

DENPASAR MAYOR'S INSTRUCTIONS ON DENGUE FEVER MITIGATION: A REFLECTION ON SUSTAINABLE DEVELOPMENT

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Abstract

Dengue fever (DHF) is one of the serious infectious diseases in Indonesia, including in the city of Denpasar, which often faces a spike in cases. Dengue fever control requires an integrated and sustainable approach, especially in the context of sustainable development which is the focus of the government. The instructions of the Mayor of Denpasar in this case play an important role in directing local policies to address this problem effectively. This study aims to analyze the instructions of the Mayor of Denpasar in mitigating dengue fever cases and their impact on sustainable development through a normative legal approach. This study uses a procedure that emphasizes the disclosure of truth through the logic of legal science from a normative aspect. Emphasis is placed on the importance of good environmental management, because without it, stopping dengue fever cases will be difficult to achieve. Dengue fever cases require policies that are not only effective in reducing the prevalence of the disease but also contribute to achieving sustainable development goals. Using the normative legal method, this study will examine the regulations and legal instructions issued by the local government and their implementation within the legal framework. This study will also evaluate how these mitigation policies support sustainable development and contribute to the vision of Golden Indonesia 2045. The results of this study are expected to provide insight into the legal strength and effectiveness of policies in addressing health issues while supporting sustainable development.

Keywords: Denpasar Mayor Instruction; Dengue Fever Mitigation; Sustainable Development.

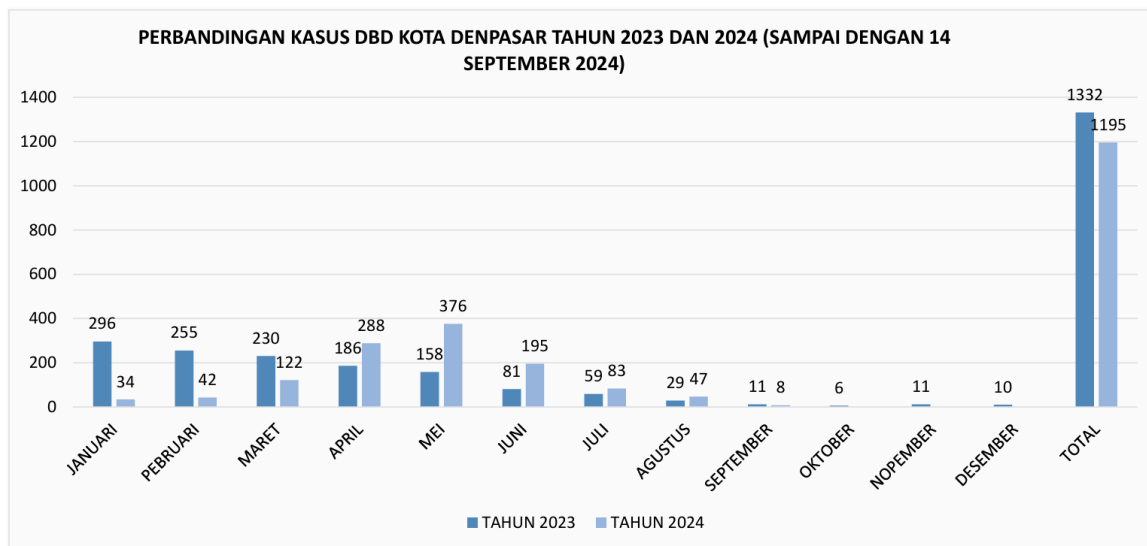
A. INTRODUCTION

Dengue fever is caused by the dengue virus pathogen which is widespread in various regions of Indonesia (Sukendra et al., 2024). Transmission of this virus occurs through insect vectors, especially several cosmopolitan mosquito species such as *Aedes aegypti*, *Aedes albopictus*, and several other types of mosquitoes (Kantao, 2023). Dengue virus infection (IVD) can cause various symptoms of fever, ranging from dengue fever (DF), dengue hemorrhagic fever (DHF) which may be accompanied by shock, to other unusual symptoms (World Health Organization, 2017). Dengue fever is a disease that is very susceptible to climate change, especially related to physical environmental conditions. Changes in climate will affect the transmission process of this disease, because vectors can thrive if temperature, wind speed, and humidity are at optimal levels that support their survival (Prambudi et al., 2023). Indonesia as one of the tropical countries in the world with quite high air humidity is a trigger for the breeding of mosquitoes such as *Aedes aegypti* which is one of the vectors of dengue fever and is widespread in tropical and subtropical areas so that it can cause health

problems because in Indonesia this type of mosquito is widespread both in homes and public places (Ministry of Health of the Republic of Indonesia, 2017).

