

Conservation Based Disaster Resilient Schools in Realizing Legal Protection from Disaster Risks in Magelang Regency

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Abstract

Magelang Regency is a region with a high level of disaster vulnerability, as recorded by the Regional Disaster Management Agency in 2020-2024, showing several disasters that occurred, including landslides, earthquakes, extreme weather, building fires, forest fires, droughts, volcanic eruptions, and floods. This situation demands concrete steps in disaster mitigation, especially for vulnerable groups such as children. Children are not physically and mentally prepared to face disasters, and their knowledge of disaster risk reduction is still limited. Schools are strategic places to build preparedness while providing legal protection for children in emergency situations. This study aims to analyze the urgency of establishing disaster resilient schools as a mitigation strategy and analyze the concept of conservation based disaster resilient schools to realize legal protection from disaster risks in Magelang Regency. The research method used is empirical juridical research. The results of the research on the urgency of disaster resilient schools as disaster mitigation in Magelang Regency are seen from the aspect of Pancasila,

especially the 5th principle. The sociological aspect is that there are 106 Elementary Schools and 21 Junior High Schools located in disaster prone zones, while legally supported by various regulations related to formulating disaster resilient schools. The concept of conservation based disaster resilient schools realizes legal protection from disaster risks in Magelang Regency, namely by integrating elements of legal protection and conservation principles to realize sustainable legal protection for all school residents in facing potential disasters in Magelang Regency. The conclusion of the study shows the urgency of having disaster resilient schools and the concept of conservation based disaster resilient schools that integrate legal protection as a guarantee of safety and sustainability of children's educational rights in disaster prone areas. Suggestions for the need a synergistic relationship between schools in Magelang Regency, the Magelang Regency Education Office, and the Magelang Regency Regional Disaster Management Agency in the formation of conservation based disaster responsible schools as an effort to provide legal protection from disaster risks.

Keywords

Conservation Based, Legal Protection, Disaster Risk, Disaster Resilient Schools

A. Introduction

The fourth paragraph of the preamble to the 1945 Constitution of the Republic of Indonesia, mandates that the Indonesian government protect the entire Indonesian nation and all of Indonesia's territory. This protection encompasses all aspects of Indonesian life. This mandate is implemented through the responsibility for disaster management, with the aim of protecting people in disaster prone areas. Law Number 24 of 2007 concerning Disaster Management, serves as the legal basis for implementing disaster management. Article 2 of Law Number 24 of 2007 concerning Disaster Management, affirms that disaster management is based on Pancasila and the 1945 Constitution of the Republic of Indonesia.

The basis of disaster protection in Indonesia is closely related to Indonesia's geographical conditions. Disaster vulnerability in Indonesia is divided into two types: hydrometeorological and geological disasters. Hydrometeorological disasters, or natural disasters related to meteorology, are natural disasters influenced by climatic conditions. Types of hydrometeorological disasters include floods, landslides,

The disaster in Magelang Regency underscores the need for measures to reduce the potential losses caused by natural disasters. Disaster risks can result in loss of life, damage to infrastructure, and impact the social and economic conditions of communities, including psychological aspects and levels of well being. One of the groups most vulnerable to disaster impacts is children. Physically and mentally, children are still developing and are highly dependent on adults, making them unprepared for disasters. Furthermore, children's knowledge of disaster mitigation is still very limited.⁵ To encourage schools to build disaster preparedness, various agencies and institutions have implemented various disaster risk reduction education activities or programs at the school level with methodologies specifically developed by each party.⁶

Schools play a crucial role in providing disaster risk reduction awareness education. Therefore, schools are not only educational institutions but also community based disaster management initiatives.⁷ Disaster mitigation education programs in schools can promote disaster preparedness. Involving parents and the community in school-based disaster mitigation education can foster strong communities. Through the curriculum, students will gain skills and knowledge to deal with disasters.⁸

The education sector is vital for disaster mitigation. Therefore, schools have a strategic role in providing their students with disaster education to prepare them for the potential threat of disaster risk.⁹ Disaster education is the integration of disaster risk into disaster

⁵ Dinar Wahyuni, "Membangun Partisipasi Anak Dalam Pengurangan Risiko Bencana," *Info Singkat Kesejahteraan Sosial* 14, no. 23 (2022): 26.

⁶ Konsorsium Pendidikan Bencana Indonesia, *Kerangka Kerja Sekolah Siaga Bencana* (Jakarta: Konsorsium Pendidikan Bencana Indonesia, 2011), 1.

⁷ Nurul Hidayati Rofiah and Norimune Kawai, "Integrating Disability-Inclusive Disaster Education in Primary Schools: A CASE from Yogyakarta, Indonesia," *Progress in Disaster Science* 28 (2025): 2, <https://doi.org/10.1016/j.pdisas.2025.100482>.

⁸ Mujalin Intaramuean, Atsuko Nonomura, and Tum Boonrod, "Empowering Flood Preparedness: Enhancing Flood Knowledge, Risk Perception, and Preparedness Among Primary School Learners in Flood-Affected Southern Thailand," *Progress in Disaster Science* 26 (2025): 9, <https://doi.org/10.1016/j.pdisas.2025.100410>.

