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THE ROLE OF INDUSTRY IN ADDRESSING THE SIX DIMENSIONS OF THE NEW ENVIRONMENTAL PARADIGM

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Abstract. Industrial development remains a major driver of economic growth while simultaneously contributing to severe environmental degradation. This study aims to examine how industrial communities perceive and respond to the six key dimensions of the New Environmental Paradigm (NEP): anti-anthropocentrism, the fragility of nature's balance, the possibility of an ecological crisis, rejection of human exemptionalism, limits to growth, and belief in human capability through science and technology. Using a descriptive qualitative approach, data were collected through semi-structured questionnaires and interviews with 21 respondents residing near the industrial zone of Kampung Kadingding, Tambak Village, Kibin District, Serang Regency, Indonesia. The results reveal a relatively high level of ecological awareness among respondents, particularly concerning the fragility of natural balance (mean score = 69) and the risk of an ecological crisis (mean score = 64). However, lower agreement was observed in the dimensions of anti-anthropocentrism (mean score = 60) and limits to growth (mean score = 68), suggesting persistent anthropocentric and growth-oriented perspectives. These findings indicate a cognitive dissonance between environmental consciousness and economic dependency within industrial communities. The study underscores the need for integrating environmental education, policy enforcement, and corporate social responsibility programs to bridge the gap between ecological values and industrial behavior.

Keywords: new environmental paradigm; industrial communities; ecological awareness; environmental behavior

I. INTRODUCTION

Industrialization has been a cornerstone of global economic growth, yet it remains one of the principal contributors to environmental degradation. The expansion of manufacturing, resource extraction, and energy-intensive production systems has accelerated ecological stress through deforestation, pollution, and greenhouse gas emissions [1], [2]. Industrial activities often exploit natural resources beyond their regenerative capacity, disturbing ecological balance and increasing vulnerability to environmental crises [3]. The challenge, therefore, lies in harmonizing economic development with environmental sustainability an endeavor that requires not only technological innovation but also a fundamental paradigm shift in how humanity perceives and interacts with nature [4]. The New Environmental Paradigm (NEP) introduced by Dunlap and Catton in the late 1970s represented a seminal framework for measuring ecological worldviews and assessing human-environment relationships [5]. The NEP challenges the Dominant Social Paradigm (DSP) a worldview rooted in anthropocentrism, economic growth, and human supremacy over nature and instead emphasizes ecological interdependence and the limits of natural systems [6], [7]. The six dimensions of NEP anti-anthropocentrism, the fragility of nature's balance, the possibility of an eco-crisis, rejection of exemptionalism, limits to growth, and belief in human capability through science and technology serve as a comprehensive lens to evaluate environmental attitudes across communities and industries [8], [9]. Recent studies have reaffirmed the importance of NEP values in shaping pro-environmental behavior and sustainable business ethics [10]. However, despite growing environmental awareness, industrial practices often remain guided by the DSP, prioritizing profit maximization and short-term economic goals over ecological preservation [11]. This dichotomy reflects a cognitive dissonance between environmental understanding and behavioral application a phenomenon particularly pronounced in industrial societies where livelihood and local economies depend on continuous production [12].

In developing countries such as Indonesia, the tension between environmental responsibility and industrial productivity is further amplified by weak regulatory enforcement, limited environmental education, and socio-economic dependence on factory employment [13]. Communities surrounding industrial zones, while increasingly aware of ecological degradation, often face structural and economic constraints that limit their ability to act upon pro-environmental beliefs [14]. Studies in Southeast

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Asia have demonstrated that social context, policy environment, and cultural norms strongly influence how industrial actors internalize and practice ecological values [15].

The integration of NEP principles into industrial settings is therefore essential to drive the transition toward sustainable production systems. By understanding how industrial communities perceive and respond to the six NEP dimensions, this research aims to identify the extent of environmental awareness, potential dissonance between ecological values and economic orientation, and the underlying social and cultural factors shaping these attitudes. The findings contribute to the global discourse on ecological modernization, sustainable industry practices, and the human dimensions of environmental transformation in the Global South.

