

RESEARCH PAPER**OPEN ACCESS****Marine biodiversity conservation through fisheries law enforcement: Lived experiences of implementers of Republic Act No. 8550, as amended by Republic Act No. 10654****Bernard G. Gilaga****College of Criminal Justice Education, Jose Rizal Memorial State University, Dapitan City, Zamboanga del Norte, Philippines***Key words:** Marine biodiversity conservation, Fisheries law enforcement, Republic Act No. 8550, Republic Act No. 10654, Phenomenology, Coastal governance, Marine resource management, Philippines**Received:** 29 May, 2026**Accepted:** 12 June, 2026**Published:** 18 June, 2026**DOI:** <https://dx.doi.org/10.12692/jbes/28.6.185-201>**ABSTRACT**

Effective fisheries law enforcement is essential for conserving marine biodiversity, protecting coastal ecosystems, and ensuring the sustainable use of aquatic resources. Despite the enactment of Republic Act No. 8550, as amended by Republic Act No. 10654, limited qualitative evidence exists regarding the experiences of frontline implementers responsible for enforcing these fisheries laws in the Philippines. This study explored the lived experiences of fisheries law implementers in the Northern Zamboanga Peninsula to better understand the factors influencing effective law enforcement and marine resource conservation. A qualitative phenomenological research design was employed involving ten purposively selected participants representing the Bureau of Fisheries and Aquatic Resources, Philippine National Police-Maritime Group, Philippine Coast Guard, Municipal Agriculture Offices, and Bantay Dagat. Data were collected through four in-depth interviews and one focus group discussion involving six participants and were analyzed using Braun and Clarke's thematic analysis. Nine interrelated themes emerged. Positive experiences included institutional support and community cooperation, which enhanced motivation and operational effectiveness. Major challenges comprised political and systemic intervention, safety and security risks, and inadequate logistical resources that constrained consistent law enforcement. Participants addressed these challenges through professional integrity, inter-agency coordination, collaborative enforcement, and continuous public education and awareness campaigns. The findings demonstrate that effective implementation of fisheries legislation depends not only on the legal framework but also on adequate institutional support, transparent governance, sufficient operational resources, and meaningful collaboration among enforcement agencies and coastal communities. Strengthening these interconnected factors will enhance fisheries law enforcement and contribute to the long-term conservation of marine biodiversity and the sustainable management of coastal resources in the Philippines.

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INTRODUCTION

Marine biodiversity underpins ecosystem functioning, food security, and the livelihoods of millions of coastal communities worldwide. Healthy marine ecosystems provide essential ecological services, including fisheries production, coastal protection, carbon sequestration, and the maintenance of biological diversity. However, these ecosystems continue to face increasing pressure from overfishing, destructive fishing practices, habitat degradation, and weak governance, threatening both ecological sustainability and the socio-economic well-being of coastal populations (Roberts, 2002).

The Philippines is internationally recognized as the global center of marine biodiversity because of its exceptional diversity of coral reefs, mangrove forests, seagrass ecosystems, and marine organisms (Carpenter and Springer, 2005). These ecosystems support one of the world's most productive fisheries and provide food security and livelihoods for millions of Filipinos. Despite their ecological and economic importance, Philippine marine resources continue to experience significant degradation resulting from illegal, unreported, and unregulated (IUU) fishing, destructive fishing methods, overexploitation of fish stocks, and increasing anthropogenic pressures. These threats have contributed to declining fisheries productivity and deterioration of coastal habitats, raising serious concerns regarding the long-term sustainability of marine resources (World Bank, 2005).

Recognizing these challenges, the Philippine government enacted Republic Act No. 8550, otherwise known as the *Philippine Fisheries Code of 1998*, which was subsequently strengthened through Republic Act No. 10654. These laws establish the legal framework for the conservation, management, and sustainable utilization of fisheries and aquatic resources by regulating fishing activities, prohibiting destructive fishing methods, and strengthening measures against illegal, unreported, and unregulated fishing. Their implementation involves multiple institutions, including the Bureau of Fisheries and Aquatic Resources (BFAR), local government units

(LGUs), the Philippine National Police–Maritime Group, the Philippine Coast Guard, Municipal Agriculture Offices, and community-based organizations such as Bantay Dagat.

Although the legal and institutional framework for fisheries management has been substantially strengthened, effective implementation remains a continuing challenge. Previous studies have shown that fisheries law enforcement is frequently constrained by inadequate institutional capacity, insufficient logistical resources, weak inter-agency coordination, governance issues, and inconsistent enforcement across coastal communities (Dalabajan, 2005; Weeks *et al.*, 2009; World Bank, 2005). Community-based enforcement initiatives have likewise demonstrated that sustained institutional support and stakeholder participation are essential for improving compliance with fisheries regulations and achieving long-term conservation outcomes (Halik *et al.*, 2018).