The Indonesian government has formulated a national strategy for dengue control for the 2021-2025 period, consisting of six main steps (Khairinnisa et al., 2025). The first step is to strengthen effective, safe, and sustainable vector management. The second step focuses on improving access and quality of dengue management. The third step includes strengthening comprehensive dengue surveillance and responsive management of Extraordinary Events (KLB). The fourth step emphasizes increasing sustainable community involvement. The fifth step includes strengthening government commitment, policies, program management, and partnerships. Finally, the sixth step is to develop studies, innovations, and research as a basis for evidence-based policies and program management. Although the national strategy has been implemented, in early January 2024 - May 5, 2024 there were 91,269 cases of dengue hemorrhagic fever (DHF) in Indonesia, of which 641 cases resulted in death (Ministry of Health of the Republic of Indonesia, 2019).

Denpasar City, which is the capital of Bali Province, is still not ready to implement the national strategy for handling dengue fever in 2021-2025, as evidenced by the high number of dengue fever cases on June 1, 2024, there were 862 cases with 6 deaths. Based on the Denpasar City dengue fever case graph data, 56.38% of cases came from the age of 15-44 years, while the majority of deaths came from the age of 5-15 years. The following is a graph of dengue fever case exposure in Denpasar City in 2024.



Graph 1. Dengue Fever Cases in Denpasar City in 2023 and 2024 until September 2024
Source: Denpasar City Health Office, 2024

Due to the increase in cases experienced, the Mayor of Denpasar issued a circular as the Mayor of Denpasar's Instruction Number 2 of 2024 concerning early warning of dengue fever cases. In the instruction, it is stated that the government involves the community in increasing early warning of dengue fever cases as an effort to break the chain of transmission of dengue fever (Mayor of Denpasar Instruction Number 2 of 2024, 2024).

B. LITERATURE REVIEW

Dengue Fever and Urban Public Health Challenges

Dengue fever (DF) is a tropical disease that poses a serious threat to public health, especially in urban areas with high population density and inadequate sanitation (Ayundasari et al., 2024). Climate change, increasing rainfall, and rapid urbanization worsen

environmental conditions that support the development of *Aedes aegypti* mosquitoes as disease vectors. Therefore, DHF control requires an integrated approach that includes medical, environmental, and social aspects (Ashar & SKM, 2022).

The Role of Local Government in Mitigating Infectious Diseases

Local governments have important authority in efforts to mitigate and control infectious diseases through policies, instructions, and regulations that are adjusted to local conditions (Nugroho et al., 2022). The Mayor's Instruction is a form of strategic intervention that is top-down, but can encourage synergy between institutions, regional apparatuses, and active community participation (Hadiwijoyo & Hergianasari, 2021). Dengue fever mitigation is not only limited to spraying (fogging), but also to health education, waste management, and improving the drainage system (Lestari, 2022).