The New Environmental Paradigm (NEP) serves as a foundational framework in environmental sociology to understand how individuals and societies conceptualize their relationship with nature. First developed by Dunlap and Catton in the 1970s, NEP emerged as a response to the anthropocentric assumptions embedded in the Dominant Social Paradigm (DSP), which emphasizes economic growth, technological optimism, and human superiority over natural systems [16]. NEP proposes a contrasting worldview in which humans are seen as integral parts of a fragile ecological system, subject to biophysical limits and interdependence with nature [17]. The NEP framework encompasses six major dimensions: (1) anti-anthropocentrism, which rejects human dominance over nature; (2) the fragility of nature's balance, which recognizes environmental systems as inherently vulnerable; (3) the possibility of an ecological crisis, emphasizing the risks of environmental collapse; (4) rejection of exemptionalism, countering the notion that humans are exempt from ecological laws; (5) limits to growth, asserting that planetary boundaries constrain human development; and (6) belief in human capability through science and technology, recognizing that innovation can aid but not replace ecological stewardship [18]. Together, these dimensions form a comprehensive tool for assessing environmental attitudes, especially in contexts where industrial growth conflicts with sustainability principles [19].

The Dominant Social Paradigm (DSP) reflects a worldview rooted in industrial-era capitalism, which legitimizes human authority over nature and assumes that technological progress can indefinitely offset environmental degradation [20]. This paradigm underpins much of modern economic and industrial policy, leading to unsustainable patterns of production and consumption. Research has shown that adherence to DSP values such as materialism, individualism, and economic expansion negatively correlates with pro-environmental behavior [21]. In industrial communities, particularly in developing economies, the DSP remains influential due to socio-economic dependency on manufacturing sectors and the perception that environmental protection hinders economic progress [22]. This belief system perpetuates short-term, profit-driven decision-making while disregarding long-term ecological costs. Scholars argue that transitioning from DSP to NEP requires structural change in institutional governance, public education, and corporate ethics [23].

The coexistence of ecological awareness and economic dependence on industrial activities often leads to cognitive dissonance a psychological state where beliefs and actions are misaligned [24]. Industrial workers and residents may recognize environmental risks but continue supporting polluting industries due to economic necessity. This paradox results in partial or inconsistent adoption of NEP values, particularly in dimensions such as anti-anthropocentrism and limits to growth [25]. Studies by Friska and Novianty [12] revealed that individuals may express environmental concern yet engage in behaviors driven by consumerism and economic ambition, reflecting dissonance between values and actions. Similarly, Muna et al. [3] observed that socio-economic structures often prioritize growth-oriented thinking, limiting the implementation of ecological principles. This dissonance highlights the need for environmental education and participatory policy frameworks that align ecological awareness with practical and economic realities. Industrial actors are increasingly recognized as key agents in environmental governance. The integration of NEP principles into corporate practice can transform industries from being sources of degradation to drivers of sustainability. However, research shows that environmental commitment in business contexts is often externally motivated driven by regulation or public pressure rather than internalized as a moral or cultural value [10]. Saleem et al. [10] found that industries with strong internal environmental orientation tend to implement proactive sustainability strategies, while those with weak orientation exhibit reactive compliance behavior.

Christiani et al. [11] emphasized that green industry standards, when combined with organizational learning and community engagement, can significantly improve environmental performance. Meanwhile, Utari and Mahrawi [9] demonstrated that environmental education fosters a shift from anthropocentric to ecocentric worldviews, especially when supported by institutional incentives and participatory culture. These findings underscore that ecological transformation in industrial sectors requires both individual attitude change and systemic support through policy, corporate responsibility, and cultural adaptation [19].