Most existing studies on fisheries governance in the Philippines have focused primarily on marine protected area effectiveness, fisheries management policies, coastal resource governance, and conservation outcomes (Carpenter and Springer, 2005; Weeks *et al.*, 2009). While these studies have substantially improved understanding of institutional and ecological aspects of fisheries management, comparatively little attention has been given to the lived experiences of frontline implementers who are directly responsible for enforcing fisheries laws. In particular, limited qualitative evidence is available regarding how fisheries law implementers experience institutional support, operational constraints, political intervention, occupational risks, and inter-agency collaboration during the implementation of Republic Act No. 8550, as amended by Republic Act No. 10654. Understanding these experiences is important because the effectiveness of environmental legislation ultimately depends not only on the quality of legal frameworks but also on the capacity, experiences, and adaptive responses of those responsible for implementing them.

This study addresses this gap by exploring the lived experiences of fisheries law implementers in the Northern Zamboanga Peninsula, a coastal region where fisheries play an important role in local livelihoods and marine resource conservation. By examining the perspectives of personnel from BFAR, the Philippine National Police–Maritime Group, the Philippine Coast Guard, Municipal Agriculture Offices, and Bantay Dagat, the study provides empirical insights into the realities of fisheries law enforcement and the factors that influence implementation at the local level.

The study is anchored in Bandura's (1986) Social Cognitive Theory, which explains that individual performance is influenced by reciprocal interactions among personal capabilities, behavior, and environmental conditions. It is further informed by Cultural Theory (Douglas and Wildavsky, 1982; Thompson *et al.*, 1990), which highlights the influence of governance structures and social relationships on environmental decision-making, and Person–Environment Fit Theory (Caplan, 1987), which emphasizes the importance of alignment between organizational resources and job demands in shaping employee performance and effectiveness. Together, these theoretical perspectives provide an appropriate framework for understanding how institutional environments, governance systems, and individual experiences collectively influence fisheries law enforcement.

Specifically, this study aimed to explore the lived experiences of implementers of Republic Act No. 8550, as amended by Republic Act No. 10654, and related local fisheries ordinances in the Northern Zamboanga Peninsula. It sought to:

1. examine the experiences of fisheries law implementers in enforcing Republic Act No. 8550, as amended by Republic Act No. 10654, and related local ordinances;
2. identify the challenges encountered during the implementation of fisheries laws; and
3. explore the strategies employed by implementers to address these challenges and sustain effective fisheries law enforcement.

The findings are expected to contribute to the growing body of knowledge on fisheries governance and marine biodiversity conservation by providing evidence that can inform policy development, institutional strengthening, and collaborative approaches to sustainable fisheries management in the Philippines.

MATERIALS AND METHODS

Research design

This study employed a qualitative phenomenological research design to explore the lived experiences of fisheries law implementers responsible for enforcing Republic Act No. 8550 (The Philippine Fisheries Code of 1998), as amended by Republic Act No. 10654, together with relevant local fisheries ordinances in the Northern Zamboanga Peninsula, Philippines. Phenomenology is particularly appropriate for investigating how individuals perceive, interpret, and assign meaning to their experiences of a shared phenomenon (Creswell, 2013; Moustakas, 1994). Rather than measuring variables, this approach seeks to understand the essence of participants' lived experiences through rich descriptions and reflective interpretation.

The study focused on frontline implementers directly involved in fisheries law enforcement, including personnel from the Bureau of Fisheries and Aquatic Resources (BFAR), Municipal Agriculture Offices (MAOs), the Philippine National Police–Maritime Group (PNP-Maritime Group), the Philippine Coast Guard (PCG), and Bantay Dagat volunteers. The qualitative approach enabled participants to describe, in their own words, the realities, challenges, and adaptive strategies associated with implementing fisheries laws within their respective jurisdictions.

Research setting

The study was conducted in selected coastal local government units of the Northern Zamboanga Peninsula (Region IX), Philippines, specifically Dipolog City, Dapitan City, Sindangan, Sibutad, Roxas, and Manukan in the province of Zamboanga del Norte. These municipalities and cities possess

extensive coastal areas characterized by coral reefs, mangrove forests, seagrass beds, and productive fishing grounds that support both municipal and commercial fisheries.

These localities were purposively selected because they actively implement Republic Act No. 8550, as amended by Republic Act No. 10654, through coordinated fisheries management and coastal resource protection programs involving national agencies, local government units, and community-based enforcement groups.

Participants and sampling

Ten participants with direct experience in fisheries law enforcement were purposively selected for the study. Purposive sampling is appropriate in phenomenological research because it allows the selection of information-rich participants who have

firsthand experience of the phenomenon being investigated (Tongco, 2012; Patton, 2015).