Dengue Fever Mitigation as Part of Sustainable Development

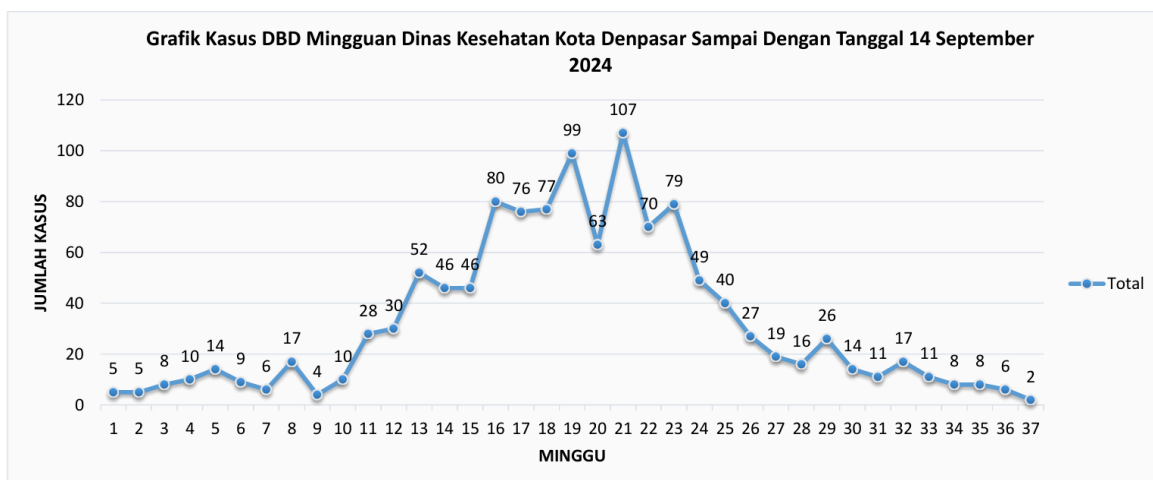
Sustainable development emphasizes the balance between economic development, environmental protection, and social welfare (Depari 2024). In this context, dengue fever mitigation can be seen as an effort to achieve the sustainable development goals (SDGs), especially the third goal on good health and well-being (Sudipa et al., 2023). The instructions of the Mayor of Denpasar in handling dengue fever reflect the integration between public health policies and sustainable environmental governance, while strengthening the city's resilience to future disease threats (Yuliana, 2025).

C. RESEARCH METHODOLOGY

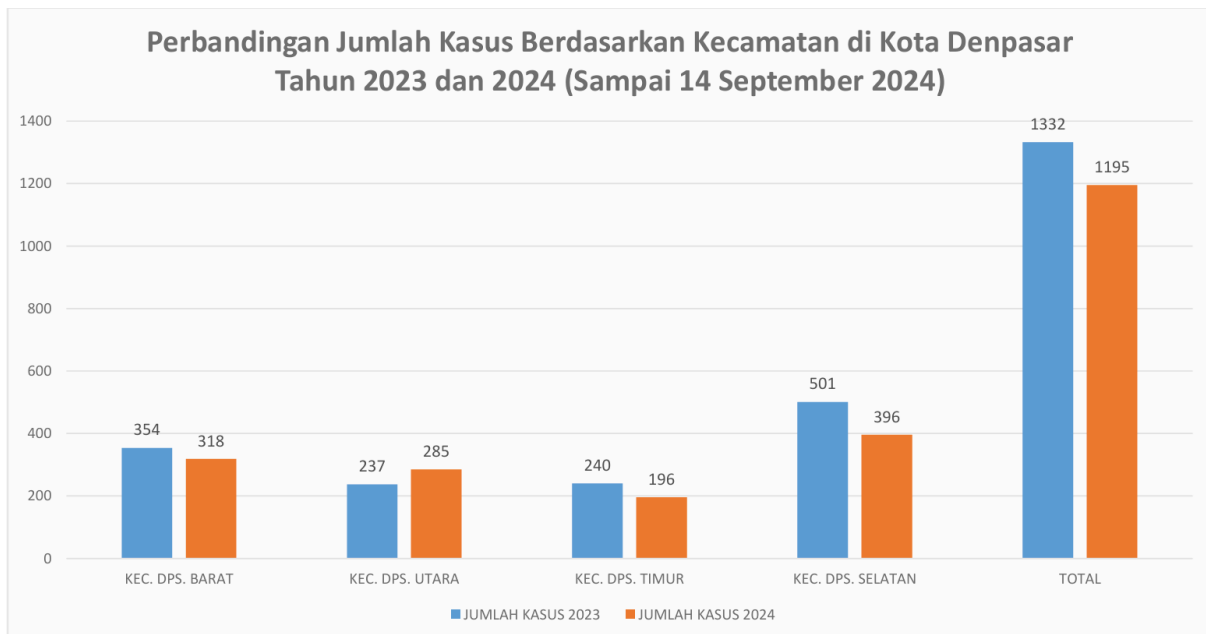
This article uses a normative legal method as a research approach (Zainuddin & Karina, 2023). This method is a scientific procedure that aims to reveal the truth based on legal logic from its normative aspects, where this type of research focuses on the analysis of written regulations (Suyanto, 2023). The author refers to written regulations, especially the Instruction of the Mayor of Denpasar Number 2 of 2024, as the basis for the research.