The integration of NEP values into industrial practice represents a critical step toward achieving sustainability in the Anthropocene. Scholars advocate for an Ecological Industry Paradigm (EIP) a conceptual model where environmental consciousness, innovation, and socio-economic equity coexist within production systems [16], [22]. Transitioning toward this paradigm involves reorienting business ethics, embedding sustainability metrics in industrial policy, and strengthening environmental education among stakeholders. In this context, the NEP serves not only as a theoretical measure of environmental belief but also as a diagnostic tool to evaluate the readiness of industrial communities to embrace ecological modernization. Understanding how industrial societies internalize or resist NEP dimensions provides valuable insights for designing strategies that promote

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behavioral alignment with sustainable development goals (SDGs). This study therefore seeks to empirically analyze these relationships within an industrial community context, contributing to the global discourse on environmental psychology and sustainable industry transitions.

II. RESEARCH METHODS

This study employed a qualitative descriptive approach designed to explore and interpret the perceptions and responses of industrial communities toward the six dimensions of the New Environmental Paradigm (NEP). The research was conducted in Kampung Kadingding, Tambak Village, Kibin District, Serang Regency, Indonesia, an area characterized by dense industrial activity and a high dependency of local residents on factory-related employment. This site was selected due to its representation of industrial–community interdependence, making it ideal for assessing the alignment between ecological awareness and economic necessity. Data were collected from 21 respondents who were residents and industrial workers directly affected by environmental changes in the region. The study applied a purposive sampling technique, ensuring participant diversity based on age, gender, education level, and employment status to capture a range of perspectives within the community [26].

Primary data were gathered through semi-structured questionnaires and in-depth interviews. The questionnaire included items reflecting the six NEP dimensions anti-anthropocentrism, the fragility of nature's balance, the possibility of an ecological crisis, rejection of exemptionalism, limits to growth, and belief in human capability through science and technology. Each statement was rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Interviews were conducted to deepen understanding of respondents' environmental attitudes, beliefs, and contradictions between ecological values and economic dependence. Data were analyzed using thematic and descriptive statistical techniques to identify dominant NEP dimensions and interpret underlying socio-psychological patterns. The results were validated through triangulation, cross-verification with local environmental officers, and discussion with subject experts to enhance credibility and dependability [27], [28]. Ethical considerations including informed consent, anonymity, and voluntary participation were strictly upheld throughout the study.

III. RESULTS AND DISCUSSION

The findings reveal varying levels of environmental awareness among industrial actors across the six NEP dimensions. Overall, the participants demonstrated a moderate-to-high ecological orientation, though significant disparities emerged between cognitive awareness and behavioral application. This section discusses each NEP dimension and its implications for understanding the socio-environmental attitudes of industrial communities in the study area.

The first NEP dimension, anti-anthropocentrism, measures the degree to which individuals reject human dominance over nature. The results showed an average score of 60, indicating moderate recognition of ecological equality but persistent anthropocentric tendencies among respondents. Many industrial workers still viewed nature as an instrument for economic progress rather than an entity with intrinsic value. This aligns with earlier findings by Erdogan [26] and Friska and Novianty [21], who observed that industrial communities in developing regions often maintain human-centered worldviews due to socio-economic dependency on production-based livelihoods. As Christiani et al. [23] noted, economic survival often outweighs ecological ethics, leading to a pragmatic rather than philosophical approach to environmental issues.

Respondents exhibited the highest level of agreement (mean score = 69) in recognizing the fragility of nature's balance. Participants generally acknowledged that environmental systems are sensitive and easily disturbed by industrial waste, deforestation, and pollution. This finding mirrors the observations of Alves et al. [19], who emphasized that communities living near industrial zones develop heightened awareness of ecological vulnerability through direct exposure to environmental degradation. However, this cognitive recognition did not always translate into proactive environmental action. The contradiction supports the concept of value–action gap described by Torey et al. [24], where individuals understand environmental risks yet fail to act accordingly due to economic and cultural barriers.

Awareness of an impending ecological crisis ranked second highest (mean score = 64). Respondents expressed concern about the long-term impacts of industrial emissions, particularly air and water pollution, which they associated with rising illness and declining agricultural productivity. Similar patterns were observed by Saputra and Herlina [13], who found that local residents near industrial belts in Banten Province associated pollution with health and livelihood risks. This growing awareness signals an emerging environmental consciousness among industrial communities a potential foundation for participatory environmental governance. Yet, as Tenri and Yunus [20] argue, awareness alone is insufficient without structural empowerment and regulatory enforcement to transform perception into collective action.

