

Social Vulnerability of Children in Coastal Communities Due to Climate Change and Ocean Degradation

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Abstract

Climate change and marine degradation are ecological pressures that are increasingly affecting the lives of coastal communities, including the social conditions and well-being of children. This study aims to analyze the forms of social vulnerability among children in coastal communities caused by climate change and marine degradation, as well as to identify the influencing factors and adaptation strategies developed by families and communities. This study employs a qualitative approach through a literature review. Data were obtained from 20 national and international journal articles, books, reports, and relevant scientific documents, and were analyzed descriptively and thematically through a process of identification, selection, extraction, categorization, comparison, and synthesis of findings. The research findings indicate that climate change and marine degradation are linked to children's social vulnerability in coastal communities through disruptions to ecosystems, livelihoods, income, and household food security. This vulnerability encompasses food, health, education, economic, protective, psychosocial, and social aspects. The level of vulnerability is influenced by ecological exposure, family socioeconomic conditions, and adaptive capacity. Strengthening family economies, ensuring access to basic services, protecting children, building community capacity, and providing institutional support are key strategies for reducing vulnerability and enhancing children's social resilience in coastal communities.

Keywords: social vulnerability, ocean degradation, social resilience, coastal communities, climate change.

Received: 20 September 2026

Accepted: 10 October 2026

Published: 13 October 2026

1. INTRODUCTION

Climate change is a complex environmental issue that continues to be a serious concern for various cross-sectoral institutions. This phenomenon involves changes in the patterns and intensity of climatic elements over a specific period, which can be observed, among other things, through changes in temperature, rainfall patterns, and the frequency of extreme weather events. These changes occur gradually and have far-reaching impacts on both human life and the environment. Rising temperatures, shifting seasonal patterns, erratic rainfall, and increasingly frequent extreme weather events can affect various aspects of people's lives. Therefore, climate change must be understood not only as an ecological issue but also as a social issue that requires sustained adaptation and mitigation efforts (Hadi et al., 2023).

The impacts of climate change are also evident in changes to the quality of the environment. Extreme droughts can lead to reduced water availability, the drying up of community water sources, and decreased river flow. In coastal areas, changes in environmental conditions can increase the threat of seawater intrusion into clean water sources and agricultural land. At the same time, changes in temperature and seasonal patterns can threaten biodiversity as various species lose or experience changes in their habitats. These conditions demonstrate that climate change can create ecological pressures that subsequently affect the social and economic lives of communities dependent on natural resources (Febriosa et al., 2025).

During the Anthropocene, marine ecosystems face increasingly complex pressures resulting from pollution, overexploitation of resources, and global climate change. Human activities have become the primary cause of marine environmental degradation through industrialization, technological

advancements, and rising greenhouse gas emissions that accelerate changes in the Earth system (Heinze et al., 2021). These anthropogenic pressures have triggered a number of ecological crises, such as overfishing, marine pollution, ocean acidification, deoxygenation, rising sea temperatures, and the loss of biodiversity and coastal habitats (International Union for Conservation of Nature, 2009) (Amiruddin & Usman, 2026).

One of the groups facing these pressures is the coastal community. Coastal communities have close ties to marine resources, both to meet their food needs and as a source of livelihood. However, the socioeconomic conditions of coastal communities also face various limitations, particularly in terms of the economy, education, and access to public services. These conditions can exacerbate social inequality and increase the vulnerability of coastal communities when facing environmental changes. Consequently, climate change has the potential to intensify the social challenges already faced by coastal communities, particularly when their ability to adapt to environmental changes remains limited (Wahida, 2026).

The vulnerability of coastal communities becomes even more complex when climate change occurs alongside the degradation of marine ecosystems. Disturbances to marine ecosystems caused by climate change can reduce marine biodiversity and productivity, thereby potentially diminishing the availability of resources vital to coastal communities, such as fish and other marine products. Changes in oceanographic conditions can also affect the distribution and migration patterns of marine species. These conditions can ultimately put pressure on food security and the livelihoods of communities that depend on marine resources for their survival (Pelu, 2025).