The participants represented the principal agencies responsible for fisheries law enforcement: BFAR, the PNP-Maritime Group, the Philippine Coast Guard, Municipal Agriculture Offices, and Bantay Dagat. Four participants took part in individual in-depth interviews, while six participated in a focus group discussion.

Participant confidentiality was maintained by assigning identification codes (P1–P10) rather than using personal names (Table 1).

Data collection continued until sufficient information richness was achieved and no substantially new concepts emerged from successive interviews, indicating data saturation (Guest *et al.*, 2006).

Table 1. Profile of the participants

Participant	Agency/Sector	Role/Position	Data Source
P1	BFAR	Fisheries/Law Enforcement Personnel	In-depth Interview
P2	PNP–Maritime Group	Maritime Police Officer	In-depth Interview
P3	Philippine Coast Guard	Coast Guard Personnel	In-depth Interview
P4	Municipal Agriculture Office	Fisheries/Agriculture Officer	In-depth Interview
P5	Bantay Dagat	Fish Warden/Volunteer	Focus Group Discussion
P6	Bantay Dagat	Fish Warden/Volunteer	Focus Group Discussion
P7	Municipal Agriculture Office	Fisheries/Agriculture Officer	Focus Group Discussion
P8	PNP–Maritime Group	Maritime Police Officer	Focus Group Discussion
P9	Philippine Coast Guard	Coast Guard Personnel	Focus Group Discussion
P10	BFAR	Fisheries/Law Enforcement Personnel	Focus Group Discussion

Research instrument

Data were collected using a researcher-developed semi-structured interview guide that was reviewed by experts in qualitative research and fisheries law enforcement to establish content validity. The interview guide consisted of open-ended questions organized into three broad domains:

1. experiences in implementing fisheries laws;
2. challenges encountered during law enforcement; and;
3. strategies used to address operational difficulties.

The semi-structured format provided consistency across interviews while allowing participants to elaborate on issues they considered important. Interviews and focus group discussions were conducted in the participants' preferred language, audio-recorded with permission, and supplemented with field notes documenting

contextual observations and non-verbal communication (Kvale, 1996).

Data collection procedure

Prior to data collection, permission was obtained from the concerned government agencies and local authorities. Potential participants were informed of the objectives, procedures, potential benefits, and voluntary nature of the study before written informed consent was obtained.

Individual in-depth interviews were conducted first to capture detailed personal experiences. Subsequently, a focus group discussion was organized to explore shared perspectives, compare experiences among agencies, and clarify emerging themes. Interviews and discussions

were conducted in private locations that ensured confidentiality and minimized interruptions.

All interview sessions were digitally recorded with participants' consent and later transcribed verbatim. Field notes were maintained throughout the data collection process to capture contextual information and researcher observations that complemented the interview transcripts.

Data analysis

The interview transcripts were analyzed using the six-phase thematic analysis framework proposed by Braun and Clarke (2006). The analysis involved:

1. familiarization with the data through repeated reading of transcripts;
2. generation of initial codes;
3. identification of potential themes;
4. review and refinement of themes;
5. definition and naming of themes; and
6. preparation of the final narrative report.

Coding was performed inductively so that themes emerged from participants' accounts rather than from predetermined categories. Similar codes were grouped into broader conceptual themes that reflected common experiences across participants while preserving variations in individual perspectives.

To enhance analytical rigor, themes were continuously compared with the original transcripts to ensure that interpretations accurately reflected participants' narratives.

Trustworthiness

The rigor of the study was established using the criteria proposed by Lincoln and Guba (1985): credibility, dependability, confirmability, and transferability.

Credibility was enhanced through prolonged engagement with participants, detailed interviewing, and careful verification of emerging interpretations against the interview data. Dependability was strengthened by maintaining a clear audit trail documenting methodological decisions and analytical

procedures. Confirmability was achieved by grounding interpretations directly in participants' narratives while minimizing researcher bias through reflexive note-taking. Transferability was supported by providing detailed descriptions of the study setting, participants, and research procedures, enabling readers to assess the applicability of the findings to similar contexts (Lincoln and Guba, 1985; Krefting, 1991).

Ethical considerations

The study adhered to internationally accepted ethical principles for qualitative research (Orb *et al.*, 2001). Participation was voluntary, and informed consent was obtained from all participants prior to data collection. Participants were informed of their right to withdraw from the study at any stage without penalty.

To protect privacy and confidentiality, identifying information was removed from transcripts, and participant codes (P1–P10) were used throughout data analysis and reporting. Audio recordings and electronic files were securely stored and accessed only by the researcher. All findings are presented in aggregate form to prevent the identification of individual participants or institutions.