The rejection of exemptionalism dimension received moderate endorsement. Respondents largely agreed that humans are part of, rather than separate from, natural systems, yet some maintained that technological innovation can ultimately "correct" ecological imbalance. This belief reveals partial adherence to the Dominant Social Paradigm (DSP), which assumes that human ingenuity can overcome natural limits [30]. Such optimism toward technological solutions reflects what Milbrath [7] termed "technological exceptionalism", a belief that progress can offset environmental constraints. While innovation indeed plays a crucial role in sustainable development, excessive reliance on technology risks perpetuating a false sense of ecological security [31].

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The limits to growth dimension produced a mean score of 68, signifying moderate acceptance of the idea that natural resources have finite boundaries. However, several respondents expressed hesitation about reducing industrial output, citing fears of job loss and declining regional income. This pattern is consistent with findings from Muna et al. [22], who emphasized that economic dependency inhibits acceptance of ecological limitations. The duality between ecological concern and economic ambition underscores the persistent influence of the growth-oriented paradigm in developing economies [32]. Bridging this divide requires redefining growth metrics beyond GDP, integrating social and environmental indicators into industrial policy frameworks [33].

Respondents showed strong belief (mean score = 71) in human ability to solve environmental problems through science and technology. While this reflects confidence in human innovation, it also reveals the persistence of anthropocentric optimism. As Utari and Mahrawi [9] suggest, educational interventions can redirect such beliefs toward eco-technological awareness a mindset that values technology as a tool for harmony rather than dominance over nature. This dimension therefore represents both an opportunity and a challenge: technological empowerment must be balanced with ethical and ecological responsibility [34]. Across all dimensions, a recurring theme of cognitive dissonance was evident participants simultaneously recognized environmental fragility and endorsed growth-oriented values. This psychological duality reflects the socio-economic contradictions embedded within industrial communities: economic dependence drives support for industrial expansion, even when it conflicts with environmental sustainability. Similar findings were reported by Torey et al. [24] and Cheah and Tan [15], who observed that individuals in emerging economies often reconcile ecological concern with pragmatic survival strategies. Nevertheless, this duality also represents a potential transitional phase toward ecological modernization, where industries gradually internalize environmental norms as part of competitive advantage and social legitimacy [35]. Strengthening community-based environmental education, corporate social responsibility (CSR) initiatives, and participatory local governance can help translate awareness into sustainable behavior [36]. This study thus reaffirms that the NEP remains a valid and adaptable framework for understanding environmental attitudes in industrial societies, particularly within the context of developing economies such as Indonesia.

From a policy perspective, the results underscore the need for multi-level interventions that integrate environmental education, regulatory enforcement, and community participation. First, government agencies and local authorities should develop targeted awareness programs that contextualize NEP principles for industrial workers, emphasizing the interdependence of economic growth and ecological stability. Second, industries must adopt corporate environmental responsibility (CER) strategies that go beyond compliance, focusing on waste reduction, green innovation, and community empowerment. Third, educational institutions and NGOs should collaborate to design participatory learning models that bridge the value–action gap and foster sustainable behavior. By embedding NEP values into industrial culture, stakeholders can gradually shift from a Dominant Social Paradigm (DSP) toward a balanced Ecological Industry Paradigm (EIP), ensuring that economic productivity coexists with environmental preservation [37]–[39].

IV. CONCLUSION

This study highlights the complex relationship between environmental awareness and industrial dependency through the lens of the New Environmental Paradigm (NEP). Findings indicate that industrial communities in Serang Regency exhibit moderate-to-high ecological consciousness, particularly in acknowledging the fragility of nature's balance and the risks of ecological crises. However, strong anthropocentric and growth-oriented values persist, reflecting a cognitive dissonance between environmental beliefs and economic realities. The participants' reliance on industrial activity for income contributes to a pragmatic orientation that prioritizes short-term economic security over long-term ecological sustainability. Despite these contradictions, a growing recognition of environmental limits suggests the early formation of an ecological ethic among industrial workers. This emerging awareness, if nurtured through education and institutional support, can become a catalyst for transforming industrial mindsets toward sustainable development.