In addition to climate change, marine pollution is another issue that exacerbates the condition of coastal ecosystems. Marine pollution is a growing problem that can affect both human health and the sustainability of ecosystems. This pollution involves various types of hazardous substances that can accumulate in the marine environment and ultimately threaten the well-being of communities that interact directly or indirectly with marine resources. Therefore, marine degradation and pollution are not only environmental issues but also have social consequences that require systematic attention (Maha, 2024).

The ecological pressures faced by coastal communities can, in turn, affect household livelihoods. When marine resources decline or are disrupted, the livelihoods of communities dependent on marine products may also become uncertain. These conditions have the potential to affect income, food security, access to basic services, and families' ability to meet the various needs of their members. In this context, the impacts of climate change and marine degradation do not stop at the environment and adult breadwinners, but can extend into the lives of children as members of households and coastal communities.

Children are the next generation who play a vital role in sustainable development and the future of society. However, children are also a group that is highly dependent on their families and social environments for the fulfillment of their basic needs and protection. Therefore, when families face economic and social pressures due to environmental changes, children are likely to be affected as well. The issue of child protection remains a concern in Indonesia. The Indonesian Child Protection Commission (KPAI), for example, recorded 5,953 cases of violence against children in 2021. This situation underscores the importance of strengthening child protection, especially when children are in social environments facing various pressures (Hutagalung & Fitria, 2023).

In the context of coastal communities, children's vulnerability can be seen in the impact of environmental changes on their psychological well-being and social lives. Tidal flooding, for example, not only disrupts their living environment but can also have psychological effects on children. Children in the Pekalongan area affected by tidal flooding exhibit signs of psychological trauma, such as difficulty sleeping, excessive fear, and behavioral changes. Research in the Bandarharjo neighborhood of North Semarang also shows that elementary school-aged children experience a decline in self-esteem because

they feel unsafe and lack a stable environment. Meanwhile, adolescents in coastal areas have also been reported to suffer from anxiety disorders after experiencing such disasters (Aditia, 2025).

Children's social vulnerability can also be linked to economic pressures and poor family circumstances. In certain situations, economic pressures can increase the risk of various forms of child exploitation, such as forced child labor, commercial sexual exploitation, child trafficking, and children's involvement in illegal activities. These conditions can be exacerbated by socioeconomic inequality, low levels of education, and weak social oversight within the community. Thus, the economic pressures arising from changes in the livelihoods of coastal communities must be viewed not only in terms of their impact on adults but also in terms of their consequences for children's safety, protection, and well-being (Rahman et al., 2026).

The social vulnerability of children in coastal communities due to climate change and marine degradation refers to a situation in which ecological pressures interact with households' socioeconomic vulnerabilities and limited adaptive capacity, thereby posing risks to children's basic needs, health, education, protection, psychosocial well-being, and overall welfare. In this study, marine degradation is defined as the decline in the quality, function, and condition of marine ecosystems that sustain the livelihoods of coastal communities. Children's vulnerability is analyzed through a socio-ecological lens, taking into account the relationships between environmental pressures, livelihoods, household conditions, and the adaptive capacities of families and communities.

2. METHOD

This study employs a qualitative approach using the literature review method (library research). The qualitative approach was used to gain an in-depth understanding of the phenomenon of children's social vulnerability in coastal communities due to climate change and marine degradation, based on the results of published studies and research findings. The literature review method was chosen because the study aims to identify, examine, compare, and synthesize various scientific sources relevant to the research focus.

Data were collected through a literature review, which involved examining a variety of relevant secondary sources, such as articles from accredited national journals and reputable international journals, scientific books, conference proceedings, research reports, government policy documents, and publications by international organizations related to children's social resilience, coastal communities, climate change, and marine degradation. The collected literature was then selected based on credibility, relevance, and recency, and subsequently grouped according to research themes to identify concepts, theories, research findings, and research gaps that served as the foundation for developing the conceptual model. (Usman & Amiruddin, 2026).

A literature search was conducted in the Scopus, ScienceDirect, SpringerLink, Google Scholar, and Garuda (Garba Rujukan Digital) databases from September 1 to October 9, 2026. The search was limited to publications from 2022 to 2026 to prioritize literature from the last five years relevant to climate change, marine degradation, children's social vulnerability, coastal communities, and adaptation strategies. Publications prior to this period may be considered on a limited basis if they constitute important theoretical or conceptual sources. English and Indonesian keywords are used in combination with the Boolean operators AND and OR to broaden or narrow search results according to the research focus.