RESULTS AND DISCUSSION

The interview and focus group discussion transcripts were analyzed using Braun and Clarke's (2006) thematic analysis. Through repeated reading, coding, and comparison of participants' narratives, significant statements were identified and organized into meaningful categories from which broader themes emerged. These themes represent the shared lived experiences of fisheries law implementers responsible for enforcing Republic Act No. 8550, as amended by Republic Act No. 10654, and related local fisheries ordinances in the Northern Zamboanga Peninsula. The findings provide insights into the implementers' experiences, challenges encountered, and strategies adopted to sustain effective fisheries law enforcement. The discussion integrates participants' narratives with relevant literature to enhance understanding of factors influencing marine biodiversity conservation and fisheries governance (Table 2).

Table 2. Summary of Emergent Themes

Research question	Main theme	Core meaning
RQ1: Experiences	Theme 1. Support: The Glow of Happiness and Satisfaction	Institutional, logistical, and community support generated motivation, satisfaction, and greater confidence among implementers.
RQ1: Experiences	Theme 2. Moments of Inadequacy: Sources of Dissatisfaction	Shortages in equipment, personnel, facilities, and legal-support resources produced frustration, stress, and diminished operational capacity.
RQ1: Experiences	Theme 3. Interference Obstructs Performance	Political intervention, influential individuals, and informal patronage systems weakened the authority and effectiveness of implementers.
RQ2: Challenges	Theme 4. Systemic Interventions	Implementers encountered political and institutional pressures that complicated the consistent application of fisheries laws.
RQ2: Challenges	Theme 5. Safety and Security Risks at Work	Threats, intimidation, hostility, and encounters with armed individuals exposed implementers and their families to safety and security risks.
RQ2: Challenges	Theme 6. Inadequate Logistics Affect Law Implementation	Insufficient patrol boats, fuel, manpower, communication equipment, detention facilities, and operational resources constrained enforcement.
RQ3: Responses	Theme 7. Successful Implementation Lies with Multiple Approaches	Integrity, consistency, professionalism, and firm application of the law helped implementers respond to enforcement difficulties.
RQ3: Responses	Theme 8. Coordination and Collaboration Elicit Safety and Security	Inter-agency cooperation strengthened operational security and enabled implementers to conduct more effective enforcement activities.
RQ3: Responses	Theme 9. Initiative and Educational Campaign Boost Law Implementation	Information campaigns, community meetings, radio announcements, and direct education promoted awareness and voluntary compliance.

Experiences of the informants in the implementation of RA 8550 as amended by RA 10654 and its local ordinances

The findings revealed that the implementation of Republic Act No. 8550, as amended by Republic Act No. 10654, relies heavily on the collaborative efforts of multiple agencies responsible for fisheries management and marine law enforcement. The participants represented personnel from the Bureau of Fisheries and Aquatic Resources (BFAR), Municipal Agriculture Offices (MAOs), the Philippine Coast Guard, the Philippine National Police–Maritime Group, and Bantay Dagat. Although these institutions perform different operational functions, their experiences reflected a common commitment to protecting marine resources and enforcing fisheries regulations despite numerous institutional and operational constraints.

The thematic analysis generated three interrelated themes describing the participants' lived experiences: Support: The Glow of Happiness and Satisfaction, Moments of Inadequacy: Source of Dissatisfaction, and Interference Obstruct Performance. Collectively, these themes illustrate that fisheries law enforcement

extends beyond the application of legal provisions and is strongly influenced by organizational support, resource availability, governance structures, and interactions with local communities. Similar observations have been reported in studies of marine protected area management in the Philippines, where institutional capacity, governance quality, and stakeholder cooperation substantially influence the effectiveness of fisheries enforcement and biodiversity conservation (Weeks *et al.*, 2009). These findings are likewise consistent with Bandura's (1986) Social Cognitive Theory, which emphasizes that individuals' performance is shaped not only by personal capability but also by environmental support and social conditions that facilitate or constrain effective action.

Support: The glow of happiness and satisfaction

A prominent theme emerging from the participants' narratives was the positive influence of institutional and community support on the implementation of fisheries laws. Most participants described feelings of satisfaction and professional fulfillment when local government units and partner agencies provided

essential operational resources, including patrol boats, fuel, manpower, food assistance, and logistical support. These resources enabled them to conduct regular sea patrols, monitor municipal waters more effectively, and respond promptly to violations of fisheries regulations.

Several participants explained that the availability of government support significantly improved their operational capacity. One participant recalled that enforcement activities initially relied on rented patrol boats because no government vessels were available. The subsequent provision of several patrol boats together with regular fuel allocations substantially enhanced their ability to conduct patrol operations. During seasonal fishing bans, Bantay Dagat volunteers also received food assistance and fuel support, which lessened the financial burden associated with volunteer enforcement activities and reinforced their commitment to marine resource protection.

