

Separatist and Terrorist Movements in Papua: The Challenges of Social Disaster Management and the Important Role of Human-Made Disaster Intelligence

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Abstract

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The Papua secessionist movement hinders Indonesia's stability efforts. The government has implemented measures, deploying intelligence for managing social crises as defined by Law 24 of 2007 on Disaster Management. The present study examines the separatist movement in Papua, its resultant societal upheaval, and the crucial role of intelligence in mitigating this societal crisis. The study explores applying Human-Made Disaster Intelligence, using AI and data tech, to mitigate risks in the Papua case. This study employs a literature review with 26 sources to explore challenges posed by separatist and terrorist movements in Papua. Data is gathered from official sources, excluding personal websites and social media. The study was conducted from January to March 2023. Data analysis utilizes descriptive narratives to qualitatively explore separatist and terrorist movements, social disasters, intelligence, and the Papua region. The research findings demonstrate that the separatist movement in Papua has resulted in a significant societal calamity, causing conflicts, casualties, and economic challenges. Man-made disaster intelligence is proposed to manage social disasters by collecting and analyzing data related to separatist activities. Intelligence plays a crucial role in detecting and mitigating risks associated with separatism, offering preventive and remedial measures. Challenges include limited resources and the need for collaboration among intelligence agencies. Strategic measures to enhance intelligence involve increased resources, collaboration, transparency, and the integration of Artificial Intelligence (AI) for data analysis. The complexity of using AI in countering separatist movements requires careful consideration of data sources, collection methods, and reliability measures.

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INTRODUCTION

According to recent reports from the Indonesian government and media outlets, the Armed Criminal Group (KKB) operating in Papua, Indonesia has been officially classified as a terrorist organization (DPR, 2021), while the State Intelligence Agency (BIN) has identified it as a separatist group (CNN, 2021). The aforementioned determination was reached. Subsequently, it was concluded that the KKB warranted opposition due to its involvement in the fatalities of multiple individuals in Papua, including the leader of the local intelligence bureau (*Kepala BIN Daerah* or Kabinda). The Papua conflict originated from the Dutch government's efforts during the period of Indonesian independence to detach Papua from the Netherlands, which entailed the establishment of substantial Papuan territories. Indonesia has underscored that the Papua region is an integral part of the Unitary State of the Republic of Indonesia, as prescribed in the New York agreement (Mangku, 2022).

The separatist movement in Papua has undergone various transformations over the course of its historical trajectory. This organization continues to evolve, accompanied by methods involving violence, demonstrations, shaping public opinion, the raising of the *Bintang Kejora* flag, and efforts to seek international support. Papuan-educated factions in 1964 engaged in a struggle for Papuan autonomy, which subsequently transformed into the Free Papua Organization (Organisasi Papua Merdeka or OPM), a separatist movement characterized by a more organized structure (Mardiani et al., 2021). This organization has an interest in establishing Papuan Independence (Ilmar, 2017). The OPM comprises three mutually competitive elements, each exercising control over distinct territories. These include armed units, groups engaged in demonstration and protest activities, and overseas-based entities aiming to amplify issues in the Papua region as part of an effort to garner international support for Papua's independence (Verianty, 2023). This was also noted by Widjojo, Elisabeth, Pamungkas, & Dewi (2008), stating that among Papuan Nationalists, exists the National Liberation Army/Papuan Freedom Movement (TPN/OPM) and the Papuan Presidium Council (Presidium Dewan Papua or PDP) with its associated panels. Additionally, some committees coordinate demonstrations, exemplified by the United Front of Struggle of the West Papua People-an alliance comprising various organizations of Papuan students and youth across different regions in Indonesia, with support from like-minded groups in Australia and the U.K.

In Papua, there has been a rise in armed secessionist movements, such as the West Papua National Liberation Army (*Tentara Pembebasan Nasional Papua Barat* or TPNPB), which have been responsible for carrying out attacks and sabotage against both the Indonesian government and foreign corporations (Hernawan, 2019). TPNPB constitutes the military wing of the OPM, established on March 26, 1973. TPNPB engages in armed actions to achieve Papua's independence (Tumanggor, 2022).