D. RESULT AND DISCUSSION

Based on the results of the analysis of Denpasar Mayor's Instruction Number 2 of 2024, this policy shows a significant step in efforts to control dengue fever (DBD) cases in Denpasar City. The latest data from the Denpasar City Health Office as of August 24, 2024, recorded the number of DBD cases reaching 1,165 cases, with a downward trend since June 2024. Details of DBD case data from January to August are as follows:



Graph 2. Dengue Fever Cases in Denpasar City per Month from 2024 to September 2024
Source: Denpasar City Health Office



Graph 3. Dengue Fever Cases in Denpasar City in 2023 and 2024 until September 2024
Source: Denpasar City Health Office, 2024

The decline in cases is evidence of the successful implementation of government policies through the Mayor's Instruction, with an emphasis on community participation in maintaining environmental cleanliness. The Mosquito Nest Eradication Movement (PSN) which is appealed by the government every week has played an important role in reducing the number of cases. Although the decline has occurred, the active role of the community is still needed to prevent a spike in cases again, considering that mosquito eggs can survive for up to six months in the environment (Tca, 2024).

Legal Foundation

Denpasar Mayor Instruction Number 2 of 2024 is based on a strong legal framework. At the national level, Law Number 36 of 2009 concerning Health provides a legal basis for local governments to take preventive measures in the field of public health. One important element in this law is the government's obligation to implement policies to prevent infectious diseases that pose a risk to the community (Law of the Republic of Indonesia Number 36 of 2009, 2009). In addition, this instruction is also based on the Regulation of the Minister of Health Number 82 of 2014 concerning the Control of Infectious Diseases, which specifically regulates the technical steps that must be taken in dealing with diseases such as dengue fever (Regulation of the Minister of Health of the Republic of Indonesia Number 82 of 2014, 2014). This instruction reflects the implementation of the authority given to local governments in controlling the spread of dengue fever in their areas. The common thread that is visible is that this policy is in line with national laws and regulations. This ensures that the policies taken by the Mayor of Denpasar are not only based on local interests but also reflect compliance with national health policies regulated in higher laws and regulations.

In addition, this Mayor's Instruction is also in line with the principles in Denpasar City Regional Regulation Number 6 of 2020 concerning Health Provision, which emphasizes the responsibility of local governments in dealing with and preventing infectious diseases. The Denpasar City Government through this instruction has been able to carry out its obligations well in protecting its citizens from the threat of dengue fever which experienced an increase in cases in early 2024 (Bali Provincial Regulation Number 6 of 2020, 2020). Data from the Denpasar City Health Office shows an increasing trend in the number of dengue fever cases

reaching a peak in May 2024 with 363 cases. However, after this policy began to be implemented intensively, the number of cases began to decrease significantly to only 38 cases on August 24, 2024. This proves that the policy is effective in controlling the spread of the disease through Mosquito Nest Eradication (PSN) efforts that actively involve the community.

Obligations of Local Government

As a local authority, the Mayor of Denpasar has an obligation to protect its citizens from the threat of infectious diseases such as dengue fever. One way to fulfill this obligation is through Instruction Number 2 of 2024, which focuses on preventive measures through community empowerment and health education. The emphasis on the PSN movement is a key preventive measure, where the community is asked to play an active role in eliminating potential mosquito nests in their environment. Data from the field shows that the implementation of this policy has succeeded in reducing the number of dengue fever cases significantly since June 2024. From 363 cases in May, the number dropped to 195 in June, and continued to drop to only 38 cases in August. This decline shows the success of collaboration between the local government and the community in preventing the spread of dengue fever through PSN. The success of this policy also indicates that the Denpasar City government has carried out its obligations in accordance with the mandate stipulated in laws and regulations, both at the national and regional levels. This instruction is proof that preventive measures that are well planned and supported by community participation can provide real results in dealing with health problems.