⁹ Hayatul Khairul Rahmat et al., "Model Kesiapsiagaan Bencana Berbasis Sekolah Melalui Program Satuan Pendidikan Aman Bencana Di Kota Tangerang," *Al-Iyraq: Jurnal Bimbingan, Penyuluhan, Dan Konseling Islam* 7, no. 3 (2024): 657, <https://doi.org/10.59027/alisyraq.v7i3.844>.

1. To analyze the urgency of disaster resilient schools as a disaster mitigation measure in Magelang Regency.
2. To analyze the concept of conservation based disaster resilient schools in realizing legal protection from disaster risks in Magelang Regency.

B. Methods

The type of empirical legal research is legal research that analyzes the implementation of law or the application of law in society.¹¹ The type of research used is empirical juridical, focused on the implementation of laws related to conservation based disaster resilient schools to realize legal protection from disaster risks in Magelang Regency.

The data sources used in this study are as follows:

1. Primary Data.

Primary data is data obtained directly from the source, either through interviews, observations and reports that are directly related to the research object.¹² In this study, researchers conducted interviews with the parties, namely the Regional Disaster Management Agency of Magelang Regency and the Education and Culture Office of Magelang Regency.

2. Secondary Data.

Secondary data in this study, as follows:

- a. Primary legal materials

Primary legal materials, namely binding legal materials, consist of statutory regulations.¹³ Researchers use primary legal materials, including:

- 1) The 1945 Constitution of the Republic of Indonesia.
- 2) Law Number 20 of 2003 concerning the National Education System.
- 3) Law Number 24 of 2007 concerning Disaster Management.
- 4) Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program.

¹¹ Muhaimin, *Metode Penelitian Hukum*, 2020.

¹² Wiwik Sri Widiarty, *Buku Ajar Metode Penelitian Hukum* (Yogyakarta: Publika Global Media, 2024), 139.

¹³ Sigit Sapto Nugroho, Anik Tri Haryani, and Farkhani Farkhani, *Metodologi Riset Hukum*, ed. Sarjiyati Sarjiyati, *Ase Pustaka*, vol. 2 (Oase Pustaka, 2020), [https://unmermadiun.ac.id/repository_jurnal_penelitian/Sigit Sapto Nugroho/URL Buku Ajar/Buku Metodologi Riset Hukum.pdf](https://unmermadiun.ac.id/repository_jurnal_penelitian/Sigit%20Sapto%20Nugroho/URL%20Buku%20Ajar/Buku%20Metodologi%20Riset%20Hukum.pdf).

5) Magelang Regency Regional Regulation Number 3 of 2014 concerning the Implementation of Disaster Management in Magelang Regency.

b. Secondary legal materials

Secondary legal materials, namely books and scientific legal writings.¹⁴ The books and scientific articles used in this research are related to disaster resilient schools, conservation, disaster mitigation, legal protection.

The data analysis technique used is descriptive analysis.¹⁵ Based on this, the legal fact data obtained from this research attempts to provide an explanation by providing a description or revealing various factors that are seen as closely related to conservation based disaster resilient schools realizing legal protection from disaster risks in Magelang Regency.

C. Results and Discussion

1. *The Urgency of Disaster Resilient Schools as Disaster Mitigation in Magelang Regency*

Following The importance of developing disaster resilient schools as part of the mitigation strategy in Magelang Regency can be examined from several key aspects: philosophical, sociological, and legal. These aspects are outlined as follows:

a. Philosophical Aspect.

The fifth principle of Pancasila, “Social justice for all Indonesian people,” is a crucial foundation for the urgent need to strengthen the Disaster Resilient School program in Magelang Regency. The principle of social justice emphasizes that every citizen, including students, has the right to receive equal treatment in terms of protection and safety. In the context of disasters, the fulfillment of the right to a sense of security and protection for all students is realized equally, including through mitigation efforts in the educational environment. The implementation of Disaster Resilient Schools is a concrete step in realizing social justice, by ensuring that all schools have equal capacity, systems, and preparedness in facing potential disasters.

The meaning of social justice for all Indonesian people is reflected, among other things, through the fulfillment of the right to health, as stipulated in the 1945 Constitution of the Republic of Indonesia. Article 28H of the 1945 Constitution of the Republic of Indonesia, affirms that everyone has the right to live in physical and spiritual prosperity, to have a place to live, and to have a good and

¹⁴ Muhaimin, *Metode Penelitian Hukum*.

¹⁵ Nugroho, Haryani, and Farkhani, *Metodologi Riset Hukum*.

healthy living environment, as well as the right to receive health services. This provision affirms that health and welfare are basic rights that must be guaranteed by the state as part of the implementation of social justice.

The implementation of the disaster resilient school program in Magelang Regency is a concrete form of effort to fulfill the constitutional rights of citizens, especially children, as guaranteed in Article 28H of the 1945 Constitution of the Republic of Indonesia. Schools, as one of the public spaces where children grow and develop, should be protected from disaster risks through adequate preparedness and mitigation systems. By making schools a safe and resilient environment against disasters, the state is also carrying out its responsibility in realizing social justice for all Indonesian people, especially in the aspect of protecting the health and safety of the nation's future generations.

