

Mitigation Natural Disaster Through Numerous Local Knowledge in Some Location in Indonesia

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Abstrak

Bencana alam masih belum bisa diatasi sehingga terjadi banjir, kekeringan, dan perubahan iklim. Secara ekonomi, kekayaan masyarakat harus terhambat karena dampak bencana menghilangkan sebagian penghidupan. Secara sosial, itu mengarah pada peningkatan kemiskinan. Tujuan dari penelitian ini adalah untuk menemukan berbagai strategi berbasis kearifan lokal untuk mitigasi bencana alam dan kendala penerapan kearifan lokal pada generasi muda. Metode yang digunakan dalam penelitian ini adalah studi literatur dimana peneliti mengumpulkan beberapa sumber dari jurnal, buku, dan dokumen. Hasil penelitian menunjukkan bahwa masyarakat adat meningkatkan pengetahuan generasi muda sebagai langkah mendasar untuk mengatasi bencana. Masyarakat yang memiliki pemahaman yang cukup tentang kebencanaan dan lingkungan hidup melanjutkan perilaku dalam bentuk perilaku nyata. Temuan lain yaitu adanya sanksi bagi masyarakat yang berani melanggar kebijakan tersebut. Aturan tersebut biasanya untuk mengatur masyarakat setempat agar tidak merusak ekosistem lingkungan. Pada akhirnya, banyak rintangan untuk menanamkannya pada generasi muda seperti gagal bertransformasi karena kearifan lokal tidak terdokumentasi. Transfer pengetahuan langsung secara lisan tanpa menuliskannya di kertas. Terlebih lagi, pengetahuan telah tergerus oleh teknologi ditengah arus globalisasi dimana generasi muda mencoba menggunakan teknologi daripada kearifan lokal.

Kata kunci: *Tradisi, Budaya, Local Knowledge, Bencana, Lingkungan.*

Abstract

Nature disaster still occurred including climate, flooding, and drying. Economically, the wealth of the community must be hampered because disaster impact eliminates subsistence. Socially, it leads to an increase in destitute societies. The goal of this research is to discover numerous of strategy based on local knowledge to mitigate natural disasters and the obstacle to implementing local knowledge in the young generation. The method applied in

this research is literature studies where the researcher gathers some sources from journals, books, and documents. The result of the research shows that indigenous people improving the young generation's knowledge is the fundamental step before acting. The people who have sufficient understanding of disaster and environmental knowledge continue to do real behavior. The other is there is punishment for communities who bravely ban the local policy. The rules usually adjust the community locally for not to devastate the environment and ecosystem. Ultimately, many hurdles to embedding it in the young generation such as its fail to transform because local knowledge is undocumented. The knowledge is transferred immediately orally without writing it in the paper. Moreover, knowledge has been eroded by state of art amid globalization where the young generation attempt to use technology instead of local knowledge.

Keywords: *Tradition, Culture, Local Knowledge, Disaster, Environment.*

INTRODUCTION

Indonesia is a country that is located at a meeting point of four tectonic plates, that is the Asian continental plates, the Australian continental plate, the Indian ocean plate, and the Pacific ocean plate. As a result, this country is prone to be hit by natural disasters. One of the disasters that threatened is volcano eruptions (Atmojo, 2021). Environment devastated is caused by human behavior. The attitude of human has been moved by belief (Berdame, Jekson., Charles, A., & Lombogia, 2013). The human exploit the nature excessively. The fact show that it is related to a low behavior to conserve nature (Immaniar et al., 2019). The degradation of the environment result to create a gap in relation between human and the environment. Moreover, a high number of human casualties and loss of public and private property in Nepal due to natural disasters may be attributed to inadequate public awareness, lack of disaster preparedness, weak governance, lack of coordination among the concerned government agencies, inadequate financial resources, and inadequate technical knowledge for mitigating the natural disasters (Tuladhar et al., 2015).