Normative Aspect

Social and legal norms also play an important role in this policy. Normatively, the Mayor's Instruction emphasizes the principle of mutual cooperation, which is an important part of Indonesian culture (Patricia, 2024). In the context of health, PSN involves the community in eliminating places that have the potential to become mosquito nests, so that dengue fever prevention is not only the responsibility of the government but also the community (Prameswari et al., 2024). This principle of mutual cooperation is in line with legal norms that regulate the community's right to live healthily and their obligation to maintain environmental cleanliness. Active community participation not only strengthens the success of the policy but also underlines the importance of collaboration between the government and the community in achieving sustainable health goals. On the other hand, Instruction Number 2 of 2024 also strengthens legal norms that give the community the right to receive good health services and a healthy environment. The Denpasar government has facilitated this by providing clear guidance through instructions, while the community becomes the implementing agent in the field.

Supervision and Law Enforcement

The success of this policy cannot be separated from the aspects of supervision and law enforcement. In the normative legal context, supervision is a key element in ensuring that the instructions are implemented consistently throughout the Denpasar area. This supervision can be carried out through routine environmental inspections by the health office or a special task force assigned to monitor the implementation of PSN in each sub-district or village. An effective supervision mechanism requires regular reports from the community and authorities regarding the results of the implementation of PSN. In addition, periodic evaluations are also important to ensure the effectiveness of this policy, as well as providing an opportunity for the government to adjust the policy if obstacles are found in its implementation. To ensure the success of the policy, there needs to be strict law enforcement against parties who do not carry out their obligations to maintain environmental cleanliness. For example, the local government can impose administrative sanctions on residents or groups who are proven to be negligent in maintaining environmental cleanliness. This sanction serves as a deterrent for

violators, while strengthening the community's commitment to supporting the DHF prevention policy. In addition to sanctions, the government can also provide incentives for communities who successfully implement PSN well, such as healthy environmental awards or additional facilities from the local government. This combination of supervision, sanctions, and incentives is expected to encourage public compliance with government policies and maintain the sustainability of disease prevention programs.

Impact on Sustainable Development

The success of dengue fever mitigation also contributes directly to sustainable development efforts, especially related to the Sustainable Development Goals (SDGs). In particular, the decrease in the number of dengue fever cases supports SDG 3: Good Health and Well-being which targets improving the quality of public health. Communities that are free from the threat of infectious diseases will have a better quality of life, which is an important foundation for long-term development (Betan et al., 2023). In addition, this instruction also contributes to SDG 11: Sustainable Cities and Communities, which emphasizes the importance of creating safe, inclusive, and sustainable cities (Ministry of National Development Planning, 2017). By suppressing the spread of disease, the local government also indirectly increases the attractiveness of Denpasar City as a healthy and friendly urban environment to live, work, and travel. This improvement in environmental quality is in line with efforts to create a city that is able to withstand future health challenges, such as other infectious diseases that could arise due to climate change (Malihah, 2022).

This dengue fever mitigation policy not only has a direct impact on public health, but also affects infrastructure planning and environmental management in Denpasar City. The PSN movement, which is the main element in implementing this instruction, demands improvements in sanitation and waste management throughout the city. For example, vulnerable areas are prioritized for improving public facilities, such as drainage and waste disposal systems, which can minimize the emergence of breeding grounds for *Aedes aegypti* mosquitoes. With improved environmental management and sanitation infrastructure, Denpasar City can ensure that this policy not only has a short-term impact, but also provides long-term benefits in creating a cleaner, healthier, and more environmentally friendly city. The development of infrastructure that supports environmental cleanliness can affect the lifestyle of the community as a whole, triggering collective awareness to continue to maintain the cleanliness and health of their environment.