Philosophically, every citizen has the right to a safe and healthy environment, including in schools. In the context of Disaster Resilient Schools, this reflects the importance of protecting the health and safety of students and the entire school community from the threat of disaster. Implementing disaster resilient schools aligns with the core values of the Indonesian philosophy, which prioritizes the protection of life and the well being of the people. Strengthening the implementation of the Disaster Resilient Schools program in Magelang Regency is an urgent matter based on the principle of comprehensive citizen protection.

b. Sociological aspect.

Article 4 of the Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, which essentially explains that the scope of implementation of the disaster safe education unit program includes three main phases: pre disaster, emergency situations during a disaster, and post disaster recovery of education services. These three stages aim to ensure the continuity of the education process under any conditions, including during a crisis. The implementation of this disaster safe education unit program involves the active involvement of ministries and local governments in an integrated manner, to ensure the effectiveness of program implementation and provide maximum protection for all educational unit residents in disaster prone areas.

Article 6 of the Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, which essentially explains the responsibilities of regional governments in implementing pre disaster programs, namely the integration of the implementation of the disaster-

safe education unit program into the regional medium term development plan, particularly in the education and disaster management sectors. The initial step that can be taken is to establish a Joint Secretariat for Disaster Safe Education Units at the regional level as a cross-sector coordination forum. Next, mapping of education units located in disaster prone areas to determine the priority of schools that will receive support for the implementation of the disaster safe education unit program.

Based on Article 6 of the Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, which essentially also emphasizes that the government needs to ensure that educational facilities and infrastructure meet disaster safety standards, including through periodic building feasibility studies involving certified professionals. Strengthening and repairing educational infrastructure needs to be carried out to comply with disaster safe building standards, and the construction process must be strictly supervised. In addition, material on disaster prevention and mitigation must be integrated into the local content curriculum. Capacity building for regional government officials in the education sector, including educators, is also an important part of the comprehensive implementation of the disaster safe education unit program.

Based on the provisions of the above article, this demonstrates the urgency of establishing disaster resilient schools in disaster prone areas, including Magelang Regency. Magelang Regency is an area with a high potential for disasters, such as Mount Merapi eruptions, floods, landslides, and earthquakes. Therefore, the existence of disaster resilient schools is crucial as a form of protection for students and the school community, ensuring their safety in the face of various disaster risks. Furthermore, resilient schools also aim to ensure the continuity of the educational process even if disruptions occur due to disasters.

The basis for the disaster safe education program requires mapping of educational units in disaster prone areas in Magelang Regency. The list of schools categorized as vulnerable to disasters is shown in the following table:

No.	District Name	Number of Schools		Disaster Potential			
		Elementary School	Junior High School	Floods	Landslides	Volcano	Tornado
1.	Secang	10	1	✓	✓	×	×
2.	Borobudur	6	1	×	✓	×	×
3.	Kaliangkrik	9	2	×	✓	×	×

4.	Srumbung	4	3	×	✓	✓	×
5.	Salam	5	0	✓	×	✓	×
6.	Grabag	6	0	×	✓	×	×
7.	Kajoran	9	2	✓	✓	×	×
8.	Salaman	11	1	×	✓	×	×
9.	Pakis	9	2	×	✓	✓	×
10.	Windusari	5	0	×	✓	×	✓
11.	Dukun	27	2	×	×	✓	×
12.	Ngablak	5	2	×	✓	×	×
13.	Bandongan	0	1	×	✓	×	×
14.	Sawangan	0	3	×	✓	✓	×
15.	Sumber	0	1	×	×	✓	×
Total		106	21				

Notes:

✓ = Has the potential for disaster

× = Has no disaster potential

Source: Magelang Regency Regional Disaster Management Agency Year 2025

Based on the data in Table 2. a total of 106 Elementary Schools and 21 Junior High Schools in Magelang Regency are located in disaster prone areas. This figure indicates that a significant number of educational institutions are highly vulnerable to the threat of natural disasters. Each region in Magelang Regency has its own characteristics of disaster threats. Potential disasters faced by educational institutions in this area include floods, landslides, volcanic eruptions, and tornadoes.

The potential for disasters in schools will result in disaster risk, so disaster mitigation is necessary in schools, including education, training, and the implementation of procedures. Education provides knowledge about disaster types, disaster risks, and steps to take in the event of a disaster. Training includes regular disaster simulations. Procedures include evacuation procedures and skills for effectively responding to emergency situations.¹⁶ As it is understood that the impact of disasters damages the environment and threatens human safety, disaster mitigation education in schools is essential. Disaster mitigation education in schools can improve disaster preparedness and reduce disaster risk.¹⁷

¹⁶ Syamsu A. Kamaruddin and Mario, "Rancangan Kesiapsiagaan Bencana Di Lingkungan Sekolah Menengah," *Predestinasi* 18, no. 2 (2025): 23, <https://doi.org/10.26858/predestinasi.v18i2.81196>.