Technology engineering has been invented by humans unable to mitigate this issues (Niman, 2019). The knowledge is advanced due to human needs, withstanding, pursuing the life suited to situation and condition, ability and values has been observed by the communities. Therefore, local knowledge is a part of life wisdom, so it can implement to overcome numerous of issues that communities face so they are able to continue life and even it can expand sustainability (Widodo & Nurholis, 2021). Local knowledge posses life value and it deserve to investigate, advancing, keeping, and protecting. Local knowledge is previous knowledge or product which can be applied continuesly and can be life guider in communities locally. Despite, local knowledge is implemented locally but the value in local knowledge content is universal value (Alimah, 2019). Local knowledge can be categorized as culture. Local knowledge are developed based on life view for operating life guidance (Iswatiningsih, 2019).

Then, local knowledge can be mentioned as science of knowledge and life view as well as numerous of life strategy which is activity form where it is conducted by communities for mitigating numerous of life hurdle to fulfill they necessities (Khery et al., 2020). Local

knowledge is a view that it is developed continuously in one communities ranging the value, custom, belief, language and daily habituation (Pingge, 2017). Indigenous knowledge are methods and practices developed by a community based on their culture, traditions & beliefs, means of livelihood and geographical location they live. This knowledge is originated from the community, transmitted through generations by non-formal communication (Sunil et al., 2018). Based on several perspective, local knowledge contain some values where it has been implemented locally in local communities as well as it can mitigate life issues both economic and social issues because the knowledge has been tested accurately by previous communities. Consequently, local knowledge is life view and traditional knowledge that it is a guide to release the behavior and has been practiced it in communities heredity for overcoming life obstacle and need. It has role including preserving nature resources, conserving the culture as well it can valuable for human life (Kusumadewi & Suwarno, 2022).

However, most of the indigenous knowledge evinced by the respondents can be identified into categories, such as respondents' observations relating to unusual animal activity vis-à-vis the upcoming weather, or having a shaman predict the future and revealing an upcoming crisis or disaster. In addition, ethnographic research has found that one of the coping methods employed during disasters connects to the community's high regard for community relationships, strong family links and mutual assistance in times of calamity (Reyes et al., 2020). Functional knowledge of the local people gained over the generations has proved to be very effective when technical solutions proved to be wrong. Unfortunately, all the local knowledge and practices are in oral form and remained under-utilized and undocumented. Such knowledge runs the risk of disappearance in the event of a major disaster that may cause wiping out of the whole community (Zutshi et al., 2018). The embeddedness of local and indigenous communities in their environments has led them to develop time-tested knowledge and practices to prepare for, mitigate, respond to, and recover from the impacts of natural hazards (Hadlos et al., 2022).

There are some form of local knowledge such as in Mentawai societies. To begin with, their traditional house (the Uma) is earthquake resistant, and none has ever collapsed as a result of the 2010's earthquake. Second, their predecessors have already taught them where to live and to avoid coastal areas because of tsunami risk. Third, their villages are usually close to the water but not on the river bank in order to avoid floods. Fourth, the community has its own traditions of storing food for times of drought or flooding. Finally, people use Tuddukat to disseminate news that is of importance in their community. (Zulfadrim et al., 2019). Other example from different country namely Zimbabwe is Ukuhluma kwezihlahla (the growth of new tree leaves that marks the onset of a new season) was also said to be a sign that the rainy season was about to begin (Dube & Munsaka, 2018). Based on this finding, show that indigenous knowledge has been embedded to last generation to pursue the knowledge and action locally but it can be adopted by other communities which it have similar issues.

Despite, it is valuable to overcome disaster issues but it is susceptible to eliminate from young generation because the yout nowadays attempt to include in modern art of technology instead of practicing local knowledge. As consequences, nature disaster unable

to solve without attending local knowledge in local communities. On problem why disaster fail to mitigate because overlooking local knowledge which it has been adapted and tested as well as guide in life from former ancestor. They can combat environmental issues through applying and preserving the knowledge. In this research try to investigate several action in mitigating the environmental issues like natural disaster. Local knowledge have ensured that it is an effective method for mitigating the issues. The other goal of this research to identify the obstacle to release the local knowledge in modern era typically to solve natural issues.

