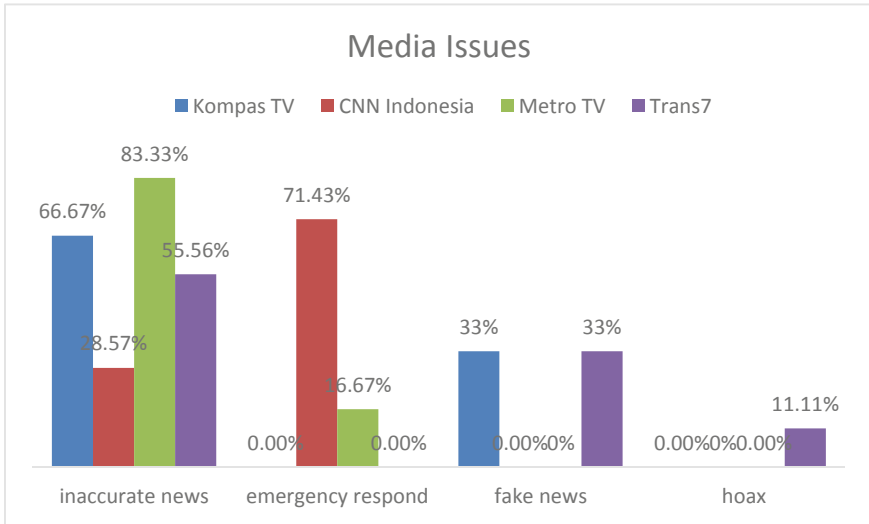
### 3 Results and Discussion

#### 3.1 Media Issues

In practice, journalists and news organizations are essential components of the disaster communication ecosystem (Spialek and Houston, 2018). Disaster journalism is the process of collecting and presenting news and information related to natural and human events that have occurred, are currently occurring, or may occur in the future (Houston et al., 2012). Disaster reporting can cover the basics of journalism, such as finding out about the event, reporting what was learned, sending journalists to the scene, providing background information, verifying information, correcting rumors or false reports, and gathering additional material (Scanlon, 2007). Journalists are required to provide fast, accurate, and straightforward coverage (Dill and Wu, 2009). Reporting on disasters that impact the community can also be conceptualized as a process of 'witnessing' the event (Cottle, 2013).

When a natural disaster occurs, journalists have a significant role in several actions that are reasonably possible to take, namely (1) informing the public with timely and factual information, (2) providing advice to the public about actions to be taken, (3) providing information about actions taken by the authorities and aid groups, (4) conveying messages about the well-being of isolated or trapped groups, (5) facilitating communication among affected people and their relatives, friends, families in other parts of the country or across the world, (6) highlighting the needs of survivors, and (7) reporting potential secondary risks to minimize disaster or further damage (Jayasekara, 2015).

Media issues as information conveyed in the condition of the Sunda Strait tsunami in Pandeglang, but the information is not a response to the emergency at that time. This study addresses an important issue in reporting on the condition of the Sunda Strait tsunami in Pandeglang. In the event of a tsunami, the media reports information based on conditions that occur in the field and uses the primary source of information, namely the government. Nevertheless, this study answers that the government provides



**Fig. 2.** Percentage of News Issue Level

invalid information to the media in conveying information. It impacts fatalities, and the government does not provide early warning of fast and robust information.

Based on the results of interviews with national media journalists who covered information directly after the tsunami, they answered that the main issue at that time was inaccurate news. The inaccurate news comes from government authorities. This is based on the policy of determining the status of the potential tsunami. Four national media who were directly involved in tsunami coverage responded that the information submitted by the government was inaccurate, so the media coverage also followed. The four media are Kompas TV with a percentage (66.67%), CNN Indonesia (28.57%), Metro TV (83.33%), and Trans7 (55.56%).

Media with emergency response information are CNN Indonesia (71.43%) and Metro TV (16.67%). The two media provided emergency response information because they directly accessed information from the government to see the main issues in reporting the Sunda Strait tsunami in Pandeglang on the emergency response aspect. However, the information was not accurate because there was a conflict between the two institutions in making decisions about tsunami reporting. Sunda Strait in Pandeglang. Meanwhile, Metro TV uses a scientific approach to review government policies in determining the potential condition of the Sunda Strait tsunami in Pandeglang (Fig. 2).