Over time, these groups have evolved, engaging in massive resistance through various criminal activities. Consequently, their actions have led to a shift in their status to Armed Criminal Groups (KKB) (Kenshanahan, 2023; Sitoresmi, 2022). Operating within the Papua region, this group instills terror not only among civilians but also towards the Indonesian National Armed Forces (TNI) and the National Police (Polri) (Putri & Nugroho, 2023). The KKB conducts attacks and shootings against civilians (Sitoresmi, 2022), resulting in their apprehension for criminal reasons. However, due to the KKB's objective of seeking Papua's separation from the Republic of Indonesia, the group is considered a separatist movement, posing a threat to the nation's integrity (Dzulfaroh & Nugroho, 2023).

The secessionist movement in Papua presents a notable obstacle to the Indonesian government's endeavors to uphold the stability and security of its jurisdiction. The Indonesian government has implemented various measures to address separatist movements in Papua (Febrianti et al., 2019). These measures include military operations and socio-economic development initiatives in the area. One such initiative is the implementation of Law Number 2 of 2021 concerning the Second Amendment to Law Number 21 of 2001 concerning Special Autonomy for the Province of Papua, which provides for Special Autonomy for the Province of Papua. The primary objective of this law is to enhance public services and expedite development in Papua. The management of separatist movements in Papua poses significant and complex challenges, owing to a multitude of social, political, and economic factors (Haris, 2005).

The separatist movement in Papua has exerted a noteworthy influence on the sociopolitical environment of the area. The emergence of this movement can be attributed to the presence of separatist groups, instances of human rights violations, and political instability (Marit & Warami, 2018). The Papuan populace has been significantly impacted by the conflict between separatist factions and security personnel, resulting in adverse consequences. Frequently, these conflicts entail acts of violence, including but not limited to shootings, arson, detonations, and abduction of individuals. the aforementioned conflict resulted in numerous casualties, inflicted damage to infrastructure in Papua, and generated a pervasive sense of fear and psychological distress among the indigenous populace (Sugandi, 2008).

Furthermore, the 2010 horizontal conflict encompassed 22 instances of discord between the Papuan and immigrant communities (Tohari et al., 2011). There were a total of 15 instances of communal conflicts in the year 2011, with 12 of them occurring between Papuan individuals and migrants (Pamungkas & Rusdiarti, 2017). The secessionist campaign in Papua has additionally played a role in the disruption of political stability within the region. The Indonesian government has encountered difficulties in establishing collaborative relationships with the Papuan populace as a result of the ongoing conflicts and human rights violations. Furthermore, the separatist movement has contributed to the proliferation of misleading propaganda in Papua, thereby posing a potential threat to regional stability and exacerbating conflicts (Syafruddin, 2018).

The management of separatist movements in Papua necessitates the utilization of intelligence in the realm of human-generated calamities, specifically those of a social

nature, as a critical component. As per the provisions of Law 24 of 2007 concerning Disaster Management, social disasters are classified as calamities that require overcoming. Man-made disasters are often intricate and challenging to anticipate. As a result, the implementation of a disaster intelligence system can facilitate prompt and pragmatic measures by stakeholders involved in disaster management, thereby reducing the detrimental impact of the disaster. Man-made disaster intelligence is the use of artificial intelligence (AI) and other data-driven technologies to help reduce the risks and impacts of disasters caused by human activities, such as armed conflicts, climate change, or development projects. Man-made disaster intelligence can help improve the decision-making process, situational awareness, location awareness, and community engagement of disaster responders and affected populations (Cao, 2023).

The study intends to explore how Human-Made Disaster Intelligence, which is the use of artificial intelligence and data technologies to help reduce the risks and impacts of human-made disasters, can be applied to the Papua case. The present study investigates the separatist movement in Papua, its resultant social calamity, and the pivotal significance of intelligence in mitigating this societal catastrophe. Furthermore, this study employs a literature review as its primary method, extracting secondary data from various sources to comprehensively explore challenges posed by Separatist and Terrorist Movements in Papua. Also, the study was conducted from January to March 2023. Data is gathered from official sources, excluding personal websites, opinion-based platforms, and social media.

METHODS

Methods and Information Collection

The present investigation utilizes a literature review as its primary methodology. The information gathered is classified as secondary data. The examination of 26 literature sources provides a comprehensive understanding of the multifaceted challenges posed by Separatist and Terrorist Movements in Papua. The thematic areas explored include the integration of man-made disaster intelligence in social disaster management, the significance of intelligence in addressing the social fallout of separatism movements, and Artificial Intelligence in countering these movements. Various criteria are employed to extract data from online media sources, such as the official website of the Indonesian government, official news in the form of articles and videos, and journals. The study excluded news sourced from personal websites, websites that express opinions, articles that present distorted information, and social media platforms such as Facebook, Instagram, Twitter, Whatsapp, and other similar platforms. Subsequently, supplementary data will be obtained by referring to digital literary resources.