METHOD

The research topic is mitigation natural disaster through numerous of local knowledge in some location in Indonesia. The method is applied in this research is literature review through gathering numerous article and books as well as the papers where it is related to the research. Library research is an activity research is done in a way collect information and data with various kinds of help materials in the library such as reference books, research results previous similar, articles, notes, as well as various journals related to the problem you want solved. Activities are carried out systematically to collect, processing, and concluding data using methods/techniques in order to find answers problems encountered (Sari, 2021). Process the preparation of the library itself includes 6 (six) stages which important to follow sequentially, starting from determining the topic, search related literature, develop arguments, conduct surveys of related literature, criticizing that literature, and writing the review (Mahanum, 2021).

A literature review is an excellent research methodology. For example, a review can synthesise research findings and identify areas where more research is needed, thus providing the basis for a conceptual model, and informing policy and practice. However, despite their potential, the contribution and knowledge development of literature reviews are often weak. Time and again, literature reviews provide only a summary of descriptive statistics that does not facilitate knowledge development or inform policy and practice (Snyder, 2023). In this research, the researcher search numerous of article and book as well as related documents which it has strong linkage to local knowledge. Once after discovering, the researcher invistage the content that it has connection to environment and ecology as well as nature disaster. The papers and book are not connected to local knowledge will not selected. Then, find out the obstacle for implementing local knowledge in mitigating nature disaster. The content must be gathered and try to get the fundamental point both the hurdle of local knowledge and nature mitigation based on local knowledge. The other step, the main point will encouraged by the other finding to make it more perfect and concise. The last stages, writing the finding based on literature review and make the conclusion each of investigating.

RESULT AND DISCUSSION

Nature disaster can be classified into numerous of type including flooding, hurricane, earthqueeek, volcano eruption, drying, and climate change as well as other disaster like the impact of technology to environment. To mitigate nature and technology disaster entail to preserve again culture and belief which it has been applied for long periods by local people

to overcome local issues. Local knowledge has been performed to confront nature disaster through improving the community knowledge and strengthening the capacity of societies. Meaning that, local knowledge has a proof that it can conduct before disaster string the environment. It is related to mitigation of disaster meaning. Mitigation can be categorized as the first step to overcome nature disaster and reduce the risk of disaster effect (Dennis F. Niode et al., 2016). Local knowledge have released the action before disaster combat human life and environment.

It is like rules where all the communities locally must be followed without arguing. In some local knowledge, the preparation to face disaster has been conducted through making sacred zonation like forest zone. In Urug societies, they create sacred mountains where it is grown by several trees and vegetation (Bahagia, Mangunjaya, et al., 2020). In other communities like in Baduy, the communities make forest zone, in nurturing the forest zone, it recognize as forbidden forest (hutan larangan), dudungusan forest (hutan dudungusan), arable forest (hutan garapan). Arable forest able to convert as agriculture area or drying land farming based on rules locally (Nasution et al., 2017). They have inherited this teaching from generation to generation. A form of respect for their ancestral spirits manifest in the form of an attitude of protecting and caring for nature such as mountains, hills, valleys, forests, gardens, eyes water and all other ecosystems. They care for and protect the forest as part of the effort to create balance of the universe. Basically the Baduy tribe adheres to their customs, it is not allowed subtracted and not added (Tumanggor & Suharyanto, 2022).

Baduy tribe convince that there is severe linkage between nature and customary rules. In this mechanism, human as customary and nature guard (Herandy, 2022). People able to meet their basic needs for natural resources and existing human resources, and are carried out independently without depending on other parties, in fulfillment of food needs (Mirajiani & Widi, 2022). The analyses of disaster-related losses of ecosystems have shown that crops, livestock, and forests have experienced most losses from climate-related hazards. With the analytical coding, we aimed at aggregating reported and described losses into tangible physical losses of ecosystems, which are relevant for ecosystem management, and at the same time consider categories that are relevant for indicators of the SFM, such as crops, livestock, forestry, aquaculture and fisherie (Walz et al., 2021).