¹⁷ Shania Maharani et al., "Pendidikan Mitigasi Bencana Dan Kesiapsiagaan Anak Dalam Menghadapi Gempa Bumi Di SDN 09 Berok Nipah Shania," *JIK (Jurnal Ilmu Kesehatan)* 8, no. 2 (2024): 437, <https://doi.org/10.33757/jik.v8i2.1207>.

The existence of participation and optimization of the importance of disaster mitigation in schools, which in this case is able to strengthen the involvement of all stakeholders in disaster risk reduction actions, and build disaster mitigation resilience.¹⁸ Schools are able to strengthen social capital and community capacity.¹⁹

This diversity of threats requires a specific and adaptive approach to building school resilience to disasters. Risk mapping and strengthening preparedness capacity at the educational institution level are crucial steps to ensure the protection of the entire school community. The presence of these schools in disaster prone areas poses risks to the safety of students, educators, and the continuity of the teaching and learning process. This situation reinforces the urgency of establishing Disaster Resilient Schools as a mitigation and preventative measure in disaster prone areas.

c. Legal Aspect

The legal aspects underlying the urgency of establishing disaster resilient schools in Magelang Regency lie in the importance of a strong legal basis to ensure the safety and health of students, educators, and the entire school community in the face of potential disasters. The legal aspects of establishing disaster resilient schools in Magelang Regency are as follows:

1). The 1945 Constitution of the Republic of Indonesia.

Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia, states that everyone has the right to live in physical and spiritual prosperity, to have a home, and to have a good and healthy living environment, as well as the right to receive health services. In the context of schools, this provision implies that the fulfillment of the right to health and safety must also be guaranteed in the educational environment, including in disaster mitigation efforts. The establishment of disaster-resilient schools in Magelang Regency is important to ensure the fulfillment of these rights. The main objective is to protect all school residents from the risk of disaster, guarantee the continuity of safe educational services, and create a healthy, safe, and equitable learning environment for every student.

2). Law Number 20 of 2003 concerning the National Education System.

¹⁸ Maciej Pawlik et al., "Agent-Based Modelling for Flood Evacuation as Inclusive Disaster Risk Reduction: Pilot Participatory Action Research with 11- and 12-Year-Old Children from A Japanese School," *International Journal of Disaster Risk Reduction* 117 (2025): 15, <https://doi.org/10.1016/j.ijdrr.2025.105180>.

¹⁹ Carol Mutch, "How Schools Build Community Resilience Capacity and Social Capital in Disaster Preparedness, Response and Recovery," *International Journal of Disaster Risk Reduction* 92 (2023): 12, <https://doi.org/10.1016/j.ijdrr.2023.103735>.

Law Number 20 of 2003 concerning the National Education System, legally provides an important basis for the implementation of inclusive, adaptive, and responsive education to special conditions, including disaster situations. Article 32 paragraph (2) of Law Number 20 of 2003 concerning the National Education System, states that special service education is education for students in remote or underdeveloped areas, isolated indigenous communities, and/or those experiencing natural disasters, social disasters, and those who are economically disadvantaged. This demonstrates legal recognition of guaranteed access to education even in emergency disaster conditions. Therefore, the establishment of disaster resilient schools in Magelang Regency is a manifestation that is in accordance with the provisions of the law to ensure that educational units have adequate preparedness, risk mitigation, and response capabilities in facing disasters, so that the teaching and learning process can continue to run safely and sustainably.

3). Law Number 24 of 2007 concerning Disaster Management.

Law Number 24 of 2007 concerning Disaster Management, serves as the primary legal basis for implementing disaster risk reduction efforts, including in the education sector. Article 26 paragraph (1) letter b of Law Number 24 of 2007 concerning Disaster Management, states that everyone has the right to education, training, and skills in disaster management.

This law emphasizes that disaster management is a shared responsibility between the central government, regional governments, and the community, encompassing disaster prevention, emergency response, and rehabilitation activities. In this regard, the establishment of disaster resilient schools in Magelang Regency aligns with the mandate of this law, as it aims to protect students and school residents from the impacts of disasters and ensure the continuity of educational services in emergency situations. Making schools part of a planned and sustainable disaster risk management system serves as a form of protection for citizens constitutional rights to safety and a decent education.

4). Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program.

Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, serves as the basis for regulating the implementation of disaster resilient schools in Indonesia. Article 4 of Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, states

that the scope of the implementation of the disaster safe education unit program includes:

- a. Implementation of disaster safe educational unit programs during pre disaster periods;
- b. Provision of educational services during disaster emergencies; and
- c. Recovery of educational services after a disaster.

This regulation also stipulates concrete measures such as risk mapping, increasing educator capacity, strengthening the curriculum, and improving educational infrastructure to ensure disaster resilience. Based on these provisions, the establishment of disaster resilient schools in Magelang Regency is relevant, given the region's high disaster risk. The establishment of disaster resilient schools represents a commitment and strategic effort to ensure children's right to a safe and sustainable education.

- 5). Magelang Regency Regional Regulation Number 3 of 2014 concerning the Implementation of Disaster Management in Magelang Regency.