Overall, Denpasar Mayor Instruction Number 2 of 2024 is a strategic step that not only addresses short-term health issues but also contributes to sustainable development in Denpasar City. The success of this policy in reducing dengue fever cases strengthens the foundation for a healthier society, which is a prerequisite for long-term social and economic well-being. Collaboration between the government, society, and the use of technology in this policy ensures that Denpasar continues to move towards a sustainable and resilient city against future health threats. This effort supports the vision of creating a healthy, inclusive, and sustainable city, in accordance with the global agenda contained in the SDGs.

E. CONCLUSION

Analysis of Denpasar Mayor Instruction Number 2 of 2024, this policy has proven effective in controlling dengue fever (DBD) cases in Denpasar City, as seen from the significant decrease in the number of cases since June 2024. Collaboration between the government and the community through the Mosquito Nest Eradication Movement (PSN) is the main key to the success of this policy. This instruction is based on a strong legal framework, both at the national and regional levels, and prioritizes the norm of mutual cooperation as an important part of local culture. The Denpasar City Government has carried

out its legal obligations well, where this instruction is not only a preventive measure but also in line with the sustainable development agenda.

The supervision and law enforcement aspects also strengthen the implementation of the policy through evaluation mechanisms and sanctions for non-compliance, as well as incentives for good implementers. This policy contributes to the achievement of the Sustainable Development Goals (SDGs), especially in the aspects of public health and sustainable cities. Overall, Denpasar Mayor Instruction Number 2 of 2024 is an example of a successful policy in suppressing the spread of disease, encouraging active community participation, and supporting sustainable development in Denpasar City. Strong collaboration between the government and the community is the main key to realizing a healthier and safer environment for all.

REFERENCE

- Ashar, Y. K., & SKM, M. (2022). *Manajemen Penyakit Berbasis Lingkungan*. Cipta Media Nusantara.
- Depari, E. T. (2024). *Pembangunan Berkelanjutan: Integrasi Ekonomi, Sosial, dan Lingkungan*. Circle Archive, 1(5).
- Hadiwijoyo, S. S., & Hergianasari, P. (2021). Analisis Implementasi Pro-Poor Budgeting Pemerintah Kota Salatiga di Masa Pandemi COVID-19 Tahun 2020. *Jurnal Ilmiah Widya Sosiopolitika*, 3(1), 69-85.
- Instruksi Walikota Denpasar Nomor 2 Tahun 2024, Pub. L. No. 2 (2024).
- Kantao, A. (2023). *Kepadatan Jentik Nyamuk Aedes Aegypti Sebagai Vektor Demam Berdarah Dengue Di Kecamatan Panakukang Kota Makassar* (Doctoral dissertation, Universitas Hasanuddin).
- Kemendes RI. (2017). *Profil Kesehatan Indonesia 2016*. Kementerian Kesehatan Republik Indonesia.
- Kementerian Kesehatan RI. (2019). *Strategi Nasional Penanggulangan Dengue 2021-2025*. In *Kementerian Kesehatan RI*. Kementerian Kesehatan RI. <https://www.kemkes.go.id/article/view/19093000001/penyakit-jantung-penyebab-kematian-terbanyak-ke-2-di-indonesia.html>
- Kementerian Perencanaan Pembangunan Nasional. (2017). *Peta Jalan Sustainable Development Goals (SDGs) di Indonesia 2030*. In *Kementerian PPN/Bappenas*. Kementerian Perencanaan Pembangunan Nasional. https://sdgs.bappenas.go.id/website/wp-content/uploads/2021/02/Roadmap_Bahasa-Indonesia_File-Upload.pdf
- Khairinnisa, K., Fauzi, Y., & Nugraheni, E. (2025). Analisis Spasio-Temporal Kondisi Iklim dan Jumlah kejadian Demam Berdarah Dengue (DBD) Tahun 2012-2021 di Bengkulu. *Jurnal Kesehatan Lingkungan Indonesia*, 24(2), 136-144.
- Lestari, E. (2022). *The Kinerja PMI Kabupaten Klaten Dalam Upaya Penanggulangan dan Pencegahan Penyebaran Virus Covid-19 di Kabupaten Klaten: Kinerja, PMI, Covid-19*. *Jl@ P*, 11(2).
- Nugroho, S. S., SH, M., Rohmatiah, A., & Mutmainah, S. E. (2022). *Hukum Mitigasi Bencana Covid-19 Berbasis Kearifan Lokal*. Penerbit Lakeisha.
- Patricia, D. (2024). *Analisis Yuridis Tentang Penyelesaian Sengketa Pemilihan Kepala Desa di Indonesia Berdasarkan Konsep Siyasa Tasyri'iyah* (Doctoral dissertation, IAIN Parepare).
- Peraturan Daerah Provinsi Bali Nomor 6 Tahun 2020 (2020). <http://dx.doi.org/10.1038/s41421-020-0164-0><https://doi.org/10.1016/j.solener.2019.02.027><https://www.golder.com/insights/block-caving-a-viable-alternative/><http://dx.doi.org/10.1038/s41467-020-15507-2><http://dx.doi.org/10.1038/s4158>