Furthermore, in the news of the Sunda Strait tsunami in Pandeglang, fake news and even hoax news were still found. Fake news is found with the same percentage on Kompas TV and Trans7, which is 33%. Meanwhile, hoax news is still found on Trans7 with a percentage of 11.11%. Based on the four media discussed in this study, it was found that there are still two major media outlets that issue news with falsehoods and even hoaxes; this indicates that even in a disaster, the major media in Indonesia still carry news that is not based on an event that happened.

This happened because, at that time, both government agencies could not provide information on the development of the next disaster, such as aftershocks and so on. This was explained by Saptaji, who at that time covered the location as a Trans 7 journalist,

The government did not provide clear information about the current conditions between the two BMKG institutions, and the PVMBG both have information authority on this condition. The aftershocks that occurred in the Sunda Pandeglang strait were a form of response to rapid information, thus creating public panic. But the information became a hoax because there was no official authority that had the right to provide this information. During the earthquake, hoaxes and misinformation became the main factors for public panic (interview, 21/03/2021).

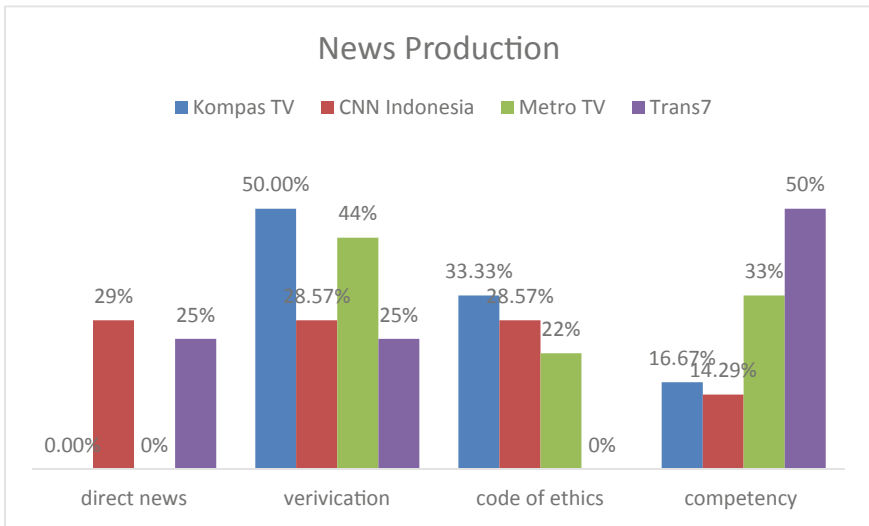
At the level of news issues, it can be described that these four media still cover non-normative issues but at different rates. In reporting on the Sunda Strait tsunami in Pandeglang, these four media both framed inaccurate news with a relatively high percentage. However, Trans7 became the media that gave the most inaccurate issues. Basically, these non-normative issues are a form of sensationalism. These issues become something of sensationalism in the event of a disaster, and the media considers it valuable because it can increase the selling price of a news story. This is what academics consider a form of media sensationalism (Fernando, 2010).

### 3.2 News Productions

News production is the process of producing news by the media through the editorial kitchen. In a crisis, information is needed quickly and accurately. A fundamentally important role for journalists and news organizations is to deliver warnings before disasters and report incidents (describe what happened or what is happening). Journalists can also be involved before, during, and after disasters, examine mitigation and preparedness, facilitate long-term recovery, and promote resilience among individuals and communities (Houston et al., 2019). Journalists can investigate disaster mitigation and preparedness by liaising with emergency managers and other experts (McLean and Power, 2014) and participating in planning with government agencies and communities (Lowrey et al., 2007).

Journalists can also advocate for actions or policies that can reduce disaster risk, improve preparedness, or reduce impact by acting as a 'mitigation watchdog' (Wilkins, 2016). However, in these conditions, the media often provide information to convey the conditions at the scene. Information quickly has the potential to ignore journalistic standards and media productions. Based on interviews with journalists in four media and data processing results using Nvivo, the news production of the four national media has differences (Fig. 3).

In the aspects of direct news of CNN Indonesia (29%) and Trans7 (25%), the two media conveyed information directly to the public after the earthquake. Direct news is a type of information that refers to the actual situation that occurred at the place where the disaster occurred. Information is exclusive because it is obtained directly from the scene and sources who are directly involved in the interview process as both the authorities and the victims. Direct news also involves stronger emotional feelings, is much more aware of the situation, and is purer than other types of information acquisition. CNN



**Fig. 3.** Percentage of News Production Level

Indonesia and Trans7 tend to prioritize direct situational information from Pandeglang and information from the authorities and victims involved.