Article 41 paragraph (2) letter h of Magelang Regency Regional Regulation Number 3 of 2014 concerning the Implementation of Disaster Management in Magelang Regency, states that preparedness is carried out through disaster preparedness education in the elementary and secondary school curriculum, as local content. Based on this article, the school environment has an important role in education related to disaster mitigation. Students who receive education about disaster mitigation will be able to implement it in preventing potential disaster risks. Therefore, disaster responsible schools play an important role as a form of guarantee of security and safety protection for students.

2. The Concept of Conservation Based Disaster Resilient Schools Realizes Legal Protection from Disaster Risks in Magelang Regency

Following According to Satjipto Raharjo, legal protection is a form of protection for individual interests through the granting of certain rights or authority so that the individual can take action to protect his interests.²⁰ This authority is not granted absolutely, but rather through measured regulations regarding the extent to which the right can be exercised and in what contexts it can be used. Protection itself includes measures to ensure a sense of security, peace, well being,

²⁰ Romli et al., *Perlindungan Hukum* (Kota Palembang: CV Doki Course and Training, 2024), 32.

and protection from threats or risks that could potentially harm the parties involved.²¹

Legal protection is an instrument to safeguard the rights and interests of every individual from potential threats. This protection includes granting concrete authority that enables an individual to defend their rights. This demonstrates that legal protection is functional and applicable. The concept of protection encompasses psychological and social aspects, namely creating a sense of security and peace in an individual's life, which is the essence of substantive justice in law. In the context of disaster risk protection, this perspective supports the importance of the state's role in providing a sense of security through regulations that are pro and responsive to the needs of citizens.

Legal protection against disaster risks is a right of every individual, and the responsibility for disaster management lies with the central and regional governments. Disaster mitigation must be carried out in a planned, systematic, and coordinated manner to ensure effective mitigation efforts.²²

Disaster risk protection emphasizes the importance of the state's role in ensuring a sense of security for all citizens through policies that are responsive to community needs. One way the state fulfills this responsibility is through the implementation of the disaster resilient school program, which aims to protect students, educators, and the entire school community from potential disaster threats. This program provides a practical form of legal protection for children as a vulnerable group, as well as a preventive measure reflecting the state's presence in creating a safe, appropriate, and sustainable educational environment.

Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, serves as an important legal basis for realizing legal protection for students in educational units. This regulation emphasizes that educational units have responsibilities not only in the learning aspect, but also in ensuring the safety of all school members from disaster risks. Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, regulates the integration of disaster risk reduction into the curriculum, increasing the capacity of educators and education personnel, and building safe facilities and infrastructure.

²¹ Romli et al., *Perlindungan Hukum*.

²² Arif Maulana et al., "Paradigma Penanggulangan Bencana: Tanggung Jawab Pemerintah Daerah Dan Mitigasi Berbasis Kearifan Lokal," *Collegium Studiosum Journal* 7, no. 2 (2024): 675, <https://doi.org/10.56301/csj.v7i2.1495>.

Essentially, this regulation reflects the existence of legal protection through a preventive and educational approach.

When natural disasters occur, one of the most vulnerable groups is children. It's known that children lack mental and physical preparedness, and disasters can also cause psychological trauma. Education can foster empathy and togetherness in facing disaster risks.²³ Disaster risk education can help school communities improve their disaster mitigation capacity. A safety framework within schools plays a crucial role in protecting the rights of school residents to address disaster risks.²⁴ Management in disaster mitigation in schools, as follows:²⁵

- a. Comprehensive disaster preparedness involves implementing disaster mitigation plans for all types of disasters, supported by community participation, and conducting disaster simulation training in schools.
- b. Expanded disaster mitigation training combines theoretical knowledge with practical experience.
- c. Psychosocial support programs integrate post disaster mental health interventions to maintain learning continuity and support recovery.
- d. Infrastructure and security measures include strengthening physical structures, securing classroom equipment, maintaining disaster safety systems, and providing emergency exits.
- e. Leadership development involves training in flexible leadership, appropriate decision making, and trauma based disaster risk management.

In studying motivation for disaster risk protection, each individual's response to disaster mitigation perceptions is crucial. Disaster based education programs in schools are an approach to reducing disaster risk for both the school community and everyone outside the school. Therefore, the social impact of these educational programs needs to be formulated into policies as a form of legal protection against disaster risk in disaster prone areas.²⁶

²³ Ria Tresnomurti, "Perlindungan Terhadap Anak-Anak Korban Bencana Ditinjau Dari Konvensi Hak-Hak Anak Dan Hukum Nasional," *Collegium Studiosum Journal* 6, no. 1 (2023): 246–47, <https://doi.org/10.56301/csj.v6i1.896>.

²⁴ Tisha Goswami and Ansar Ahmad, "A Systematic Review of School-Based Disaster Risk Reduction Strategies in India," *Evaluation and Program Planning* 112 (2025): 1, <https://doi.org/10.1016/j.evalprogplan.2025.102646>.

²⁵ Engin Is and Halil Karadas, "Investigation of Disaster Management Perceptions of School Administrators: The Case of Kahramanmaraş Earthquake," *Acta Psychologica* 260 (2025): 8, <https://doi.org/10.1016/j.actpsy.2025.105613>.