REFERENCES

[1] J. Julianti, L. Magriasti, and Yulhendri, "Resource allocation efficiency and environmental degradation in economic activity," *ILTIZAM: J. Econ. Islamic Finance*, vol. 2, no. 2, pp. 15–38, 2025.

[2] W. D. S. Alves et al., "Analysis of the fragility of natural and anthropized environments to guide land-use policy in the Brazilian savannah," *Rev. Bras. Geogr. Fis.*, vol. 18, no. 3, pp. 2178–2204, 2024

[3] M. Muna et al., "Ecological and social transformations in America: Economic policy impacts from the colonial era to the 21st century," *Polyscopia*, vol. 1, no. 3, pp. 80–85, 2024.

[4] A. Tenri and M. Yunus, *Environmental Sociology: Understanding the Human–Environment Relationship*, Sukoharjo: Tahta Media Group, 2022.

[5] R. E. Dunlap and W. R. Catton, "Struggling with human exemptionalism: The rise, decline, and revitalization of environmental sociology," *Am. Sociol.*, vol. 28, no. 1, pp. 5–30, 1997.

[6] N. Erdogan, "Testing the New Environmental Paradigm (NEP) scale in a developing country context," *Int. J. Environ. Stud.*, vol. 76, no. 4, pp. 589–602, 2019.

[7] A. Milbrath, *Envisioning a Sustainable Society: Learning Our Way Out*, Albany: SUNY Press, 1989.