The literature selection process consists of the following stages: identification, removal of duplicates, screening, eligibility assessment, and final selection of sources. During the identification stage, all search results were collected and recorded based on their source databases. Duplicates were removed by comparing titles, author names, publication years, DOIs, or other publication identifiers. If multiple records referred to the same publication, only one record was retained. Next, titles and abstracts were reviewed to assess their relevance to the research focus. Articles that passed the screening were read in full and then evaluated based on inclusion and exclusion criteria. Inclusion criteria

included scientific publications addressing climate change or marine degradation, the vulnerability of coastal communities, the socioeconomic conditions of households, child well-being or protection, as well as social adaptation and resilience. Articles that were irrelevant, did not provide sufficient information for analysis, or were duplicates were excluded from the synthesis process. The final sources were recorded in a data extraction matrix that included the authors, year, objective, location, methods, study groups, key findings, type of evidence, and their relevance to children's social vulnerability.

This study employs an integrative literature review using a qualitative approach and thematic analysis to synthesize research findings on climate change, marine degradation, the vulnerability of coastal communities, child well-being, and strategies for adaptation and social resilience. The research procedures included the identification and selection of literature based on inclusion and exclusion criteria; data extraction covering the objectives, methods, context, and main findings of the studies; and the coding and grouping of findings into six themes: climate change and ecological pressures; marine degradation and changes in coastal ecosystems; impacts on livelihoods and families' socioeconomic conditions; children's social vulnerability, family and community adaptation strategies, and social resilience and child protection. Subsequently, findings across sources were compared and synthesized to identify patterns of relationships, factors contributing to vulnerability, research gaps, and the conceptual contributions of the studies. The synthesis also distinguishes direct evidence regarding children from contextual evidence regarding the vulnerability of coastal communities, so that impacts on the community are not automatically assumed to apply to children. The results of the analysis were used to construct a conceptual framework that explains the interrelationships between ecological pressures, household socioeconomic conditions, children's social vulnerability, and the adaptive capacity of families and communities.

3. RESULTS AND DISCUSSION

3.1 Climate Change as a Source of Vulnerability for Coastal Communities

The results of the literature review indicate that climate change is one of the factors that increases the vulnerability of coastal communities because environmental changes directly interact with the socioeconomic systems of communities that depend on marine resources. Climate change significantly increases the vulnerability of coastal communities by adversely affecting their socioeconomic systems (Iqbal & Abro, 2024). Coastal environmental changes, including sea-level rise and extreme weather events, significantly disrupt economic activities, challenging the sustainability of livelihoods in coastal communities and reducing households' capacity to maintain socio-economic stability. Adaptation strategies are essential for resilience (Alimato Hanisu H. Marsel M. & Jana, 2026).

(Putiarni et al., 2022) A study of fish farming communities in Indramayu revealed a high level of social vulnerability to tidal flooding. This vulnerability stems from various factors, including inadequate social networks, social status, and environmental conditions. It calls for a range of policy interventions that address individual and community challenges, as well as economic and educational disparities. (Mechanic & Tanner, 2007). These findings indicate that vulnerability is not determined solely by the magnitude of environmental threats, but also by social conditions and the community's capacity to respond to such threats.

These findings are supported by (Rini Pratiwi et al., 2024) which indicates that coastal communities in Tarakan face physical, social, and economic vulnerabilities due to climate change. The study identifies community capacity as a key factor in coping with climate change-related disasters. Thus, from a sociological perspective, climate change can be understood as an ecological stressor that subsequently produces social consequences. When coastal communities experience disruptions to marine resources, the impacts do not stop at the environment but can extend to household income, employment patterns, the fulfillment of basic needs, education, and the well-being of family members.