Study Setting

The research was conducted in Jakarta, Indonesia. The research duration commences in January of 2023 and concludes in March of the same year. Various terminologies are utilized to denote subjects of inquiry. Subsequently, the scholars engaged in a discourse and provided a concise overview of the aforementioned subjects.

Information Processing

Following the acquisition of suitable references, several investigations are organized based on their congruence with the designated title. The initial step in organizing pertinent articles involves evaluating the suitability of the titles of various research works, succeeded by classifying the abstracts. Upon completion of the sorting process, a list was compiled to review double studies.

Information Analysis

The data was analyzed through the use of descriptive narratives about separatist and terrorist movements, social disasters, the role of intelligence, and the Papua region, as derived from the references obtained. The use of descriptive narratives implies a qualitative approach to data analysis, focusing on the richness of details and context to facilitate a deeper comprehension of the subject matter.

RESULT AND DISCUSSION

Separatization Movement in Papua as a Social Catastrophe

The separatist movement in Papua has been a multifaceted and intricate matter for several decades. The separatist movement that sought autonomy from Indonesia resulted in a significant societal calamity in Papua. One of the notable consequences of separatist movements in Papua is the emergence of a conflict between security forces and separatist factions (Mangku, 2022). There have been instances of casualties and infrastructure damage resulting from confrontations between separatist groups and security forces in the Papua region (Anderson, 2015). The aforementioned circumstance has impeded the progress of local development, specifically in the domains of healthcare, education, and the economy. Furthermore, the aforementioned conflict gave rise to a significant number of refugees and social disruptions, including but not limited to displacement of populations and loss of means of subsistence.

The separatist movements observed in Papua are deemed to be a social catastrophe due to their substantial impact on the societal and security aspects of the region. the separatist movement in Papua has had a detrimental impact on the region's social and political environment, leading to the loss of both human life and property, as well as a decline in its overall social climate (Hernawan, 2017). The phenomenon of separatism has been present in Papua since the era of Dutch colonialism and has endured since the proclamation of Indonesia's independence in 1945. Various factions in Papua, particularly the Melanesian populace, engaged in a struggle for independence due to their perceived marginalization within the Indonesian state. The outcome was a prolonged dispute and the utilization of forceful measures by both factions.



Figure 1. Mapping Regions Affected by Violence (Anderson, 2015)

The conflict of separatism in Papua has also been a contributing factor to the region's state of uncertainty and instability. The assertion is supported by the substantial number of individuals who have been forced to relocate due to acts of aggression and discord, leading to a rise in the societal and financial strain on the Papuan administration and populace (Figure 1). The separatist movements in Papua have been found to cause social calamities, including but not limited to the destruction of infrastructure, disruption of economic activity, and environmental degradation. The infrastructure of Papua suffered damage as a result of violent actions carried out by secessionist factions. The Papua region faces significant challenges in the development of its infrastructure, particularly highways, bridges, structures, and other public facilities. These assets are often subjected to acts of aggression and sabotage, leading to considerable economic losses and hindering the region's progress.

According to Suwandi (2022), the aforementioned group is responsible for the fatal shooting and murder of eight employees of PT Palapa Timur Telematika (PPT) in the Beoga District of Puncak Regency, Papua. During the occurrence, the personnel were engaged in the mending of Tower Base Transceiver Station (BTS) 3 on behalf of Telkomsel. The tower is situated on the border that separates the Puncak and Intan Jaya Regencies (Suwandi, 2019). KST engages in acts of arson against schools and violence resulting in the loss of lives of teachers as a means of instilling fear in the education sector (Aditra, 2021). Apart from its impact on economic activity, the separatist movement in Papua has various detrimental consequences. The Papua region is witnessing burgeoning growth in its mining, plantation, and tourism sectors. The economic progress and foreign investment in the region were hindered due to the political instability and conflict that

arose as a result of separatist movements, as stated (Arifin, 2007). As a result, individuals from Papua often encounter challenges in securing employment and achieving financial stability.

Man-Made Disaster Intelligence as a Social Disaster Management

The term "intelligence" is derived from the word *intelligencia*, which denotes qualities such as brightness, brilliance, intellectuality, omniscience, intelligence, and adaptability (Phythian, 2013). Intelligence tends to prioritize the identification and mitigation of threats over the pursuit of opportunities for gaining an advantage (Breakspear, 2013). Intelligence can be defined as the ability to gather, evaluate, combine, and communicate data to facilitate effective decision-making in situations that involve unpredictability and potential hazards. The cognitive procedures involved in intelligence encompass the collection, examination, amalgamation, and dissemination of data (Legg & Hutter, 2007).