²⁶ Tetsuya Harada, Masahiro Shoji, and Yoko Takafuji, "Intergenerational Spillover Effects of School-Based Disaster Education: Evidence from Indonesia," *International*

Disaster mitigation efforts in schools aim to:²⁷

- a. Improve resource capacity to address and reduce disaster risks.
- b. Optimize school facilities and infrastructure to ensure disaster safety.
- c. Ensure the protection and safety of students, teachers, and education personnel from disaster risks.
- d. Ensure the continuity of educational services in schools affected by disasters.
- e. Recover from the impact of disasters on schools.

Disaster resilient schools are an implementation effort designed to create an educational environment that is prepared for various stages of disaster, from pre disaster, during emergencies, to post disaster. This concept emphasizes the importance of comprehensive preparedness, including safe school infrastructure, organized risk management, and integrated disaster education into the curriculum.

The elements of legal protection include several things, including:²⁸

- a. The role of the state in providing protection and care to its citizens.
- b. Guaranteeing legal certainty.
- c. Protection related to the rights of citizens.

The concept of disaster resilient schools was developed by elaborating on elements of legal protection as a basis for analysis to determine the extent to which the program provides legal protection against disaster risks in Magelang Regency. The elements of legal protection analyzed include the existence of state protection for citizens, guarantees of legal certainty, and protection of citizens rights. This approach aims to demonstrate that the disaster resilient school program is part of the realization of legal protection guaranteed by laws and regulations. An explanation of disaster resilient schools in accordance with the elements of legal protection is as follows:

- a. The role of the state in providing protection and care to its citizens.

The state has a constitutional responsibility to protect and safeguard all its citizens from all forms of threats, including the risk of disasters. This protection encompasses not only physical aspects but also fundamental human rights, such as the right to security, education, and a decent standard of living. The realization of the state's responsibility can be seen in the existence of various regulations and policies specifically governing disaster management and community

Journal of Disaster Risk Reduction 85 (2023): 11, <https://doi.org/10.1016/j.ijdr.2022.103505>.

²⁷ Zuhriana K. Yusuf et al., *Model Pendidikan Sekolah Siaga Bencana* (Indramayu: CV Adanu Abimata, 2024), 90.

²⁸ Romli et al., *Perlindungan Hukum*.

protection in emergency situations. This demonstrates that legal protection is not merely declarative but also requires concrete implementation in the form of programs and policies.

The state's role in providing protection and care, particularly for school children, from disaster risks is reflected in several important regulations, including Law Number 24 of 2007 concerning Disaster Management, Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, and Regulation of the Head of the National Disaster Management Agency Number 4 of 2012 concerning Guidelines for the Implementation of Disaster Safe Schools/Madrasahs. These three regulations serve as the legal basis that emphasizes the importance of protecting students as a vulnerable group who require safety assurances during the learning process. Through these regulations, the state is present to integrate disaster policies into the national education system.

Existing regulations are part of an integrated approach to address potential disasters and systematically manage risks. Disaster risk management is a crucial preventative approach to minimizing the negative impacts of a disaster. This step requires the active involvement of all elements of society, including educational institutions, in understanding potential hazards and how to handle them. Disaster education is an important tool for fostering awareness, skills, and responsiveness to disasters in schools.

The Regional Disaster Management Agency of Magelang Regency plays a crucial role in designing and implementing disaster management strategies at the local level. This strategy aims to improve regional preparedness for various potential disasters, particularly natural disasters such as Mount Merapi eruptions, which frequently occur in the region. There are three main steps taken:

- a. Disaster Risk Analysis: Involves identifying potential disasters, mapping vulnerable areas, and assessing the impact on the community, including educational institutions.
- b. Developing Disaster Management Standard Operating Procedures (SOP): Designing technical and procedural guidelines to serve as a reference during a disaster so that all elements can act quickly, accurately, and in a coordinated manner.
- c. Disaster Management Activity Planning: Includes program development, evacuation simulations, training for communities and schools, and preparing emergency facilities and infrastructure.

A concrete step that supports the above strategy is the issuance of Decree of the Head of the Education and Culture Office of Magelang Regency Number: 188.4/2255/04.2c/2018 concerning the

Establishment of Standard Operating Procedures (SOP) for Disaster Management in Magelang Regency in 2018. One of the important contents of the SOP is the identification of school areas located in disaster prone zones, especially those affected by the volcanic activity of Mount Merapi. This step allows for preventive measures, such as the preparation of evacuation plans, the placement of safe assembly points, the provision of disaster training for students and teachers, and the readiness of emergency logistics in these schools. This determination also serves as a basis for local governments in regulating the distribution of resources, training, and outreach.

The implementation of the Head of the Magelang Regency Education and Culture Office Decree Number: 188.4/2255/04.2c/2018 concerning the Establishment of Standard Operating Procedures (SOP) for Disaster Management in Magelang Regency in 2018, demonstrates the importance of inter agency coordination, particularly between the Education Office, the Regional Disaster Management Agency, and the Regional Disaster Management Team. This coordination is crucial so that each educational unit has action guidelines aligned with regional policies, both in the prevention, emergency response, and recovery phases. This cross sectoral collaboration strengthens the effectiveness of disaster management policies by integrating information, resources, and responsibilities of each party.