3.2 Damage to Marine Ecosystems and Disruption to Socioeconomic Life

Climate change significantly impacts marine ecosystems, leading to degradation that affects coastal communities. This synthesis highlights the interconnectedness of climate-driven processes and their implications for public health, emphasizing the need for a comprehensive understanding of these interlinked challenges (A A, 2025). The depletion of aquatic resources significantly impacts coastal communities, increasing economic vulnerability and stress on household livelihoods. This decline in marine productivity threatens their cultural identities and social structures, leading to migration pressures and emerging inequalities (Makhmudov et al., 2025). Research in the coastal region of Lindi, Tanzania, shows that the dynamics of coastal resource use and environmental changes are linked to household livelihood conditions. Coastal and marine resources form the basis for various economic activities of the community, while changes in the productivity of these resources can lead to changes in the community's livelihood conditions. (Mohamed et al., 2025).

In the context of Indonesia, (Wijayanti et al., 2025) shows that climate change on Gili Gede Indah affects not only the environment but also the social, economic, and cultural aspects of the community, as well as its food security. The clean water crisis and dependence on supplies from outside the island are part of these changes. This study also reveals a ripple effect of food insecurity on income, social and cultural relations, and social inequality.

The findings show that coastal environmental degradation is multidimensional in nature. When marine resources decline, households may experience a drop in income and uncertainty regarding the fulfillment of their basic needs. In the context of this study, these conditions are important because children are family members who are highly dependent on the household's ability to provide food, education, health care, and protection.

3.3 Food Insecurity and Children's Health

Research (Golo et al., 2025) In Ghana's coastal communities, it has been shown that disruptions to economic activity caused by climate events impact household income and are subsequently linked to issues of malnutrition and child health. Disruption of economic activity due to climate events negatively impacts family income, leading to food shortages. This, in turn, contributes to malnutrition and health problems in children, as inadequate diets and poor feeding practices hinder their development and immune system (OI, 2022). Thus, climate change can indirectly threaten the fulfillment of children's rights by altering households' economic capacity. Dependence on external supplies and clean water issues highlight that ecological vulnerability can indeed escalate into challenges in meeting basic needs, as the interconnectedness of the water-energy-food-ecology nexus amplifies overall vulnerability in resource management (Chen Pan Y. & Geng, 2023).

Household food insecurity is identified as a risk factor for children's behavior problems, contributing to social vulnerability through pathways of poor dietary intake and increased family stress, which can lead to later developmental vulnerabilities in financially deprived families (Chen & Yeung, 2024). When a family's source of income is disrupted, the family's ability to provide nutritious food and meet the children's health needs may also be affected. When a family's source of income is disrupted, their ability to provide nutritious food diminishes, leading to food insecurity. This situation particularly affects women and children, compromising their health and nutrition in the aftermath of natural disasters (Kim-Herrera Lozada-Tequeanes A. L. González-Castell D. Chávez-Muñoz E. A. Alvarado-Casas R. Rafalli-Arismendi S. Sachse-Aguilera M. De Bustos C. & Bonvecchio-Arenas, 2025).

Thus, this research synthesis distinguishes between two levels of evidence. First, direct evidence—that is, research that explicitly focuses on children as subjects or analyzes child-related outcomes, such as food, health, education, well-being, and protection. Second, indirect or contextual evidence—that is, research on coastal communities and households that demonstrates changes in livelihoods, income, food security, and access to resources resulting from climate change and environmental degradation. These two types of evidence are then carefully synthesized to explain the mechanisms through which

children's social vulnerability is formed. This perspective also highlights a research gap: there remains a need for a synthesis that specifically explains how ecological pressures at the community level are transmitted through household conditions and subsequently shape social vulnerability among children in coastal communities.

3.4 Child Protection in Situations of Ecological and Social Stress

The international literature also indicates that the pressures of climate change can interact with issues of poverty and child protection. (Golo et al., 2025) found that the protection of children's rights in Ghana's coastal communities faces obstacles related to climate change, poverty, sociocultural practices, and the treatment of children. The study emphasizes that child protection in coastal communities requires a multisectoral approach.

This is important because children's vulnerability does not stem solely from the physical impacts of disasters. Economic and social pressures within families can create conditions that increase risks to children's safety and well-being. Economic and social pressures within the family significantly increase risks to children's safety and well-being (Baharudin, 2025). Thus, child protection is a critical dimension in understanding social vulnerability resulting from climate change. Research on coastal communities must examine not only whether children are affected by disasters, but also how changes in families' socioeconomic conditions can alter the social environment in which children grow up.