Beyond logistical assistance, participants emphasized that community cooperation contributed substantially to their sense of accomplishment. They expressed satisfaction when local fishers voluntarily complied with fisheries regulations, respected closed fishing seasons, and demonstrated greater awareness of marine conservation practices. Participants viewed this growing compliance as evidence that sustained enforcement and community education were gradually fostering responsible fishing behavior. Such positive interactions strengthened their confidence that their efforts were contributing to the long-term sustainability of coastal ecosystems.

These findings highlight that effective fisheries law enforcement depends not only on legal authority but also on continuous institutional support and collaborative relationships with coastal communities. Perceived organizational support has long been recognized as an important factor influencing employee motivation, commitment, and performance (Eisenberger *et al.*, 1986). Likewise, successful marine resource governance increasingly depends on

partnerships among government agencies, local communities, and other stakeholders, particularly in community-based coastal management programs (Weeks *et al.*, 2009). The experiences shared by the participants suggest that adequate logistical support, organizational commitment, and community cooperation collectively strengthen both the effectiveness of fisheries enforcement and the morale of frontline implementers, thereby contributing to more sustainable marine biodiversity conservation.

Moments of inadequacy: Source of dissatisfaction

Although participants described positive experiences associated with institutional support, they also shared circumstances that generated frustration and reduced their sense of effectiveness. The findings indicate that inadequate logistical resources, insufficient manpower, and limited institutional support remained significant barriers to the consistent implementation of Republic Act No. 8550, as amended by Republic Act No. 10654. These operational limitations affected not only the efficiency of fisheries law enforcement but also the morale of frontline implementers.

Many participants identified shortages of patrol boats, fuel, communication equipment, detention facilities, and enforcement personnel as recurring challenges. These deficiencies constrained the frequency and coverage of sea patrol operations, making it difficult to monitor extensive municipal waters and respond promptly to illegal fishing activities. Participants emphasized that, despite their commitment to protecting marine resources, the absence of adequate operational resources often prevented them from fully carrying out their responsibilities.

The participants also highlighted the limited institutional support available during legal proceedings. Several explained that community volunteers and civilian witnesses frequently incurred personal expenses for transportation and meals when attending court hearings involving fisheries

violations. Such financial burdens discouraged continued participation in judicial processes and reduced the willingness of community members to serve as witnesses in future enforcement actions. These experiences illustrate that effective fisheries law enforcement extends beyond apprehending violators and requires sustained institutional support throughout prosecution and case resolution.

From an organizational perspective, inadequate resources can diminish both motivation and perceived effectiveness among law enforcement personnel. Eisenberger *et al.* (1986) argued that employees who perceive insufficient organizational support are more likely to experience reduced job satisfaction and organizational commitment. Likewise, Karasek (1979) proposed that occupations characterized by high demands but limited resources increase occupational stress and reduce job performance. The present findings reflect these perspectives, as participants consistently described feelings of frustration arising not from a lack of commitment, but from institutional constraints that limited their ability to perform their duties effectively. The findings are also consistent with previous studies on fisheries governance, which have identified inadequate funding, insufficient personnel, and limited operational logistics as persistent barriers to effective coastal resource management in many developing coastal regions (Weeks *et al.*, 2009; World Bank, 2005). These constraints reduce enforcement efficiency and ultimately weaken efforts to conserve marine biodiversity. Consequently, strengthening logistical support and ensuring adequate institutional resources remain essential components of sustainable fisheries governance and effective implementation of environmental legislation.

Interference obstruct performance

Another prominent theme that emerged from the participants' narratives was the influence of political and social interference on fisheries law enforcement. Participants consistently described situations in which external interventions from elected officials, influential individuals, and informal patronage

networks affected the impartial implementation of fisheries regulations. These experiences revealed that enforcement challenges were not limited to operational constraints but also involved institutional and governance issues that influenced decision-making during law enforcement activities.

Several participants reported instances in which apprehended violators received preferential treatment following requests from local officials or politically influential individuals. According to the participants, interventions by governors, mayors, barangay officials, and other influential personalities occasionally resulted in reduced penalties, delayed legal proceedings, or the release of apprehended offenders despite the existence of sufficient evidence. Such experiences created a perception that enforcement outcomes were sometimes determined by social influence rather than by the provisions of fisheries law.

Participants repeatedly referred to the "padrino system" and the "bata-bata system" as recurring obstacles to the consistent application of Republic Act No. 8550. These informal patronage practices undermined the authority of law implementers and weakened confidence in the fairness of fisheries law enforcement. Many participants expressed disappointment that their professional judgment and operational efforts could be overridden by individuals with political or social influence, thereby reducing the perceived effectiveness of conservation initiatives.