7-020-0527-y%0Ah

- Peraturan Menteri Kesehatan Republik Indonesia Nomor 82 Tahun 2014, Kementerian Kesehatan Republik Indonesia (2014).
- Prambudi, M. R. M., Kurniawan, V. R., Hidayat, D. D., Faridz, H. M., & Herbawani, C. K. (2023). Studi Literatur: Faktor Perubahan Iklim dan Kaitannya dengan Demam Berdarah Dengue (DBD) di Indonesia. *Jurnal Medika Malahayati*, 7(3), 766-778.
- Prameswari, S. D., Windari, S., Budiwitjaksono, G. S., Sholikhatunnisa, M. A., Adjie, M. Z., Rohman, M. F., ... & Ivanka, T. (2024). Peran Kader Surabaya Hebat dalam Pencegahan Penyakit Demam Berdarah Dengue di Kelurahan Klampis Ngasem. *JURNAL PENGABDIAN MASYARAKAT AKADEMISI*, 2(3), 12-20.
- Sudipa, I. G. I., Harto, B., Sahusilawane, W., Afriyadi, H., Lestari, S., & Handayani, D. (2023). *Teknologi Informasi & SDGs*. PT. Sonpedia Publishing Indonesia.
- Sukendra, D. M., Santi, Y. D. P., Siyam, N., Wahyono, B., Muanifah, E. Z., Maharani, R., ... & Shiddieqy, M. H. A. (2024). Gambaran Ekogeografi Vektor Demam Berdarah Dengue Di Daerah Endemis Kota Temanggung. *Bookchapter Kesehatan Masyarakat Universitas Negeri Semarang*, (5), 21-52.
- Suyanto, S. H. (2023). *Metode Penelitian Hukum Pengantar Penelitian Normatif, Empiris Dan Gabungan*. Unigres Press.
- Tca. (2024, September 17). Kasus DBD di Denpasar Tembus 1.165. *NusaBali.Com*. <https://www.nusabali.com/berita/174864/kasus-dbd-di-denpasar-tembus-1165#:~:text=DENPASAR%2C%20NusaBali-Kasus%20demam%20berdarah,Agustus%202024%20tercatat%201.165%20kasus>.
- Undang-Undang Republik Indonesia Nomor 36 Tahun 2009, Kementerian Kesehatan Republik Indonesia (2009).
- World Health Organization. (2017). *Dengue and severe dengue*. https://www.who.int/health-topics/dengue-and-severe-dengue#tab=tab_1
- Yuliana, D. (2025). Peran Kajian Lingkungan Hidup Strategis (KLHS) dalam Peningkatan Tata Kelola Sampah Berbasis Pembangunan Berkelanjutan di Kota Malang. *Jurnal Ilmu Sosial dan Humaniora*, 3(1), 94-103.
- Zainuddin, M., & Karina, A. D. (2023). Penggunaan Metode Yuridis Normatif Dalam Membuktikan Kebenaran Pada Penelitian Hukum. *Smart Law Journal*, 2(2), 114-123.