Therefore, the literature synthesis in this study makes a clear distinction between direct evidence regarding children and contextual evidence regarding the vulnerability of coastal communities. Direct evidence is used when research explicitly examines children and outcomes related to them, while findings regarding coastal communities are used to explain the social and economic structures and conditions that constitute the children's living environment. This distinction is important to avoid generalizing that all impacts observed in coastal communities are automatically experienced by children. Instead, these two types of evidence are combined to explain possible pathways of vulnerability, namely climate change and environmental pressures, socioeconomic disruptions in households, changes in the family's social environment, and increased risks to children's protection and well-being.

Within this framework, child protection is positioned as one dimension of social vulnerability, rather than merely an additional consequence of a disaster. This approach enables research to identify areas that already have direct empirical evidence supporting them, as well as those that still require further study. In particular, there is still a need for a synthesis explaining how ecological pressures at the coastal community level are transmitted through poverty, changes in livelihoods, and family-related social pressures, ultimately affecting children's safety, protection, and well-being. This reinforces the importance of research on children's social vulnerability in coastal communities due to climate change and marine degradation.

3.5 Family Adaptation and Community Social Resilience

The study's findings indicate that vulnerability is not static. The level of community vulnerability is influenced by the ability of families and communities to respond to change. (Putiamini et al., 2022) shows that the adaptive capacity of coastal communities is influenced by, among other factors, local knowledge, education, experience with disasters, income, government support, and mitigation systems. The study also emphasizes the importance of government support and early warning systems in reducing the vulnerability of coastal communities.

Meanwhile, research on the coastal community of Mandangin, Sampang, shows that the community has developed various forms of social adaptation in response to climate change. Other studies in Indonesia have also identified strategies such as diversifying economic activities, leveraging social networks, seeking new fishing grounds, and involving family members as part of their response to climate change.

At the international level, research (Mulonga & Olago, 2024) In the Tana Delta, Kenya, the exposure, sensitivity, and adaptive capacity framework was used to understand the vulnerability of mangrove-dependent coastal communities. This framework is relevant to this study because it allows vulnerability to be understood as the result of the interaction between the level of exposure to environmental change, socioeconomic sensitivity, and adaptive capacity. Thus, children should not only be viewed as a vulnerable group but also as part of families and communities that have the capacity to build resilience.

3.6 Discussion from a Sociological Perspective

From a sociological perspective, the research findings indicate that climate change is an ecological phenomenon that produces social consequences through mechanisms such as resource distribution, family economic structures, access to basic services, and communities' adaptive capacity. Climate change significantly impacts resource distribution, family economic structures, access to basic services, and community adaptive capacity, particularly affecting small-scale fishers, aquaculture farmers, and indigenous populations in Southeast Asia, who often lack institutional support and adaptive technologies (Noor et al., 2025). Climate change impacts societal structures through altered resource distribution, economic frameworks, access to essential services, and community adaptive capacity (Drolet, 2021).

This explains why two communities facing relatively similar environmental pressures can exhibit different levels of social vulnerability. Differences in income, education, family size, experience, knowledge, government support, and adaptive capacity can influence a community's ability to cope with environmental pressures. Findings (Putiarnini et al., 2022) specifically highlights the role of these various social factors in shaping the vulnerability of coastal communities. Therefore, children's social vulnerability must be understood as the result of the interaction between environmental factors and social structures. This approach prevents research from being trapped in environmental determinism, which views climate change as the direct cause of social problems affecting children.