The purpose of man-made disaster intelligence is to facilitate the management of disasters that are caused by human activities, such as the separatist movement in Papua (Aifadopoulou et al., 2018). The present system is designed to collect data and information from both open and closed sources about secessionist activities in Papua. Upon gathering the requisite data and information, the artificial intelligence system for man-made disasters shall proceed to analyze the aforementioned data and information to identify patterns or tendencies that are linked to separatist movements in Papua. Upon discovery, the outcomes of this analysis will be utilized to forecast the probability of a societal catastrophe resulting from secessionist pursuits in Papua and to ascertain the requisite measures for averting or surmounting this societal calamity.

Furthermore, it has been proposed that a system for intelligence on man-made disasters will be established to distribute pertinent information and analytical findings to relevant entities, such as governmental agencies or security forces. Artificial Intelligence for Disaster Response (AIDR) is an example of how AI and data science can be used to create a system for intelligence on man-made disasters, that can distribute pertinent information and analytical findings to relevant entities, such as governmental agencies or security forces. AIDR leverages AI techniques, such as machine learning, natural language processing, computer vision, and knowledge representation, to process and analyze data from multiple sources, such as sensors, satellites, social media, and crowdsourcing platforms. AIDR can provide timely and accurate information and insights on various aspects of man-made disasters, such as their causes, impacts, risks, and mitigation strategies (Cao, 2023). The present analysis aims to provide valuable insights and empirical evidence to assist policymakers and decision-makers in formulating effective strategies to address the separatist movements in Papua and minimize the adverse social consequences that may ensue. The implementation of a human-engineered disaster intelligence system has the potential to enhance the efficacy and efficiency of social disaster management in Papua, which has been adversely impacted by secessionist activities. The proposed system is designed to facilitate the expeditious and accurate acquisition of data and information, conduct comprehensive data analysis, and effectively communicate the findings and analytical outcomes to the relevant stakeholders. Hence, the management of societal crises stemming from separatist movements in Papua can be executed with greater efficiency and expediency.

The utilization of artificial intelligence in human-induced disasters in managing societal crises resulting from separatist movements in Papua (Munir, 2021) can offer manifold benefits to both the populace and the governing authorities. Initially, disaster intelligence has the potential to accelerate the government's reaction to addressing conflicts and minimizing the impact of societal catastrophes. The expeditious and efficient response of the government is facilitated by the provision of precise and up-to-date information regarding the state of affairs. Furthermore, disaster intelligence has the potential to assist social disaster management in formulating strategic and tactical decisions. Through rigorous data analysis, the government can identify the key factors that contribute to the separatist movement in Papua and develop a comprehensive strategy to address the resulting societal upheaval. Moreover, the implementation of catastrophe intelligence can facilitate the surveillance of human rights infringements in the context of confrontations between separatist factions and security forces. The utilization of catastrophe intelligence can facilitate the maintenance of human rights in the government's security measures towards separatist movements in Papua.

To proficiently handle social crises arising from separatist movements in Papua, the government must provide backing and augment the intelligence system for humaninduced disasters. The enhancement of intelligence officers' competencies and the technological infrastructure for information gathering, analysis, and dissemination are imperative for the government to address this matter effectively. It is expected that the separatist movements in Papua will have a reduced impact on social upheavals with the aid of governmental backing and a strong intelligence infrastructure.

The Important Role of Intelligence in Social Disaster Management due to the Separatism Movement in Papua

A key function of intelligence is to provide situational mapping and hazard identification (Gill & Phythian, 2018). The Intelligence agency will undertake an assessment and monitoring of the social, political, and security landscape in Papua New Guinea to identify and chart the prevailing challenges and risks. The purpose of this action is to identify potential conflicts and separatist risks that may pose a threat to the security and stability of the region. Furthermore, the possession of intelligence will furnish precise and reliable data and information to facilitate decision-making in Papua's management of social crises arising from separatist movements.

Furthermore, the role of intelligence is significant in the identification and resolution of social threats emanating from separatist movements, terrorism, and other extremist organizations (Wilujeng & Risman, 2020). Regarding this matter, intelligence can discern entities and collectives engaged in secessionist endeavors or aggressive behaviors, scrutinize the methods and schemes utilized by said entities, and formulate suitable measures of opposition.