When the environment shortage zone of forest, it lead to nature disaster, we might expect land use to affect the severity of floods in two ways, through affecting channel flow, or channel form, either of which may cause rivers to overflow their banks (Calder & Aylward, 2006). Forests have a flood control function for storing a part of the rainfall and delaying runoff discharge from their basins. This contributes toward decreasing the quantity of flood flow. As forests are part of the green infrastructure, an effective use of the flood-reduction function for disaster prevention has been previously discussed (Muto & Yokokawa, 2022). However, it was confirmed that the water supply in these areas can be increased through forest restoration. These results indicate the deterministic role of forest restoration in increasing the water supply (Yeo & Lim, 2022).

Logically, as there is bushes, trees, and grass in one area, it is a method to absorb the water when the rain season comes as well as the humidity zone where it is a place for water sources. It make the communities circumvent from drying and flooding in one times.

The other method for reduce disaster is to use traditional calender where the farmer unable to cultivate the paddy regularly. In Urug communities show that paddy cultivating schedule can be performed in November each years and harvesting periods will be on may each year. In November, wet season come and it is deserve time for farming and on may, it will be drying periods. In this time, paddy must be gathered and storing in traditional store (Bahagia, Wibowo, et al., 2020). It must be supported by the tradition of communities to save the paddy without sell it because it is staple food where the societies depent on it, it is also a way to combat the disaster because deaseas and disaster attend to human life unprecedented (Bahagia, Hudayana, et al., 2020).

It is supported by finding in Baduy tribe, To support food security, the community stores dry unhulled rice from farming (ngahuma) in the rice barn (leuit) and does not sell the harvested rice. The Baduy rice granary (leuit) is a special building that is used to store field rice by each Baduy family. Rice barns are placed around settlements in forest areas and not in the vicinity of residential areas. The harvested rice stored in the leuit can last up to 5 years at least in the leuit as a storage place for staple foods, namely rice, in good condition and still suitable for consumption (Mirajiani & Widi, 2022). Indigenous community have implemented the sort of Traditional and calendar years with animals symbol for forecasting season and climate. The community can adapt season and climate dynamic and create community resilience for environment and climate. Besides that, there is the connection of planting local paddy to attaint community resilience including environmental change, cultural and social resilience (Bahagia, Mangunjaya, et al., 2021).

Based on this finding, it is pree-disaster action has been implemented before climate issues and nature disaster. It make the communities more resilience because before disaster occurring, the action have been created to tackle the issues. Moreover, mutual assisting is other method to solve disaster. Mutual cooperation is a culture which has grown and developed in the social life of Indonesian society nesia as a cultural heritage that has been exist for generations. Gotong royong is a form of cooperation the core of society to achieve something positive outcome of the desired goal reached by consensus and deliberation together (Rozikin, 2019). Gotong-royong can be used as a resource and disaster education media involve the community (Syaifulloh & Wibowo, 2017). Gotong-royong not only to build something physical only but also create a social life better (Kurniawan & Tinus, 2019). Mutual cooperation is a universal culture in Indonesia which allegedly able to restore the nation's future youth to revive enthusiasm nationalism (Tias et al., 2022).

There are some form of mutual assisting in Indonesia. Some studies show that, in Situ Udik village, it is mentioned as *Rareongan Serumpi* where the people aid other through building the house. Materials and money are collected in communities and purchase the building material to renovate inproper house (Mujahidin et al., 2020). The other form of mutual aiding can distribute fundamental need like rice, meal, drink, food, and temporary shelter (Bahagia et al., 2022). Mutual cooperation comprises mutual helping, if someone has been aided, the person does not need to reply because it is based on the willingness of the person who helps. Helping each other does not indicate like a debt that must be repaid. cooperation prioritizes collective work so that everyone joins the group (Bahagia,

Rahmadanti, et al., 2021). Mutual assisting can also implemented through giving the money to disaster casualties (Bahagia, Wibowo, et al., 2021).