Figure 1. *Conceptual Framework*

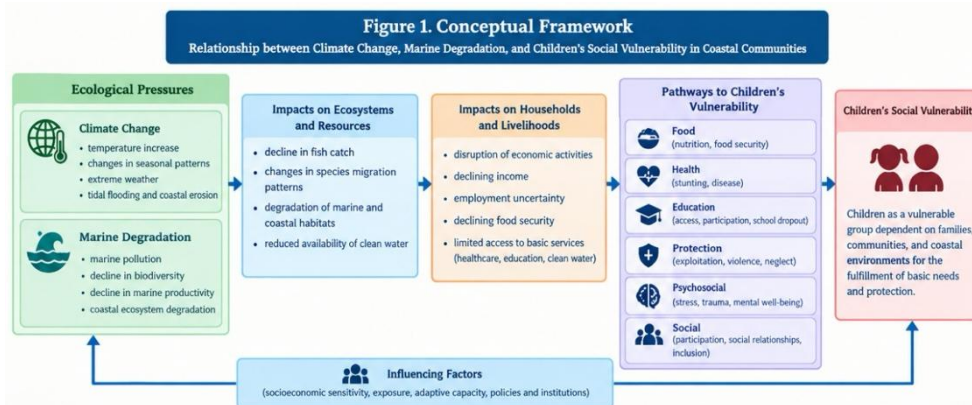


Table 1. Literature Synthesis

No.	Main Theme	Key Findings	Supporting Studies (Year)	Type of Evidence	Implications for Children's Vulnerability
1.	Climate Change as a Source of Coastal Community Vulnerability	Changes in weather, sea-level rise, tidal flooding, and extreme weather disrupt economic activities and increase the socioeconomic vulnerability of coastal communities.	Putiarnini et al. (2022); Rini Pratiwi et al. (2024)	Indirect (coastal communities)	Disruptions to livelihoods and household income that may affect the fulfillment of children's needs.
2.	Marine Ecosystem Degradation and Disruption of Socioeconomic Life	Declining marine ecosystem productivity, changes in species migration patterns, and marine pollution affect livelihoods, food security, and household socioeconomic conditions.	Mohamed et al. (2025); Wijayanti et al. (2025)	Indirect (coastal communities)	Uncertainty in food, income, and access to basic resources that may affect children's well-being.
3.	Food and Health Vulnerability among Children	Household economic disruptions are associated with child malnutrition and health problems. Dependence on external supplies and clean-water crises.	Golo et al. (2025); Wijayanti et al. (2025)	Direct and indirect	Risks of stunting, disease, and reduced nutritional intake among children.
4.	Child Protection	Climate change, poverty, sociocultural practices, and treatment of children create barriers to child protection in coastal communities.	Golo et al. (2025)	Direct (children as subjects)	Increased risks of exploitation, violence, neglect, and psychosocial vulnerability.
5.	Research Gap	Findings on coastal communities have not sufficiently synthesized how ecological pressures are transmitted through households to specifically shape children's social vulnerability.	Review of recent studies (2020–2025)	Gap in the literature	A synthesis is needed to specifically explain the mechanisms through which children's vulnerability is formed in coastal communities.

■ = Direct evidence ■ = Indirect evidence (extrapolation) ■ = Issues requiring further research

4. CONCLUSION

Children's vulnerability is multidimensional, encompassing food, health, education, economic well-being, protection, psychosocial factors, and social life. These dimensions must be understood by considering environmental exposure, family socioeconomic sensitivity, adaptive capacity, social networks, and institutional support. The adaptation mechanisms identified in this study include strengthening household economic and food security, maintaining access to education and health care, protecting children, strengthening social networks, and enhancing community adaptive capacity and institutional support. Conceptually, this study contributes by integrating research on the vulnerability of coastal communities with research on child vulnerability, specifically by positioning household and community conditions as a critical context for understanding children's social vulnerability. Thus, this study offers a socio-ecological framework to synthesize how environmental pressures, socioeconomic conditions, and adaptive capacity relate to children's social vulnerability in coastal communities.

AI USAGE STATEMENT

During the preparation of this work, the author used ChatGPT for language editing and proofreading. The author reviewed and edited the content as appropriate and bears full responsibility for the content of this publication.