The significance of intelligence in detecting and mitigating the risk of separatism is paramount for ensuring the security and stability of Papua (Fakhrul et al., 2022). In this scenario, intelligence will oversee the activities of groups and organizations that are engaged in separatist movements within the region of Papua New Guinea. To achieve this, data about the aims, framework, and affiliations of said secessionist groups is collected.

Intelligence will also assess the strategies and tactics employed by separatist organizations to accomplish their goals (Clark, 2019). In this context, the concept of intelligence pertains to the strategic planning and operational methods employed by secessionist factions, including provocative maneuvers and the utilization of coercive measures to execute their objectives. Upon analyzing said tactics and strategies, the intelligence team will formulate appropriate countermeasures to mitigate the risk posed by the separatist threat. The aforementioned measures encompass both preventive and remedial actions (Sembiring & Simon, 2022). The implementation of measures aimed at preventing the escalation of tensions between separatist groups and the Papuan populace at large, as well as fostering dialogue and collaboration among relevant stakeholders, can be considered an effective preventive strategy. In the interim, measures are implemented in response to the manifestation of separatist threats, including the apprehension of separatist group affiliates and other necessary measures to uphold the safety and steadiness of Papua.

Apart from detecting and managing the risk of separatism, intelligence also assumes a crucial function in preventing the amplification of the conflict to a more extensive magnitude (Butt, 2017). In this scenario, the implementation of intelligence measures can proactively mitigate potential risks associated with separatist movements using early monitoring and supervision, followed by the adoption of suitable measures aimed at minimizing the likelihood of conflict and violence. The possession of intelligence can potentially aid in the facilitation of collaboration among diverse stakeholders, including security forces, governmental bodies, and local communities, to mitigate conflicts and foster intergroup communication. The faculty of intelligence can act as an intermediary in this scenario, promoting discourse and assisting in the pursuit of the optimal resolution to the dispute. Hence, the significance of intelligence in mitigating the escalation of conflicts is paramount in reducing the societal upheaval resulting from separatist movements in Papua. Given the circumstances, the intelligence community must uphold both security and human rights, while simultaneously collaborating with all relevant stakeholders.

Insufficient resources and safety hazards may impede the efficacy of intelligence in managing social disasters arising from separatist movements in Papua. The complete execution of intelligence agencies' responsibilities may be impeded by limitations in budgetary and human resources (Wilensky, 2015). The acquisition of precise and dependable information, particularly in the fields of technology and data analysis, necessitates sufficient resources for the manifestation of intelligence. Furthermore, the gathering and evaluation of data about separatist movements in Papua may pose a risk to the security of intelligence operatives. It is imperative to guarantee that the information collected and employed does not infringe upon the human rights or the interests of the

Papuan populace. The appropriate management of this risk is imperative, with due consideration given to the safety of intelligence personnel and the welfare of the Papuan populace.

The primary hindrances to cooperation in Indonesia are the absence of trust among intelligence agencies and institutional competition (Mahyudin, 2016). The competition between intelligence agencies, namely the Indonesian State Intelligence Agency (BIN), Strategic Intelligence Agency (BAIS), and Polri Intelligence, poses a potential challenge to the efficacy of counter-terrorism measures, as the lack of information sharing among these entities may impede their collective efforts. The prompt suggests that the elimination of Papua's separatists and militants would be a more formidable task if each party were to play a distinct role. To overcome these challenges, it is imperative to augment the budgetary allocation and recruit personnel with specialized expertise, particularly in the domains of technology and data analytics. The proposed augmentation aims to enhance intelligence capabilities in monitoring and analyzing the situation, thereby furnishing precise and dependable information to the authorities in charge of managing social disasters resulting from separatist movements in Papua. Furthermore, intelligence agencies, security forces, governmental bodies, and local communities must collaborate in their efforts to address the societal ramifications of separatist movements in Papua. Efficient collaboration and coordination among institutions can potentially mitigate tensions and enhance communication between different groups, thereby expediting conflict prevention and the implementation of suitable measures to combat the menace of separatism.