Togetherness, solidarity, tolerance, Collaborative spirit, ability Empathy is social capital inherent in social life. The loss of social capital can ensuring the unity of society, nation and the country will be threatened, or at most not collective problems will be difficult to finish (Samuda, 2016). Finally, making local culture as a result of community knowledge revoked from its cultural roots. Many young people do not want to learn the results of local knowledge and technology owned by their communities (Sarumaha, 2020). Despite mutual working or gotong royong is previous method to give a help to other but it continue to erode amid globalization. It is boosted by the finding to reveal that now the atmosphere has changed, needs to be reconsidered the spirit of gotong royong as strength Society faces various problems life (Habibullah & Bambang Pudjiyanto, 2014).

CONCLUSION

There are some main point that can be concluded namely local knowledge has been embedded to young generation from generation to the last generation. There is transfer of knowledge and skill as well as behavior to generation from their ancestor despite the movement this knowledge is conducted through orally without giving documentation like papers. The knowledge is connected to preserve the environment because customary community perceive that nature and man has relation where this linkage must be nurtured because human entail nature. Based on this, it can be categorized as the mitigation before disaster combating the human life because it able to increase the rate of communities awareness and preparedness as well as readiness facing nature disaster. It is related to devastated nature by human lead to nature catastrophe, local knowledge announce to local community must be conserved the nature. As result, flooding, drying, and losing biodiversity as well as climate change can be mitigated. There are some action to overcome the issues through local knowledge such as local policy where they implement it in their communities, creating forbidden area such as forest and river where it have fundamental role to reduce the risk and impact as there is disaster as well as applying the punishment where each individual

REFERENCES

- Alimah, S. (2019). Kearifan Lokal Dalam Inovasi Pembelajaran Biologi: Strategi Membangun Anak Indonesia Yang Literate dan Berkarakter Untuk Konservasi Alam. *Jurnal Pendidikan Hayati*, 5(1), 1–9. <https://doi.org/10.33654/jph.v5i1.574>
- Alsalami, A. I. (2022). Literature review as a key step in research processes: case study of MA dissertations written on EFL of Saudi context. *Saudi Journal of Language Studies*, 2(3), 153–169. <https://doi.org/10.1108/sjls-04-2022-0044>
- Atmojo, S. E. (2021). Natural Disaster Mitigation on Elementary School Teachers: Knowledge, Attitude, and Practices. *JPI (Jurnal Pendidikan Indonesia)*, 10(1), 12. <https://doi.org/10.23887/jpi-undiksha.v10i1.25060>
- Bahagia, B., Hidayana, B., Wibowo, R., & Anna, Z. (2020). Local Wisdom to Overcome Covid-19 Pandemic of Urug and Cipatat Kolot Societies in Bogor, West Java,