The issuance of this SOP reflects the state's systematic efforts to provide legal protection to students. In this case, protection extends beyond physical safety during a disaster to ensure the right to continued education post disaster. This effort is a concrete manifestation of the state's obligation to create a safe learning environment, as mandated by laws and regulations, and is part of fulfilling children's rights to a sense of security and special protection as a vulnerable group.

b. Guarantee of legal certainty.

Legal certainty is a crucial element in a legal system, ensuring that all legal actions are based on clear, firm, and predictable rules. In the context of disaster risk protection, legal certainty serves as the primary foundation for the government, schools, and communities in fulfilling their obligations and obtaining adequate protection rights. Legal certainty ensures the consistent application, implementation, and enforcement of these regulations.

Legal certainty in disaster risk protection in educational settings is evident in the existence of regulations that specifically address disaster risk reduction measures in schools. These include Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the

Rights based legal protection for disaster risk reduction. Based on this, humanitarian principles are applied to disaster mitigation with the aim of protecting human life and safety. This legal protection not only reduces disaster risk but also fosters community participation in disaster mitigation.³¹

Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia states that every person has the right to live in physical and spiritual prosperity, to have a place to live, and to have a good and healthy living environment, and to receive health services. This provision emphasizes that the state is obliged to provide protection to every individual, including in the context of facing disaster risks that threaten the safety of life, housing, and access to basic services.

Legal protection for disaster management is constitutionally regulated. The Indonesian constitution affirms the state's commitment to protecting the rights of every citizen at risk of disaster. Therefore, legal protection from disaster risks is not only a humanitarian effort, but also a constitutional obligation of the state towards its people.

Educational development planning is essential for schools to understand the concept of school preparedness for disasters. Development planning is crucial for school management in disaster safe school programs for the short, medium, and long term.³² The role of education in disaster mitigation can provide students with knowledge and change their attitudes about the importance of disaster mitigation. Implementing disaster mitigation education can provide students and teachers with a better understanding of the threat of disaster risk.

The implementation of conservation in natural resource management is a concrete form of legal protection against disaster risks. Magelang Regency, known as an area with a high level of disaster vulnerability, including volcanic eruptions, landslides, and lava floods, requires an approach that is not only technical but also based on conservation principles. Through the implementation of conservation in schools, within the concept of disaster resilient schools, students can understand the importance of sustainably protecting the environment as a preventative measure for legal protection against disaster risks.

³¹ Gandar Mahojwala et al., "Peran Pendekatan Berbasis Hak Asasi Manusia Dalam Mendorong Pemenuhan Hak Pengurangan Risiko Bencana," *JMEL (Jurnal Mineral, Energi Dan Lingkungan)* 6, no. 1 (2022): 1–2, <https://doi.org/10.31315/jmel.v6i1.4320>.

³² Sjamsir Hasbi, Zaenab Hanim, and Sani Bin Husain, "The Implementation Optimization of School Development Plan in Flood Disaster Mitigation Policy in Tropical Rainforest (Case Study at State Junior High School 5 Samarinda)," *Social Sciences & Humanities Open* 7, no. 1 (2023): 1, <https://doi.org/10.1016/j.ssaho.2023.100440>.

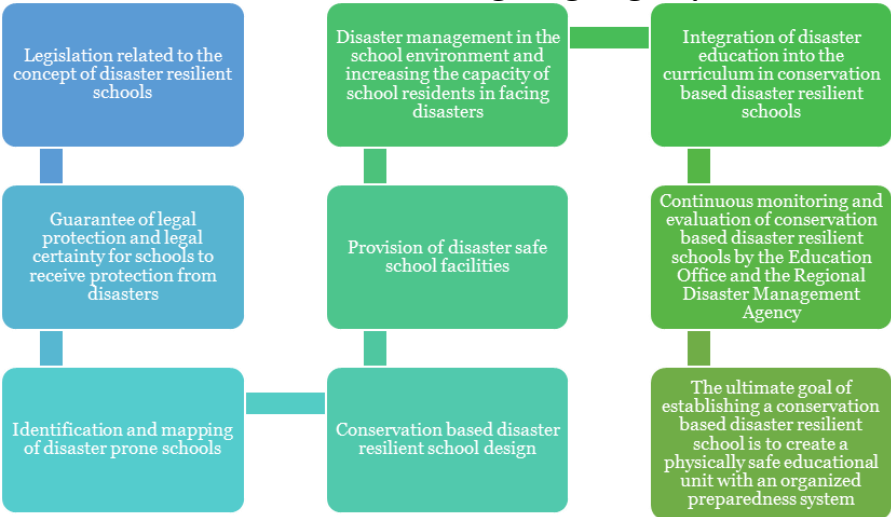
schools support legal protection against disaster risks by reducing ecological vulnerability.

The fifth principle is the mechanism for regulating and enforcing customary law in resource allocation to prevent overexploitation. Communities have long had customary legal institutions that govern equitable environmental management. This concept can be adapted into school regulations by emphasizing educational sanctions for violations of environmental regulations, such as damaging plants or littering.