These findings suggest that governance challenges represent an important dimension of marine conservation. Effective environmental legislation depends not only on well-designed legal frameworks but also on transparent institutions capable of implementing laws consistently and independently. Weak governance and political interference have been identified as major constraints to fisheries management in the Philippines and other coastal nations, where institutional fragmentation and inconsistent enforcement reduce compliance with fisheries regulations (Dalabajan, 2005; World Bank, 2005).

Similarly, Weeks *et al.* (2009) observed that marine protected areas achieve better conservation outcomes when enforcement agencies operate within strong governance systems characterized by accountability, institutional support, and effective coordination.

From a theoretical perspective, these findings can also be interpreted through Cultural Theory, which recognizes that governance outcomes are shaped by interactions among authority structures, institutional norms, and community relationships (Douglas and Wildavsky, 1982; Thompson *et al.*, 1990). Political intervention disrupts these governance structures by introducing competing interests into enforcement decisions, thereby weakening both institutional legitimacy and public confidence. Consequently, reducing external interference and strengthening institutional independence are essential for improving compliance with fisheries legislation and achieving long-term marine biodiversity conservation.

Challenges encountered: Systemic interventions

The findings identified systemic intervention as one of the most significant challenges affecting the implementation of Republic Act No. 8550, as amended by Republic Act No. 10654. Participants consistently described political and institutional interference as a recurring obstacle that complicated the impartial enforcement of fisheries laws. Rather than functioning solely as law enforcers, they often found themselves navigating competing expectations from government officials, influential community members, and other stakeholders whose interests sometimes conflicted with legal mandates.

Several participants recounted instances in which governors, mayors, barangay officials, or politically influential individuals intervened on behalf of apprehended violators. These interventions frequently resulted in requests for leniency, delayed prosecution, or the dismissal of cases despite sufficient evidence of fisheries law violations.

According to the participants, such practices weakened the deterrent effect of the law and created the perception that enforcement outcomes could be influenced by political authority rather than by legal principles. Consequently, repeat violations became more difficult to prevent, reducing the overall effectiveness of fisheries management and marine conservation initiatives.

The participants further explained that these situations created ethical and professional dilemmas. While they recognized their legal obligation to enforce fisheries regulations impartially, they also operated within administrative systems where compliance with directives from local authorities was often expected. Balancing these competing responsibilities generated uncertainty and, in some cases, discouraged strict implementation of fisheries laws. Such experiences demonstrate that effective environmental governance depends not only on comprehensive legislation but also on institutional environments that support independent and consistent law enforcement.

These findings are consistent with previous studies emphasizing that governance quality is a critical determinant of successful fisheries management. Dalabajan (2005) observed that weak enforcement mechanisms and institutional interference remain persistent challenges in addressing illegal fishing in the Philippines. Similarly, the World Bank (2005) reported that fragmented institutional arrangements, inconsistent implementation, and governance weaknesses continue to undermine coastal resource management and environmental protection efforts. Rather than deficiencies in legislation itself, these studies suggest that implementation failures often arise from institutional and political constraints that limit the consistent application of existing laws.

From a governance perspective, the findings also reflect the principles of Cultural Theory, which proposes that organizational behavior and regulatory outcomes are shaped by social structures, authority relationships, and institutional norms (Douglas and Wildavsky, 1982; Thompson *et al.*, 1990).

When political influence overrides established legal procedures, institutional credibility is weakened, public confidence in regulatory systems declines, and voluntary compliance with environmental regulations becomes more difficult to achieve. Strengthening institutional transparency, reinforcing legal accountability, and minimizing external interference are therefore essential to improving fisheries law enforcement and sustaining marine biodiversity conservation.

Challenges encountered: Safety and security risks at work

Another major challenge identified by the participants was the considerable safety and security risks associated with fisheries law enforcement. Participants described law enforcement operations as inherently hazardous because they frequently involved direct confrontations with individuals engaged in illegal fishing activities. These encounters exposed implementers not only to occupational hazards but also to psychological stress arising from threats, intimidation, and concerns for their personal safety and that of their families.

Several participants reported receiving verbal threats and experiencing hostility from violators following apprehension operations. In some cases, these threats extended beyond the workplace and affected their families, creating persistent anxiety even after enforcement activities had concluded. Such experiences illustrate the personal sacrifices often associated with protecting marine resources, particularly in areas where illegal fishing remains economically significant and enforcement actions may be perceived as threats to local livelihoods.