- Indonesia. *Forum Geografi*, 34(2), 146–160.
<https://doi.org/10.23917/forgeo.v34i2.12366>
- Bahagia, B., Mangunjaya, F. M., Wibowo, R., Rangkuti, Z., & Alwahid, M. A. (2020). Leuit and prohibition forest: Indigenous knowledge of an Urug community resilience. *Harmoni Sosial: Jurnal Pendidikan IPS*, 7(2), 130–140.
<https://doi.org/10.21831/hsjpi.v7i2.33055>
- Bahagia, B., Rahmadanti, R., & Indriya, I. (2021). Societies Resilience for Confronting Covid-19 Based on Gotong Royong Tradition (Mutual Cooperation). *Tunas Geografi*, 9(2), 119. <https://doi.org/10.24114/tgeo.v9i2.20221>
- Bahagia, B., Wibowo, R., Mangunjaya, F. M., Paradila, E., Sulistiyanti, N. A., Ibatulloh, M. A., Kharisma, M. R., Addha, M. A., & Rahmah, S. S. (2021). Nyorog Tradition Value in Betawi Societies. *Edukatif: Jurnal Ilmu Pendidikan*, 4(1), 211–216.
<https://doi.org/10.31004/edukatif.v4i1.1006>
- Bahagia, B., Wibowo, R., Mangunjaya, F. M., & Priatna, O. S. (2020). Traditional Knowledge of Urug Community for Climate, Conservation, and Agriculture. *MIMBAR: Jurnal Sosial Dan Pembangunan*, 36(1), 240–249.
<https://doi.org/10.29313/mimbar.v36i1.5824>
- Bahagia, Mangunjaya, F. M., Mujahidin, E., & Wibowo, R. (2021). Traditional Climate and Environment Forecasting Based on Local Knowledge of Urug Societies in Bogor West Java. *International Journal of Sustainable Development and Planning*, 16(7), 1339–1347. <https://doi.org/10.18280/ijstdp.160714>
- Bahagia, Wibowo, R., & Mangunjaya, F. M. (2022). *Social and Tradition In Local Knowledge For Dealing With Nature Disaster*. 4(1), 338–344.
- Berdame, Jekson., Charles, A., & Lombogia, R. (2013). Pendidikan Lingkungan Hidup Berbasis Pendidikan Islam. *Jurnal Studi Islam STIQ An-Nur*, V(1), 1–15.
- Calder, I. R., & Aylward, B. (2006). Forest and floods: Moving to an evidence-based approach to watershed and integrated flood management. *Water International*, 31(1), 87–99. <https://doi.org/10.1080/02508060608691918>
- Chigbu, U. E., Atiku, S. O., & Du Plessis, C. C. (2023). The Science of Literature Reviews: Searching, Identifying, Selecting, and Synthesising. *Publications*, 11(1), 2. <https://doi.org/10.3390/publications11010002>
- Darmalaksana, W. (2020). Metode Penelitian Kualitatif Studi Pustaka dan Studi Lapangan. *Pre-Print Digital Library UIN Sunan Gunung Djati Bandung*, 1–6.
- Dennis F. Niode, Rindengan, Y. D. Y., & Karouw, S. D. S. (2016). *Geographical Information System (GIS) untuk Mitigasi Bencana Alam Banjir di Kota Manado*. 5(2).
- Dube, E., & Munsaka, E. (2018). The contribution of indigenous knowledge to disaster risk reduction activities in Zimbabwe: A big call to practitioners. *Jamba: Journal of Disaster Risk Studies*, 10(1), 1–8. <https://doi.org/10.4102/jamba.v10i1.493>
- Gentles, S. J., Charles, C., Nicholas, D. B., Ploeg, J., & McKibbin, K. A. (2016). Reviewing the research methods literature: Principles and strategies illustrated by a systematic overview of sampling in qualitative research. *Systematic Reviews*, 5(1), 1–11. <https://doi.org/10.1186/s13643-016-0343-0>
- Habibullah, & Bambang Pudjianto. (2014). GOTONG ROYONG PADA PROGRAM