REFERENCES

- A A, Zubair. (2025). Climate Change and Marine Ecosystem Health: Implications for Coastal Communities and Public Health". *International Journal of Environment and Climate Change* 15 (10):631-45. <https://doi.org/10.9734/ijecc/2025/v15i105088>
- Aditia, B. (2025). Ketahanan Mental Masyarakat Pesisir Terhadap Banjir Rob. *Jurnal Riksa Cendikia Nusantara*, 1(1), 12–15. <https://doi.org/https://doi.org/10.5281/zenodo.17114021>
- Alimato Hanisu H. Marsel M., A., & Jana, L. (2026). Adaptasi sosial-ekonomi masyarakat nelayan terhadap perubahan lingkungan pesisir. <https://doi.org/10.51878/educational.v6i1.8844>
- Amiruddin, A. H., & Usman, A. U. (2026). Eksplorasi Ocean Literacy Calon Guru IPS di Makassar. *Majalah Ilmiah Methoda*, 16(2), 170–184. <https://doi.org/10.46880/methoda.Vol16No2.pp170-184>
- Baharudin, H. H. (2025). Parenting under Pressure: The Impact of Socioeconomic and Environmental Stressors on Family Stability and Child Development. *Asian Journal of Early Childhood and Elementary Education*, 3(5), 478-497. <https://doi.org/10.58578/ajecee.v3i5.7409>
- Chen Pan Y., Y., & Geng, M. (2023). Identification of key brittleness factors and multi-scenario analysis of the water-energy-food-ecology nexus vulnerability based on NRS-BN. *Frontiers in Environmental Science*, 11. <https://doi.org/10.3389/fenvs.2023.1273755>
- Chen, X., & Yeung, W. J. (2024). How food insecurity affects children's behavior problems in early childhood: The nutrition and family stress pathways. *PloS one*, 19(1), e0294109. <https://doi.org/10.1371/journal.pone.0294109>
- Drolet, J. (2021). Societal adaptation to climate change (pp. 365–377). Elsevier. <https://doi.org/10.1016/B978-0-12-822373-4.00011-2>
- Febriosa, S., Pratama, W. S., Mahdalena, Z., & Ikhwan, I. (2025). Analisis Dampak Perubahan Iklim Terhadap Kualitas Lingkungan Hidup Dan Kehidupan Sosial Masyarakat. *Jurnal Mudabbir (Journal Research and Education Studies)*, 5(2), 2211–2221. <https://doi.org/https://doi.org/10.56832/mudabbir.v5i2.1480>
- Golo, H. K., Ibrahim, S., & Erinosho, B. T. (2025). Impacts of Climate Change on Children's Rights to Food and Health in Coastal Communities in Ghana. *Environmental Development*, 54. <https://doi.org/10.1016/j.envdev.2025.101151>
- Hadi, S., Taqiudin, M., Anggara, D., Mujahadah, N., & Mulyadi, P. N. (2023). Pengetahuan Generasi Muda Terhadap Fenomena Perubahan Iklim. *Jurnal Tampiasih*, 2(1), 2023. <https://jurnal.itka.ac.id/index.php/tampiasih/article/view/19>