Furthermore, in news production, these four media show a relatively high percentage of information verification during news production. Kompas TV is in the highest order with 50%, followed by Metro TV 44%, CNN Indonesia 28.57%, and Trans7 25%. The percentage obtained is relatively high in this aspect. This indicates that Kompas TV, Metro TV, CNN Indonesia, and Trans7 continue to apply the basic principles of journalism to disaster events. The percentage difference occurs between these four media where Metro TV tends to verify information more intensely than Kompas TV, CNN Indonesia, and Trans7.

When covering a disaster, journalists need to verify the accuracy of the data because this is a crucial issue if ignored. Reporting can even be categorized as a hoax if it turns out that information is ambiguous because it ignores verification. The media must be monitored and handled with care as media reports that distort what happened in a disaster can lead to misunderstandings. If this happens, the media is considered to have failed on a news report caused by the myth created by the media (Jayasekara, 2015).

Furthermore, in the aspect of the code of ethics, Kompas TV (33.33%), CNN Indonesia (28.57%), and Metro TV (22%) show the percentage of numbers that are varied and have not enough difference in numbers. Based on the percentage generated, these media still adhere to the code of ethics in producing news. Not a big enough number, but this indicates that some news are believed to be based on the applicable code of ethics.

The code of conduct supports standards that require news to strive for professional accuracy and integrity and uphold the best traditions of investigative journalism in the public interest, unfettered by distorted commercialism or inappropriate pressure or by narrow vested interests that conspire against the press freedom. While free to hold and express their own strong opinions, they must consider the views of others and strive to



reflect social responsibility. However, in practice, only a small number of journalists apply this aspect.

The last aspect of news production is related to the competence of a journalist. Coverage of disaster news is required to have special abilities when in the field to carry out the production process. A disaster is an event that is expected not to happen again, and in this case, journalists should be able to quickly and responsively find out what must be done to produce a disaster event. Journalists fear losing the moment and even gaining nothing if they are not nimble in covering disaster events.

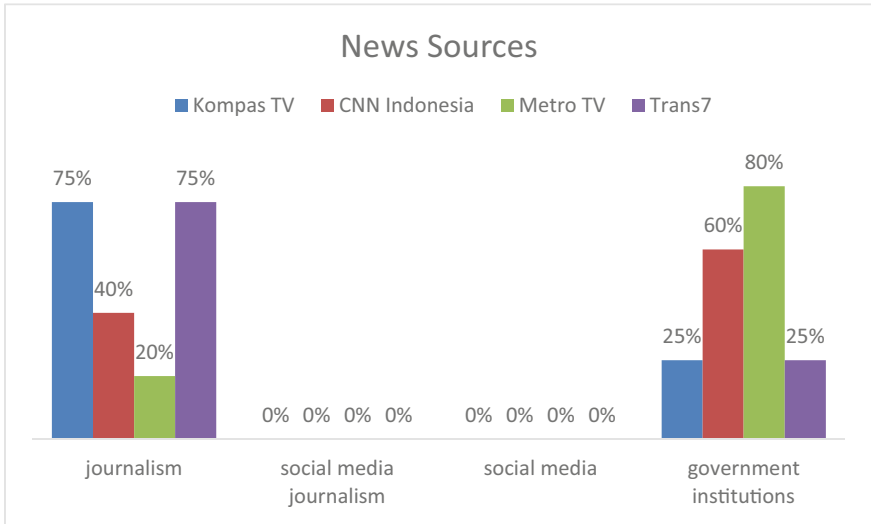
In this case, the percentage of competence of journalists from Kompas TV (16.67%), CNN Indonesia (14.29%), Metro TV (33%), and Trans7 (50%) looks varied. As two of the leading and influential media in Indonesia, Kompas TV and CNN Indonesia actually have journalists with less than optimal abilities. Figures below the average of 16.67% and 14.29% indicate that these two media should be able to improve the ability of their journalists to produce educative and informative news. Despite the significant difference in numbers, Metro TV and Trans7 have journalists who are more competent in covering disaster events than Kompas TV and CNN Indonesia.

If accumulated as a whole, the production of the four media discussed in this study gives different conclusions for each of these media. Kompas TV is a media that prioritizes information verification aspects, adhering to a journalistic code of ethics, even with incompetent journalists during the Pandeglang tsunami coverage. However, Kompas TV is quite indifferent to direct news. CNN Indonesia is quite familiar with all aspects of producing Pandeglang tsunami news, starting from obtaining direct information through news sources, verifying information based on a code of ethics, and having competent journalists for coverage of the Pandeglang tsunami. Among these four media, CNN tends to have an average score and is always in the middle of the percentage of other media. Despite so, CNN is a media that understands much more about every aspect of production-related to the Pandeglang tsunami than the other three media.