- BANTUAN STIMULAN PEMULIHAN SOSIAL DI MAMUJU, SULAWESI BARAT
MUTUAL AID STIMULANT RECOVERY ON SOCIAL ASSISTANCE PROGRAM
AND MUTUAL ASSISTANCE IN MAMUJU, WEST SULAWESI. *Sosio Konsepsia*,
5(01), 17–35.
- Hadlos, A., Opdyke, A., & Hadigheh, S. A. (2022). Where does local and indigenous knowledge in disaster risk reduction go from here? A systematic literature review. *International Journal of Disaster Risk Reduction*, 79(September), 103160. <https://doi.org/10.1016/j.ijdr.2022.103160>
- Herandy, C. (2022). Pariwisata Baduy: Antara Perubahan dan Kontinuitas. *Lembaran Antropologi*, 1(2), 204–216. <https://doi.org/10.22146/la.4231>
- Immaniar, B. D., Sumarmi, S., & Astina, I. K. (2019). Pembelajaran Lingkungan Berbasis Kearifan Lokal dengan Model Experiential Learning. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, 4(5), 648. <https://doi.org/10.17977/jptpp.v4i5.12431>
- Iswatiningsih, D. (2019). Penguatan Pendidikan Karakter Berbasis Nilai-Nilai Kearifan Lokal di Sekolah. *Jurnal Satwika*, 3(2), 155. <https://doi.org/10.22219/satwika.vol3.no2.155-164>
- Khery, Y., Rosma Indah, D., Aini, M., & Asma Nufida, B. (2020). Urgensi Pengembangan Pembelajaran Kimia Berbasis Kearifan Lokal dan Kepariwisataan untuk Menumbuhkan Literasi Sains Siswa. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, 6(3), 460. <https://doi.org/10.33394/jk.v6i3.2718>
- Kurniawan, V., & Tinus, A. (2019). Pelestarian Nilai Gotong-Royong Melalui Kelompok Seni Kuda Lumping. *Jurnal Civic Hukum*, 4(2), 174–182.
- Kusumadewi, N. T., & Suwarno, S. (2022). Mitigasi Bencana Berbasis Kearifan Lokal di Kecamatan Kejajar Kabupaten Wonosobo. *Proceedings Series on Social Sciences & Humanities*, 6, 45–49. <https://doi.org/10.30595/pssh.v6i.438>
- Maggio, L. A., Sewell, J. L., & Artino, A. R. (2016). The Literature Review: A Foundation for High-Quality Medical Education Research. *Journal of Graduate Medical Education*, 8(3), 297–303. <https://doi.org/10.4300/JGME-D-16-00175.1>
- Mahanum, M. (2021). Tinjauan Kepustakaan. *ALACRITY: Journal of Education*, 1(2), 1–12. <https://doi.org/10.52121/alacrity.v1i2.20>
- Mirajiani, M., & Widi, S. W. (2022). Pengetahuan Lokal Masyarakat Adat Baduy Dalam Pranata Sosial Untuk Menunjang Ketahanan Pangan. *Jurnal Penyuluhan Dan Pemberdayaan Masyarakat*, 1(1), 1–8. <https://doi.org/10.59066/jppm.v1i1.2>
- Mujahidin, E., Bahagia, B., Wibowo, R., & Mangunjaya, F. M. (2020). Rereongan Serumpi for Rural Development in Situ Udik Village Bogor West Java. *Jhss (Journal of Humanities and Social Studies)*, 4(2), 96–101. <https://doi.org/10.33751/jhss.v4i2.2454>
- Muto, Y., & Yokokawa, R. (2022). *Wetland Paddy Fields as Green Infrastructure Against Flood*. https://doi.org/10.1007/978-981-16-6791-6_9
- Nasution, I. P., Permana, R. C. E., & Sulistyowati, D. (2017). Model Sosialisasi Kearifan Lokal Masyarakat Baduy Dalam Pelestarian Hutan Kepada Generasi Muda Di Kampung Balimbing, Baduy Luar. *Paradigma, Jurnal Kajian Budaya*, 5(1), 79. <https://doi.org/10.17510/paradigma.v5i1.166>