[8] E. Utari, "The influence of convergent thinking style on the New Environmental Paradigm among biology students," *Biodidaktika: J. Biol. Educ.*, vol. 14, no. 2, pp. 24–34, 2019.
[9] E. Utari and M. Mahrawi, "Naturalistic intelligence and NEP intercorrelation among biology education students in Banten Province," *Proc. Natl. Educ. Conf.*, vol. 2, no. 1, 2019.
[10] F. Saleem, S. S. Qureshi, and M. I. Malik, "Impact of environmental orientation on proactive and reactive strategies: Mediating role of business environmental commitment," *Sustainability*, vol. 13, 8361, 2021.
[11] A. Christiani, H. J. Kristina, L. Hadi, and P. C. Rahayu, "Measuring industrial environmental performance based on green industry standards in Indonesia," *J. Rekayasa Sist. Ind.*, vol. 6, no. 1, pp. 39–47, 2017.
[12] M. Friska and A. Novianty, "The relationship between environmental belief and pro-environmental behavior among emerging adults," *J. Diversita*, vol. 9, no. 1, pp. 28–39, 2023.
[13] R. T. Saputra and D. Herlina, "Community perception of industrial environmental risks in Banten," *Indones. J. Environ. Soc.*, vol. 5, no. 2, pp. 101–112, 2022.
[14] L. N. Handayani, R. Fitri, and S. Nurhayati, "Local participation and environmental awareness in industrial villages," *J. Sustain. Dev. Pract.*, vol. 11, no. 4, pp. 87–98, 2023.
[15] S. Y. Cheah and Y. C. Tan, "Cultural and economic determinants of pro-environmental behavior in Southeast Asia," *Asian J. Environ. Res.*, vol. 8, no. 2, pp. 55–68, 2024.
[16] R. E. Dunlap and K. D. Van Liere, "The new environmental paradigm," *J. Environ. Educ.*, vol. 9, no. 4, pp. 10–19, 1978.
[17] N. Erdogan, "Testing the New Environmental Paradigm (NEP) scale in a developing country context," *Int. J. Environ. Stud.*, vol. 76, no. 4, pp. 589–602, 2019.
[18] E. Utari, "The influence of convergent thinking style on the New Environmental Paradigm," *Biodidaktika: J. Biol. Educ.*, vol. 14, no. 2, pp. 24–34, 2019.
[19] W. D. S. Alves et al., "Analysis of the fragility of natural and anthropized environments in the Brazilian savannah," *Rev. Bras. Geogr. Fis.*, vol. 18, no. 3, pp. 2178–2204, 2024.
[20] A. Tenri and M. Yunus, *Environmental Sociology: Understanding the Human–Environment Relationship*, Sukoharjo: Tahta Media Group, 2022.
[21] M. Friska and A. Novianty, "The relationship between environmental belief and pro-environmental behavior among emerging adults," *J. Diversita*, vol. 9, no. 1, pp. 28–39, 2023.
[22] M. Muna et al., "Ecological and social transformations in America: Economic policy impacts from the colonial era to the 21st century," *Polyscopia*, vol. 1, no. 3, pp. 80–85, 2024.
[23] A. Christiani, H. J. Kristina, L. Hadi, and P. C. Rahayu, "Measuring industrial environmental performance based on green industry standards in Indonesia," *J. Rekayasa Sist. Ind.*, vol. 6, no. 1, pp. 39–47, 2017.
[24] P. C. Torey, S. A. Nio, and S. M. Mambu, "Cognitive dissonance and ecological decision-making in industrial societies," *Int. J. Environ. Psychol.*, vol. 10, no. 2, pp. 77–89, 2023.
[25] F. Saleem, S. S. Qureshi, and M. I. Malik, "Impact of environmental orientation on proactive and reactive environmental strategies," *Sustainability*, vol. 13, 8361, 2021.
[26] N. Erdogan, "Testing the New Environmental Paradigm (NEP) scale in a developing country context," *Int. J. Environ. Stud.*, vol. 76, no. 4, pp. 589–602, 2019.
[27] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qual. Res. Psychol.*, 3(2) 77–101, 2006.
[28] C. Li and J. Xu, "Methodological innovations in qualitative environmental research: Integrating statistical and thematic approaches," *Int. J. Qual. Methods*, vol. 23, no. 2, pp. 45–60, 2023.
[29] R. E. Dunlap and K. D. Van Liere, "The new environmental paradigm," *J. Environ. Educ.*, vol. 9, no. 4, pp. 10–19, 1978.
[30] A. Milbrath, *Envisioning a Sustainable Society: Learning Our Way Out*, Albany: SUNY Press, 1989.
[31] N. Erdogan, "Testing the New Environmental Paradigm (NEP) scale in a developing country context," *Int. J. Environ. Stud.*, vol. 76, no. 4, pp. 589–602, 2019.
[32] M. Muna et al., "Ecological and social transformations in America: Economic policy impacts from the colonial era to the 21st century," *Polyscopia*, vol. 1, no. 3, pp. 80–85, 2024.
[33] P. Robertson and P. M. Vitousek, "Balancing economic growth and ecological sustainability in industrial societies," *Annu. Rev. Environ. Resour.*, vol. 49, pp. 97–118, 2023.
[34] E. Utari and M. Mahrawi, "Naturalistic intelligence and NEP intercorrelation among biology education students in Banten Province," *Proc. Natl. Educ. Conf.*, vol. 2, no. 1, 2019.
[35] G. Spaargaren and A. Mol, "Ecological modernization theory: A critical review," *Environ. Politics*, vol. 32, no. 2, pp. 145–163, 2022.
[36] L. Handayani, R. Fitri, and S. Nurhayati, "Local participation and environmental awareness in industrial villages," *J. Sustain. Dev. Pract.*, vol. 11, no. 4, pp. 87–98, 2023.
[37] G. Spaargaren and A. Mol, "Ecological modernization theory: A critical review," *Environ. Politics*, vol. 32, no. 2, pp. 145–163, 2022.
[38] F. Saleem, S. S. Qureshi, and M. I. Malik, "Impact of environmental orientation on proactive and reactive environmental strategies," *Sustainability*, vol. 13, 8361, 2021.
[39] L. Handayani, R. Fitri, and S. Nurhayati, "Local participation and environmental awareness in industrial villages," *J. Sustain. Dev. Pract.*, vol. 11, no. 4, pp. 87–98, 2023