- Hutagalung, H. M., & Fitria, A. R. (2023). Tanggung Jawab Negara terhadap Perlindungan Anak sebagai Kelompok Rentan dalam Perspektif Hak Asasi Manusia. 24(2), 1–14. <https://ejurnal.untag-smd.ac.id/index.php/dedikasi/article/view/7287>
- Iqbal, T., & Abro, A. A. (2024). Social vulnerability of coastal community due to climate change: an exploratory study of coastal region of sindh. <https://doi.org/10.60692/w87fw-a0379>
- Kim-Herrera Lozada-Tequeanes A. L. González-Castell D. Chávez-Muñoz E. A. Alvarado-Casas R. Rafalli-Arismendi S. Sachse-Aguilera M. De Bustos C., E., & Bonvecchio-Arenas, A. (2025). Influence of Emergency Situations on Maternal and Infant Nutrition: Evidence and Policy Implications from Hurricane John in Guerrero, Mexico. *International journal of environmental research and public health*, 22(11), 1615. <https://doi.org/10.3390/ijerph22111615>
- Maha, I. K. (2024). Dampak Pencemaran Lingkungan terhadap Kesehatan Masyarakat Pesisir. *Zahra: Journal of Health and Medical Research*, 3(3), 315–322. <https://felifa.net/index.php/ZAHRRA/article/view/473>
- Makhmudov, R., Narboshova, M., Olimov, K., Nurmuxamedova, L., Turayeva, S., Tasheva, U., & Shaymuradov, T. (2025). Psychological and social consequences of environmental change on aquatic resource depletion and its impact on fishermen and coastal communities. *International Journal of Aquatic Research and Environmental Studies*, 5(2), 1004–1012. <https://doi.org/10.70102/IJARES/V5I2/5-2-88>
- Mechanic, D., & Tanner, J. (2007). Vulnerable people, groups, and populations: societal view. *Health affairs (Project Hope)*, 26(5), 1220–1230. <https://doi.org/10.1377/hlthaff.26.5.1220>
- Mohamed, M., Amin, S., Lever, E., Montini, A., Machida, K., Rajagopalan, S., Costello, A., McGushin, A., Jennings, B., Benoit, L., Saville, N., Walshe, N., Dalglish, S. L., Ayeb-Karlsson, S., Sterlini, S., & Prost, A. (2025). Climate Change and Child Wellbeing: a Systematic Evidence and Gap Map on Impacts, Mitigation, and Adaptation. *The Lancet Planetary Health*, 9(4), e337–e346. [https://doi.org/10.1016/S2542-5196\(25\)00061-0](https://doi.org/10.1016/S2542-5196(25)00061-0)
- Mulonga, J., & Olago, D. (2024). Vulnerability to Climate Change of Coastal Mangrove-Dependent Communities in the Tana Delta, Kenya: a Local Perspective. *Discover Environment*, 2(1). <https://doi.org/10.1007/s44274-024-00108-3>
- Noor, N. M., Iskandar, N. S., Nurhalimi, N. I., & Adim, S. A. (2025). Waters of Change: Social Consequences of Climate Impacts on Southeast Asian Aquatic Ecosystems. *International Journal of Research and Inovation in Social Science (IJRISS)*, 9(6), 359–367. <https://doi.org/10.47772/IJRISS>
- Ol, Chent. (2022). The impacts of climate change on food consumption, household income, and child nutrition in Boseth District, Kampong Speu Province, Cambodia. <https://doi.org/10.61945/cjbar.2022.4.1.1>
- Pelu, F. (2025). Dampak Perubahan Iklim Global terhadap Parameter Oseanografi: Ancaman bagi Ekosistem Laut dan Kehidupan Pesisir di Maluku. *Peraut: Jurnal Perikanan Dan Kelautan*, 2(2), 25–30. <https://doi.org/https://doi.org/10.70134/peraut.v2i2.324>
- Putiarni, S., Mulyani, M., Petala, M. P., Soesilo, T. E. B., & Karsidia, A. (2022). Social Vulnerability of Coastal Fish Farming Community to Tidal (Rob) Flooding: a Case Study from Indramayu, Indonesia. *Journal of Coastal Conservation*, 26(7), 1–15. <https://doi.org/10.1007/s11852-022-00854-7>
- Rahman, S. N. S. A., Arsyad, A., & Nurhaedah, N. (2026). Eksploitasi Anak sebagai Kejahatan Sosial: Analisis Kriminologis terhadap Faktor dan Pola Kejahatan. *Jurnal Legal Dialogica*, 1(2), 1–16. <https://jurnal.fh.umi.ac.id/index.php/legal/article/view/2527>
- Rini Pratiwi, S., Thresia Nainggolan, Y., & Utomo, M. N. (2024). Assessments of Physical, Social, and Economic Vulnerability in Tarakan Due to Climate Change. *Jurnal Ekonomi Dan Bisnis*, 27(1), 43–70. <https://doi.org/https://doi.org/10.24914/jeb.v27i1.9008>
- Usman, A. U., & Amiruddin, A. H. (2026). Membangun Ketahanan Masyarakat Pesisir melalui Ocean Literacy Berbasis Modal Sosial. *Majalah Ilmiah Methoda*, 16(2), 190–203. <https://doi.org/10.46880/methoda.Vol16No2.pp190-203>
- Wahida, N. (2026). Peran Pekerja Sosial Dalam Meningkatkan Kesejahteraan Masyarakat Pesisir. *Jurnal Ruang Sosialia*, 2(1), 110–121. <https://doi.org/https://doi.org/10.1038/r4wbrg70>
- Wijayanti Hilmi F. Hakim L. D. R., I., & Salsabilla, S. (2025). Perubahan Iklim dan Konsekuensinya: Potret Kerentanan Pangan Masyarakat Pesisir Gili Gede Indah Akibat Perubahan Iklim. *SOSIOLOGI: Jurnal Ilmiah Kajian Ilmu Sosial dan Budaya*, 27(1).