By implementing these five conservation principles, disaster resilient schools in Magelang Regency are not merely disaster education programs but also a concrete means of environmental based legal protection. Conservation implemented in natural resource management in schools serves as a preventative measure, in line with legal protection theory, which emphasizes the importance of preventive legal protection before a disaster occurs. In this way, schools become centers of conservation learning that protect the environment and prepare the younger generation to live alongside nature sustainably.

Based on the elements of legal protection and conservation outlined previously, namely the role of the state in providing protection, guaranteeing legal certainty, protecting citizens rights, and the existence of sanctions for violations, a concept or model for disaster resilient schools in Magelang Regency will be formulated. This concept is designed to implement legal protection against disaster risks within educational institutions, integrating applicable regulations, local risk potential, and the specific needs of the school community, as follows:

Picture 1. The Concept of of Conservation Based Disaster Resilient Schools in Magelang Regency



Based on Picture 1. the formulation of the concept for establishing disaster-resilient schools in Magelang Regency begins with a legal basis as the basis for legitimacy. Several regulations that serve as references include Article 28H of the 1945 Constitution of the Republic of Indonesia, Law Number 20 of 2003 concerning the National Education System, Law Number 24 of 2007 concerning Disaster Management, Regulation of the Minister of Education and Culture Number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, and Magelang Regency Regional Regulation Number 3 of 2014 concerning the Implementation of Disaster Management in Magelang Regency. This legal basis guarantees that schools have the right to protection from disasters in pre, during, and post disaster conditions.

The concept in Figure 1. is based on legal protection elements, which are then realized in the form of schools with structured disaster management systems. With risk identification and mapping as the initial step, schools are directed to design preparedness plans, build safe physical facilities, involve the entire school community in disaster management, and integrate disaster education into the curriculum.

The final stage in this process is ongoing monitoring and evaluation by the Regional Disaster Management Agency and the Education Office to ensure schools remain prepared. All of these steps ultimately aim to create educational units that are physically safe, have an organized preparedness system, and are able to respond to and recover from disasters effectively, so that the learning process continues even in emergency situations.

Based on all the stages and legal frameworks described, the concept of disaster resilient schools is expected to be a concrete manifestation of efforts to provide legal protection for educational institutions in Magelang Regency. By integrating risk identification, strategic planning, the provision of safe facilities, capacity building for the school community, and ongoing evaluation, schools will not only become physically safe places to learn but also have comprehensive legal protection against disaster risks. This concept is expected to achieve effective and sustainable legal protection for all school members in facing potential disasters in Magelang Regency.

D. Conclusion

Based on philosophical, sociological, and legal considerations, it can be concluded that there is a strong urgency to establish disaster resilient schools in Magelang Regency. Philosophically, the 5th principle of Pancasila essentially aims to fairly protect the health and safety rights

of students and the entire school community from the threat of disaster. Sociologically, this is driven by the geographical conditions of the disaster prone region, where 106 Elementary Schools and 21 Junior High Schools are recorded as being located in vulnerable zones, thus requiring adequate protection. From a legal perspective, this urgency is reinforced by the existence of various regulations that require the implementation of disaster safe educational unit programs. Therefore, disaster resilient schools are a concrete and strategic implementation to ensure the safety and continuity of education in Magelang Regency. Based on research results, it is known that to date, there are no formally designated disaster resilient schools in Magelang Regency. However, Magelang Regency has a Decree of the Head of the Magelang Regency Education and Culture Office Number: 188.4/2255/04.2c/2018 concerning the Establishment of Standard Operating Procedures (SOP) for Disaster Management in Magelang Regency in 2018, which is a progressive step in efforts to protect children in educational environments. The existence of this SOP demonstrates the initial commitment of the local government to building a disaster preparedness system in the education sector. Therefore, the concept of conservation-based disaster resilient schools was formulated as legal protection that can be implemented in Magelang Regency as a concrete and sustainable form of implementation in protecting children's rights to a sense of security and continuity of education in disaster prone areas.

The recommendations in this study are that the Magelang Regency Education Office should develop and establish specific policies related to the establishment of Disaster Resilient Schools in a more structured and comprehensive manner, including establishing criteria and indicators for resilient schools. Furthermore, it is important to integrate disaster education into the curriculum and conduct regular training for teachers and education personnel on disaster mitigation. The Magelang Regency Regional Disaster Management Agency is expected to strengthen synergy with the Education Office in developing technical guidelines for implementing disaster resilient schools and providing training, evacuation simulations, and direct assistance to schools located in disaster prone areas. Furthermore, the Regional Disaster Management Agency of Magelang Regency is also advised to regularly update disaster risk maps and make them the primary reference in planning disaster safe schools. Schools need to take proactive steps by establishing a School Disaster Preparedness Team and developing an Emergency Response Plan that is appropriate to local risk characteristics. School principals are expected to involve the entire school community in preparedness programs, including through

disaster simulations, developing evacuation routes, and providing emergency facilities. In addition, schools are also advised to establish partnerships with parents, the surrounding community, and related agencies to strengthen support in creating a safe and disaster resilient learning environment.

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