Participants also emphasized that certain enforcement operations involved encounters with armed individuals or well-organized commercial fishing operators. Under these circumstances, they frequently relied on assistance from the Philippine Coast Guard, the Philippine National Police–Maritime Group, and other law enforcement agencies to ensure operational safety. The need for coordinated

security measures reflects the increasingly complex nature of fisheries enforcement, where environmental protection is closely linked with public safety and law enforcement capacity.

These findings underscore that occupational safety is an essential component of effective environmental governance. Law enforcement personnel who routinely face physical danger and intimidation require adequate institutional protection, operational support, and psychological assurance to perform their responsibilities effectively. Karasek (1979) argued that occupations characterized by high demands and limited control are associated with increased occupational stress, while Person–Environment Fit Theory (Caplan, 1987) suggests that job performance is enhanced when organizational support adequately matches the demands placed upon employees. The participants' experiences illustrate that inadequate protection and persistent exposure to risk can adversely affect both well-being and enforcement effectiveness.

Previous research similarly recognizes that frontline fisheries enforcement personnel frequently operate under challenging and potentially dangerous conditions. Maderazo (2016) documented that Bantay Dagat volunteers often face legal, financial, and physical risks while supporting fisheries law enforcement in coastal communities. Likewise, Mascarinas (2016) reported incidents of violence and attacks against Bantay Dagat volunteers, highlighting the vulnerability of community-based enforcement personnel in the Philippines. These studies reinforce the present findings by demonstrating that effective marine conservation requires not only legal authority but also comprehensive measures that safeguard the welfare and security of frontline implementers.

Overall, the findings indicate that addressing safety and security concerns should be regarded as a fundamental element of fisheries governance rather than merely an operational consideration. Providing appropriate protective equipment, strengthening inter-agency security coordination, and ensuring

institutional support for personnel exposed to occupational risks are essential for maintaining effective, consistent, and sustainable fisheries law enforcement.

Challenges encountered: Inadequate logistics affect law implementation

The findings identified inadequate logistical support as another major challenge that constrained the effective implementation of Republic Act No. 8550, as amended by Republic Act No. 10654. Participants consistently emphasized that successful fisheries law enforcement requires adequate operational resources, including patrol boats, fuel, communication equipment, trained personnel, detention facilities, and financial support. However, these resources were often insufficient, limiting the capacity of implementers to conduct regular surveillance, respond promptly to reported violations, and sustain enforcement operations across extensive coastal areas.

Several participants explained that some municipalities lacked government-owned patrol boats and therefore relied on rented vessels or borrowed equipment to conduct sea patrols. Others reported shortages of enforcement personnel, making it difficult to maintain regular monitoring schedules or respond simultaneously to multiple incidents within their respective jurisdictions. These operational deficiencies reduced the frequency and effectiveness of patrol activities and increased the likelihood that illegal fishing activities would go undetected.

Participants further observed that enforcement agencies often faced considerable disadvantages when confronting commercial fishing operators. Commercial fishing vessels were described as having greater financial resources, larger and faster boats, advanced communication equipment, and, in some instances, armed personnel. In contrast, government enforcement teams frequently operated with limited equipment and personnel, creating an imbalance that complicated apprehension efforts and increased operational risks. Several participants noted that they occasionally used their own financial resources to

support patrol activities when institutional assistance was unavailable, reflecting their personal commitment to marine resource protection despite limited organizational support.

These findings demonstrate that logistical capacity is a fundamental component of effective fisheries governance. Even when implementers possess adequate knowledge, commitment, and legal authority, enforcement effectiveness remains constrained if essential operational resources are unavailable. The experiences described by the participants suggest that resource limitations affect not only enforcement efficiency but also the long-term sustainability of conservation initiatives. Without adequate logistical support, routine patrols become irregular, response times increase, and opportunities for illegal fishing activities expand.

The present findings are consistent with previous studies highlighting inadequate logistics as a persistent challenge in coastal resource management. The World Bank (2005) reported that insufficient operational funding, limited enforcement infrastructure, and inadequate institutional capacity continue to hinder effective coastal and marine resource management in the Philippines. Similarly, Weeks *et al.* (2009) observed that the effectiveness of marine protected areas depends not only on legal designation but also on the availability of sufficient financial, technical, and human resources to support continuous enforcement activities. These observations reinforce the present findings by demonstrating that successful fisheries law enforcement requires sustained investment in operational capacity alongside appropriate legal and institutional frameworks.

From the perspective of Person–Environment Fit Theory (Caplan, 1987), organizational effectiveness depends on the compatibility between job demands and the resources available to employees. When enforcement personnel are expected to protect extensive marine ecosystems without adequate logistical support, the imbalance between

responsibilities and available resources can reduce both performance and job satisfaction. Addressing these deficiencies through increased investment in patrol assets, communication systems, personnel development, and operational funding would therefore strengthen both enforcement capacity and the long-term conservation of marine biodiversity.