At the production level, Metro TV is a fairly good medium at the production level, which emphasizes verification, code of ethics, competent journalists, but neglects direct news. Lastly, Trans7 is a media with the most competent journalists compared to the other three media. Trans7 is also quite aware of the importance of direct news and information verification. However, this media ignores and does not even adhere to the journalistic code of ethics that should be implemented in every news report, especially disasters. This means that these four media have their respective advantages at the production level of tsunami news in Pandeglang. Kompas TV and Metro TV excel in verification aspects, Trans7 excels in providing competent journalists, and CNN Indonesia is a good media in producing tsunami news in Pandeglang because it is sensitive to every aspect of news production.

### 3.3 News Sources

The information conveyed by the media comes from various sources. The results of this study answer that the media uses two primary sources in conveying information. First, journalism refers to direct interviews and coverage at disaster sites. The second is a government agency, which in this case is the BMKG and PVMBG. These two sources of information have different percentages.



**Fig. 4.** Percentage Level of News Sources

Regarding the aspect of journalism in getting news sources, the percentage is Kompas TV (75%), CNN Indonesia (40%), Metro TV (20%), and Trans7 (75%). Sources of information through journalism are information submitted directly by journalists to the four media. The media with the highest sources of information for journalists are Kompas TV and Trans7. Meanwhile, the percentage of information sources through government institutions shows Kompas TV (25%), CNN Indonesia (60%), Metro TV (80%), and Trans7 (25%). Between both Journalism and government agencies as sources of information, of the total percentage, Journalism is 36.67% while the government is 63.33%. This means that the primary source of information in reporting the Sunda Strait tsunami in Pandeglang is the government (Fig. 4).

Kompas TV, CNN Indonesia, Metro TV, and Trans7 are classified as credible media because they produce news with sources of information from related parties. In this case, the source in question is obtaining information directly from the scene of the incident and related parties and involved in the Pandeglang tsunami. These four media also do not use news sources from social media, such as someone's status or uploads on social media. This also relates to journalists not being allowed to quote information from someone's social media content without talking to them to make sure they are not joking or exaggerating things (Houston et al., 2015).

However, on the one hand, social media can be used as a source of information in reporting a disaster (Pantti, 2018). The role of news media has shifted from gate-keeping to gate-watching, where they publish and share relevant news content. The media can play an important role before, during, and after the event. Social media is critical, for example, for warnings to be effective and can be the most critical source of public information after a disaster occurs (Scanlon, 2007). Social media can facilitate the exchange of information that empowers citizens to take greater responsibility in disaster

management, provide emotional support for victims, and help build resilience to future disaster events (Reilly et al., 2016).

In addition, social media also appears to present an empowering opportunity for affected people within the disaster zone to communicate their own experiences and needs, rather than being talked about by journalists or aid workers (Maasilta and Haavisto, 2014). As it develops, digital technology is expected to increasingly allow disaster victims to enter the international news media and tell and frame their own situation, thereby achieving a certain degree of autonomy from professional farming practices. In a globalized world, state actors, international aid agencies, and mainstream media continue to define and shape the available discourse on disasters and disaster relief efforts (Pantti, 2018).

## 4 Conclusion

Disaster communications mediated by mass media generally consist of disaster warning messages and mass media news coverage of disasters. Disaster events are a theme that is considered quite selling for media owners. This is because disaster issues are always demanding pre-and post-disaster developments. The disaster of an event is also closely related to proximity and human values that can invite concern. For the mass media in Indonesia, this confusion of information from government agencies is a problem in reporting on disasters. The practice of reporting on the Sunda Strait tsunami disaster in Pandeglang on Indonesian national media such as Kompas TV, CNN Indonesia, Metro TV, and Trans7 has different framing.

At the level of news issues, these four media still frame inaccurate events. This indicates that even in the event of a disaster, the major media in Indonesia still carry news that is not based on an event that factually happened, although this is due to the confusion of information from the government. Furthermore, the production of the four media discussed in this study illustrates that awareness of production aspects such as direct news, verification, code of ethics, competent journalists is only owned by a small number of media in Indonesia. In this case, CNN is far more aware of every aspect of production-related to the Sunda Pandeglang Strait tsunami than the other three media. Finally, these four media prioritize news sources from the authorities and direct journalism reviews. This gives a conclusion that these four media are credible media from the source of the informants.

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