



Civil-Military Cooperation in Addressing Water Crisis in Indonesia (Case Study: Discovery of Clean Water Sources by the Republic of Indonesian Defense University)

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Abstract

The water crisis in Indonesia poses a significant challenge, particularly in rural and arid regions where access to clean water is limited. This study examines the critical role of civil-military cooperation in addressing this crisis, focusing on a case study involving the Indonesian Defense University. The collaboration between civil authorities and the military led to the successful discovery and management of new clean water sources, demonstrating the effectiveness of combined efforts in resource management. Utilizing a mixed-methods approach, this research highlights the logistical and strategic advantages brought by military involvement, such as rapid mobilization and advanced technological capabilities, in conjunction with civilian expertise in water resource management. The findings underscore the importance of integrated efforts in tackling complex environmental issues and suggest a model for future initiatives aimed at enhancing water security in Indonesia. This case study provides valuable insights into the benefits and challenges of civil-military cooperation, offering practical recommendations for policymakers and stakeholders involved in water management and disaster response.

Keyword: Civil-Military Cooperation; Water Crisis; Clean Water Sources; Water Resource Management.

INTRODUCTION

Indonesia faces a significant water crisis, particularly in rural and arid regions, where access to clean water is limited. This scarcity of clean water has profound implications for public health, economic development, and overall quality of life. To address these challenges, the Indonesian Defense University (IDU), or Universitas Pertahanan Indonesia, has played a crucial role in discovering and managing new sources of clean water. This initiative underscores the importance of civil-military cooperation in tackling environmental issues. The success of IDU in identifying and managing water resources demonstrates the effectiveness of integrating military resources with civilian expertise. The IDU has utilized advanced hydrological techniques and geospatial intelligence to identify new sources of clean water, particularly in remote and drought-prone areas. These efforts have been part of a broader strategy to enhance water security and support local communities. The military's rapid deployment capabilities, coupled with the specialized knowledge of civilian water resource managers, create a robust framework for addressing the water crisis (Tethys Engineering, 2021).

Civil-military cooperation is essential in addressing complex environmental issues. Studies have shown that such cooperation brings strategic advantages, including rapid mobilization, advanced technological capabilities, and a disciplined approach to project execution. In Indonesia, this cooperation has been crucial in managing national resources effectively. For example, the collaboration between civil authorities and the military in West Sumatra has proven successful in mobilizing national resources for defense and environmental management (Yusnaldi et al., 2022).



Moreover, environmental challenges have necessitated a surge in civil-military cooperation globally, particularly in developing countries. The increasing frequency and severity of environmental problems, such as water scarcity, have led to new security concerns that require coordinated responses. Research indicates that such cooperation is critical in managing these challenges and ensuring sustainable development (Buğday, 2016). The IDU's proactive role in water resource management is a testament to the potential of civil-military cooperation. The university has successfully drilled new wells and installed water purification systems in underserved areas, significantly improving access to clean water. These initiatives have directly benefited thousands of residents in rural communities, demonstrating the tangible impact of integrated efforts (IP Defense Forum, 2020).

In conclusion, the Indonesian Defense University's efforts highlight the importance of civil-military cooperation in addressing environmental challenges. By combining military and civilian expertise, Indonesia has developed a resilient and effective strategy for enhancing water security. This approach provides valuable insights and practical recommendations for policymakers and stakeholders involved in water management and disaster response, emphasizing the need for collaborative efforts in managing natural resources and responding to crises.

RESEARCH METHOD

The methodology employed in this research involves qualitative methods and a comprehensive literature review. These methods are chosen to deeply explore the dynamics of civil-military cooperation in addressing the water crisis in Indonesia. Qualitative methods are essential for gaining insights into the experiences and perspectives of stakeholders involved, while the literature review helps identify and synthesize findings from previous studies. This study utilizes qualitative methods to examine the role of civil-military cooperation in managing water resources in Indonesia. This approach involves in-depth interviews, field observations, and the analysis of relevant documents. Interviews are conducted with various stakeholders, including military personnel, government officials, and community members involved in the initiatives. Field observations are carried out to understand the operational context and observe the direct impact of these collaborations. Additionally, this research incorporates a literature review to identify and synthesize previous findings related to civil-military cooperation in environmental resource management. The review includes an analysis of journal articles, reports, and policy documents that discuss this topic. This approach enables the researchers to draw on existing knowledge and identify common patterns and challenges in civil-military cooperation (Janse et al., 2022).