There exist various strategic measures that can be implemented to enhance the role of intelligence in Papua's efforts to address social disasters that arise from separatist movements. Initially, the organization augmented its allocation of resources for intelligence training, both in terms of financial and human capital, with a specific emphasis on technology and data analytics. It is imperative to ensure that the process of intelligence gathering, analysis, and presentation is executed with precision and timeliness. Secondly, it facilitated collaboration among pertinent institutions and organizations in the management of societal crises resulting from separatist movements in Papua New Guinea. Enhancing coordination and collaboration among intelligence agencies, security forces, governmental bodies, and local communities in Papua is a viable approach to mitigating the social upheavals that stem from separatist movements. Furthermore, the intelligence community must establish transparency and engage in effective communication with the broader populace to garner intelligence and garner backing for thwarting secessionist initiatives. Thirdly, the utilization of state-of-the-art technologies such as Artificial Intelligence (AI) and advanced data analysis tools. In this context, artificial intelligence (AI) has the potential to expedite the data collection and analysis process, thereby facilitating the prompt and efficient dissemination of reliable and credible information. Social media sentiment analysis is an example of how Artificial Intelligence can be utilized (Pratama et al., 2019). This technology enables intelligence agencies to conduct surveillance on community activities and sentiments about separatist movements in Papua through social media platforms. After the collection of data,

advanced data analysis methodologies can be employed to obtain significant insights and information about the Papua separatist movement.

The utilization of state-of-the-art technologies such as Artificial Intelligence (AI) to counter separatist and terrorist movements is a complex and challenging task that requires a variety of data sources, data collection methods, and data reliability measures. Using AI that is concerned with these aspects and acts as a machine learning to process and analyze data from multiple sources might have a potential impact. Some of the possible aspects of this task are (McKendrick, 2019; Uddin et al., 2020; Uppal, 2022):

- a. Data sources. The data sources for AI-based counter-terrorism may include public data such as social media posts, online forums, news articles, blogs, videos, podcasts, etc., as well as private data such as intelligence reports, surveillance footage, biometric data, phone records, financial transactions, etc. The public data may provide insights into the ideologies, motivations, strategies, tactics, and networks of the terrorists, while the private data may provide evidence of their activities, locations, identities, and plans.
- b. Data collection methods. The data collection methods for AI-based counter-terrorism may involve both manual and automated processes. Manual methods may include human analysts, informants, undercover agents, etc., who can gather, verify, and interpret the data. Automated methods may include web crawlers, natural language processing, computer vision, speech recognition, etc., which can extract, analyze, and synthesize the data.
- c. Data reliability. The data reliability for AI-based counter-terrorism may depend on several factors, such as the source, the quality, the quantity, the timeliness, and the relevance of the data. The source of the data may affect its credibility, accuracy, and authenticity. The quality of the data may affect its completeness, consistency, and validity. The quantity of the data may affect its representativeness, diversity, and coverage. The timeliness of the data may affect its currency, freshness, and availability. The relevance of the data may affect its usefulness, applicability, and significance.

Therefore, the utilization of state-of-the-art technologies such as AI to counter separatist and terrorist movements is not a simple task, but rather a multidimensional and dynamic one that requires careful and continuous evaluation of the data sources, data collection methods, and data reliability.

CONCLUSIONS, RECOMMENDATIONS, AND LIMITATIONS

The separatist movement in Papua poses a significant threat to Indonesia's territorial security and stability and is regarded as a social catastrophe that requires immediate attention. Hence, the role of intelligence is pivotal in Papua's endeavors to overcome societal calamities instigated by separatist factions. The cognitive ability commonly referred to as intelligence is a significant factor in the process of situational mapping and risk assessment, as well as in the identification and mitigation of social hazards. Additionally, intelligence can aid in the prevention of conflict escalation and the establishment of cooperative relationships among relevant parties. The most substantial potential hindrances in intelligence-related roles are limitations on resources and risks to the safety of intelligence personnel. The proposed suggestions entail the provision of

sufficient resources, proficient management of safety hazards, collaborations, transparency, and the utilization of cutting-edge technology to facilitate the execution of intelligence for data analysis.

While this study has aimed to provide a thorough examination of the subject matter through an extensive literature review, it is crucial to recognize the inherent limitations associated with this methodological approach. The reliance on existing literature may inadvertently introduce biases and overlook nuances that could be elucidated through alternative research methods. Therefore, the research's scope is intentionally broad, laying the foundation for subsequent investigations employing varied data sources and credible informants. In light of these limitations, future research endeavors should prioritize the incorporation of triangulation methods to strengthen the validity and reliability of findings. Triangulating data from various sources, such as empirical studies, interviews, and credible informants, will enable a more comprehensive understanding of the phenomena under investigation. Additionally, this approach will facilitate the identification and mitigation of potential biases associated with the exclusive use of the literature review methodology.

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