- Niman, E. M. (2019). Dan Upaya Pelestarian Lingkungan Alam. *Jurnal Pendi*https://Books.Google.Co.Id/Books?Id=kXIREAAAQBAJ&printsec=frontcover&hl=id&source=gbs_ge_summary_r&cad=0dikan Dan *Kebudayaan Missio*, 11(1), 91-106<https://books.google.co.id/books?id=kXIREAAA>.
- Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4), 101717. <https://doi.org/10.1016/j.ibusrev.2020.101717>
- Pingge, H. D. (2017). KEARIFAN LOKAL DAN PENERAPANNYA DI SEKOLAH CORE View metadata, citation and similar papers at core.ac.uk provided by Jurnal STKIP Weetebula. *Jurnal Edukasi Sumba*, 01(02), 128–135.
- Reyes, J. A. L., Ayo, K. A. R., Baluyan, M. P. M., & Balaguer, A. S. R. B. (2020). Indigenous Knowledge in Disaster Risk Reduction: The Tales of Three Islands (San Miguel, Camotes and Alabat) in the Philippines. *Copenhagen Journal of Asian Studies*, 37(1), 103–132. <https://doi.org/10.22439/CJAS.V3711.5908>
- Rozikin, M. (2019). Pembentukan PERDA Penyelenggaraan Penanggulangan Bencana Daerah Berbasis Partisipasi Masyarakat (Studi Proses Pembentukan Peraturan Daerah tentang Penyelenggaraan Penanggulangan Bencana Pada DPRD Kabupaten Rembang, Jawa Tengah). *Maksigama*, 12(2), 129–144.
- Samuda, S. (2016). BARI FOLA SEBAGAI MODAL SOSIAL DAN INSTRUMENTASI MASYARAKAT TANGGUH BENCANA. *Jurnal Penelitian Humaniora*, 21(2), 109–118.
- Sari, R. K. (2021). Penelitian Kepustakaan Dalam Penelitian Pengembangan Pendidikan Bahasa Indonesia. *Jurnal Borneo Humaniora*, 4(2), 60–69. https://doi.org/10.35334/borneo_humaniora.v4i2.2249
- Sarumaha, M. S. (2020). *Educational Management Based on Indigenous Knowledge (Narrative Studies of Culture of Indigenous Knowledge in South Nias)*. 410(Imcete 2019), 150–153. <https://doi.org/10.2991/assehr.k.200303.036>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104(August), 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Snyder, H. (2023). Designing the literature review for a strong contribution. *Journal of Decision Systems*, 00(00), 1–8. <https://doi.org/10.1080/12460125.2023.2197704>
- Sunil, V., S, V., Suresh, V., Bhavani, R. R., & Vishwa, A. (2018). Indigenous Knowledge on Disaster Risk Reduction: Good practices from coastal regions of Kerala. *International Journal of Pure and Applied Mathematics*, 119(15), 805–812.
- Syaifulloh, M., & Wibowo, B. (2017). NILAI-NILAI EDUKATIF SYAIR GULUNG SEBAGAI UPAYA PENDIDIKAN KEBENCANAAN BERBASIS KOMUNITAS PADA MASYARAKAT MELAYU DI KABUPATEN KETAPANG KALIMANTAN BARAT. *Jurnal Refleksi Edukatika*, 8(1).
- Tias, S. A., Ayu, V. K., & Yunanda, W. W. (2022). Implementasi Nilai Gotong Royong Dalam Upaya Meningkatkan Rasa Nasionalisme Di Industri Pertahanan. *Jurnal Kewarganegaraan*, 6(1), 1244–1250.
- Tuladhar, G., Yatabe, R., Dahal, R. K., & Bhandary, N. P. (2015). Disaster risk reduction

- knowledge of local people in Nepal. *Geoenvironmental Disasters*, 2(1). <https://doi.org/10.1186/s40677-014-0011-4>
- Tumanggor, R. O., & Suharyanto, C. (2022). *Kearifan lokal ekologis suku baduy di kanekes lebak banten*. 939–946.
- Walz, Y., Janzen, S., Narvaez, L., Ortiz-Vargas, A., Woelki, J., Doswald, N., & Sebesvari, Z. (2021). Disaster-related losses of ecosystems and their services. Why and how do losses matter for disaster risk reduction? *International Journal of Disaster Risk Reduction*, 63, 102425. <https://doi.org/10.1016/j.ijdr.2021.102425>
- Widodo, B., & Nurholis, E. (2021). Pembelajaran Pendidikan Kewarganegaraan Berbasis Kearifan Lokal Masyarakat Kuta Dalam Membentuk Karakter Warga Negara Berwawasan Lingkungan. *Jurnal Artefak*, 8(1), 1. <https://doi.org/10.25157/ja.v8i1.5127>
- Yeo, H. C., & Lim, C. H. (2022). Can Forest Restoration Enhance the Water Supply to Respond to Climate Change?—The Case of North Korea. *Forests*, 13(10). <https://doi.org/10.3390/f13101533>
- Zulfadrim, Z., Toyoda, Y., & Kanegae, H. (2019). The Integration of Indigenous Knowledge for Disaster Risk Reduction Practices through Scientific Knowledge: Cases from Mentawai Islands, Indonesia. *International Journal of Disaster Management*, 2(1), 1–12. <https://doi.org/10.24815/ijdm.v2i1.13503>
- Zutshi, B., Ahmad, A., & Srungarapati, A. B. (2018). Disaster risk reduction: Community resilience and responses. *Disaster Risk Reduction: Community Resilience and Responses, July 2019*, 1–361. <https://doi.org/10.1007/978-981-10-8845-2>