Civil-military cooperation has proven effective in various contexts, including disaster response and environmental resource management. For instance, a study by Buğday (2016) highlights how environmental issues often trigger increased civil-military cooperation in developing countries, including Indonesia. This research found that such cooperation is crucial for addressing new security concerns arising from environmental problems. Furthermore, Macura et al. (2019) discuss various methods for synthesizing qualitative research relevant to environmental policy and management. This study emphasizes the importance of a transdisciplinary approach and the use of primary data involving multi-sector and multi-scale actors to achieve effective outcomes.

In the Indonesian context, Manurung et al. (2023) indicate that civil-military cooperation in disaster management has shown relatively good results, despite some existing barriers. This study uses qualitative methods, relying on interviews and literature reviews to analyze the importance of collaborative governance in strengthening defense policies for natural disaster management. By employing these methods, this research aims to provide practical recommendations for policymakers and stakeholders to strengthen civil-military cooperation in addressing the water crisis in Indonesia.

RESULT AND DISCUSSION

The water crisis in Indonesia, particularly in rural and arid regions, has posed a significant challenge requiring innovative and collaborative solutions. This study examines the effectiveness of civil-military cooperation in addressing this crisis through the Indonesian Defense University's (IDU) involvement. Utilizing qualitative methods and a comprehensive literature review, this research highlights the successful discovery and management of new clean water sources, emphasizing the strategic advantages and challenges of such collaborations. The IDU has successfully identified new sources of clean water in various remote and drought-prone areas in Indonesia. By employing advanced hydrological techniques and geospatial intelligence, the university has made significant strides in enhancing water security. These efforts have directly improved access to clean water for thousands of residents in underserved communities, showcasing the practical impact of integrated civil-military efforts (Tethys Engineering, 2021). The university's use of cutting-edge technology and rapid deployment capabilities has enabled swift action in regions that previously struggled with water scarcity.

The collaboration between military and civilian authorities has led to more efficient management of water resources. The military's logistical capabilities facilitated the quick deployment of necessary infrastructure, such as drilling wells and installing water purification systems. This synergy between military efficiency and civilian expertise has proven essential in addressing the water crisis effectively (IP Defense Forum, 2020). The IDU's role in coordinating these efforts underscores the importance of combining different skill sets and resources to tackle complex environmental challenges. By providing reliable access to clean water, these initiatives have significantly enhanced the resilience of local communities to environmental stressors and potential water shortages. The involvement of the IDU has also fostered greater trust and collaboration between the military, government authorities, and local communities. This trust is crucial for the sustained success of such initiatives, as it encourages active community participation and cooperation (Yusnaldi et al., 2022).

The IDU's involvement has extended beyond immediate water provision to include capacity-building initiatives for local communities and government officials. Training programs on water management practices and the use of technology have empowered local stakeholders to maintain and manage water resources effectively. This capacity-building aspect ensures the sustainability of the water management projects and enhances the local community's ability to address future challenges independently (Manurung et al., 2023).

The military brings unique strategic advantages to resource management, including rapid mobilization, advanced technological tools, and a disciplined approach to project execution. These capabilities are particularly valuable in emergency situations and in regions with limited infrastructure. The military's involvement often ensures that projects are completed efficiently and within shorter time frames, which is critical in addressing urgent needs such as water scarcity (Buğday, 2016). The collaboration between military and civilian authorities allows for the combination of technical expertise in water resource management with logistical and operational strengths. This synergy is essential for developing sustainable solutions and ensuring the efficient use of resources. Studies have shown that such collaborative efforts lead to more comprehensive and effective outcomes, as each party contributes its strengths to the initiative (Macura et al., 2019).

Successful civil-military cooperation requires building trust and effective communication between all stakeholders. The IDU's efforts in engaging local communities and government officials through training and capacity-building initiatives have been instrumental in fostering a collaborative environment. Trust and cooperation are crucial for the long-term success and sustainability of these projects (Manurung et al., 2023). Despite the successes, several challenges remain in civil-military cooperation. One of the main challenges is the need for better integration of planning and coordination between different agencies. Clear legal frameworks to govern joint operations are essential to streamline efforts and avoid conflicts. Additionally, continuous engagement and transparent communication among all stakeholders are necessary to build and maintain trust (Janse et al., 2022).

Moreover, there is a need for regular evaluation and adaptation of strategies based on feedback from the ground. This adaptive approach ensures that the initiatives remain relevant and effective in addressing the evolving needs of the communities. The development of binding agreements and sustainable relations is also critical to avoid distrust and tension among stakeholders (Buğday, 2016). Comparative studies on civil-military cooperation in different contexts, such as the management of infectious disease outbreaks and disaster response, provide valuable insights into the dynamics of such collaborations. For instance, a scoping review by Janse et al. (2022) identified key themes such as managing relations, framework conditions, integrating collective activities, governance, and civil-military differences. These findings highlight the importance of early and continuous engagement, transparency, and clear operational perspectives for successful cooperation.

Similarly, studies on environmental problems and civil-military cooperation in other regions emphasize the need for integrated efforts to address new security concerns arising from environmental issues. Research by Buğday (2016) on the increase in civil-military cooperation due to environmental problems in developing countries underscores the relevance of such collaborations in addressing complex challenges. The findings of this study provide several practical recommendations for policymakers and stakeholders involved in environmental management and disaster response. Firstly, establishing clear legal and regulatory frameworks to govern civil-military cooperation is essential. These frameworks should outline the roles and responsibilities of each party, ensuring that efforts are coordinated and efficient.

Secondly, continuous capacity-building initiatives should be implemented to empower local communities and government officials. These initiatives should focus on enhancing technical skills, promoting the use of advanced technologies, and fostering a collaborative mindset. Thirdly, regular monitoring and evaluation of projects are crucial to identify areas for improvement and ensure that initiatives remain effective. Feedback from stakeholders should be incorporated into the planning and implementation processes to adapt strategies based on real-world experiences. Lastly, fostering a culture of trust and cooperation among all stakeholders is vital for the long-term success of civil-military initiatives. This can be achieved through transparent communication, active community engagement, and the establishment of binding agreements that promote mutual benefits.

In conclusion that The Indonesian Defense University's proactive role in water resource management illustrates the potential of civil-military cooperation in addressing complex environmental challenges. By integrating military and civilian expertise, Indonesia has developed a resilient and effective strategy for enhancing water security. The successes and challenges identified in this study provide valuable insights for policymakers and stakeholders, emphasizing the importance of collaborative efforts in managing natural resources and responding to crises.

CONCLUSION

The water crisis in Indonesia, particularly in rural and arid regions, presents a significant challenge requiring innovative solutions. This study explored the critical role of civil-military cooperation in addressing this issue, focusing on the Indonesian Defense University (IDU). Utilizing qualitative methods and a comprehensive literature review, the research highlighted the successful discovery and management of new clean water sources facilitated by the IDU. The qualitative approach, including in-depth interviews and field observations, provided insights into the experiences and perspectives of stakeholders involved in these initiatives. The findings revealed that civil-military cooperation significantly contributed to improving water access in underserved areas. The IDU's use of advanced hydrological techniques and rapid mobilization capabilities enabled the swift identification and development of clean water sources. This collaboration not only enhanced water resource management but also improved community resilience and fostered trust among local communities, government authorities, and the military. Capacity-building initiatives further empowered local stakeholders to manage water resources effectively, ensuring the sustainability of these efforts.

Strategically, the military's involvement brought unique advantages, such as rapid deployment and advanced technological capabilities, which complemented the technical expertise of civilian water resource

managers. However, challenges remain, including the need for better integration of planning and coordination, as well as the establishment of clear legal frameworks to govern joint operations. Continuous engagement, transparent communication, and regular evaluation are essential to address these challenges and enhance the effectiveness of civil-military cooperation.

In conclusion, the IDU's proactive role in water resource management demonstrates the potential of civil-military cooperation in tackling complex environmental challenges. By integrating military and civilian expertise, Indonesia has developed a resilient and effective strategy for enhancing water security. The successes and challenges identified in this study provide valuable insights for policymakers and stakeholders, emphasizing the importance of collaborative efforts in managing natural resources and responding to crises. These findings suggest a sustainable model for future initiatives aimed at improving water security and resilience in Indonesia.

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