Addressing the challenges encountered by the informants

Despite numerous institutional, operational, and personal challenges, the participants demonstrated resilience by adopting various strategies to sustain fisheries law enforcement within their respective jurisdictions. The findings indicate that implementers relied not only on formal enforcement mechanisms but also on professional integrity, collaborative partnerships, and community engagement to overcome barriers encountered during the implementation of Republic Act No. 8550, as amended by Republic Act No. 10654. Three interrelated themes emerged from the participants' accounts: Successful Implementation Lies with Multiple Approaches, Coordination and Collaboration Elicit Safety and Security, and Initiative and Educational Campaign Boost Law Implementation. Together, these themes illustrate that effective fisheries governance requires a combination of institutional commitment, inter-agency cooperation, and active community participation.

The strategies described by the participants extend beyond routine law enforcement activities and reflect broader principles of adaptive environmental governance. Rather than relying exclusively on punitive measures, implementers emphasized the importance of ethical leadership, collaborative decision-making, and continuous public engagement to promote compliance with fisheries regulations. These approaches align with contemporary perspectives on coastal resource management, which recognize that sustainable conservation outcomes are achieved most effectively when regulatory enforcement is integrated with stakeholder participation, institutional collaboration, and environmental education (Weeks *et al.*, 2009; Halik *et al.*, 2018).

Successful implementation lies with multiple approaches

Participants consistently emphasized that effective fisheries law enforcement depends not only on the existence of legal provisions but also on the professionalism, integrity, and commitment of those responsible for implementing them. They acknowledged that operational challenges, political pressures, and resource limitations are unavoidable aspects of their work; however, they believed that maintaining ethical standards and consistently applying the law remain essential for achieving sustainable marine resource management.

Several participants stressed the importance of avoiding conflicts of interest by refusing gifts, financial incentives, or personal favors from fishers and commercial fishing operators. They explained that maintaining professional distance from regulated stakeholders helped preserve impartiality during enforcement activities and minimized opportunities for corruption or undue influence. Participants regarded personal integrity as a fundamental requirement for maintaining public confidence in fisheries law enforcement and ensuring that legal decisions were based solely on established regulations.

The findings further indicate that participants viewed consistency in law enforcement as equally important. They emphasized that regulations should be applied fairly regardless of the social, political, or economic status of offenders. According to the participants, consistent enforcement strengthens public trust, discourages repeat violations, and reinforces the credibility of government institutions responsible for marine resource protection.

These observations support the view that successful environmental governance depends not only on institutional capacity but also on ethical leadership and professional accountability. Bandura's (1986) Social Cognitive Theory suggests that individual behavior is influenced by both personal values and the surrounding social environment.

Implementers who consistently demonstrate integrity and professionalism may serve as positive role models for colleagues and community members, thereby promoting a culture of compliance and accountability within fisheries management systems.

Previous studies have similarly emphasized the importance of institutional integrity in environmental governance. Bovaird and Loeffler (2016) argue that effective public management requires transparency, accountability, and ethical decision-making to sustain public confidence in government institutions. Likewise, successful coastal resource management depends on the credibility of enforcement agencies and the consistent application of environmental regulations, particularly in communities where long-term cooperation is essential for conservation success (Weeks *et al.*, 2009).

Overall, the findings suggest that professional integrity, consistency, and impartial enforcement form the foundation of effective fisheries law implementation. While adequate resources and institutional support remain indispensable, participants recognized that ethical conduct and professional commitment are equally critical in achieving long-term compliance and protecting marine biodiversity.

Coordination and collaboration elicit safety and security

The findings demonstrate that inter-agency coordination and collaboration were regarded by participants as fundamental to the effective implementation of fisheries laws and the protection of law enforcement personnel. Given the complex nature of fisheries law enforcement, participants emphasized that successful operations rarely depended on a single agency. Instead, effective enforcement required the combined efforts of the Bureau of Fisheries and Aquatic Resources (BFAR), the Philippine Coast Guard, the Philippine National Police–Maritime Group, Municipal Agriculture Offices, Bantay Dagat volunteers, and local government units.

Participants explained that coordinated patrol operations improved operational efficiency by allowing agencies to share personnel, patrol vessels, communication equipment, and technical expertise. Joint operations also enhanced situational awareness and enabled implementers to respond more effectively to reports of illegal fishing activities across wider coastal areas. More importantly, collaboration provided an additional level of security during enforcement operations, particularly when confronting organized illegal fishing groups or commercial fishing operators with greater financial and logistical resources.

Several participants acknowledged that conducting enforcement activities independently often exposed them to unnecessary risks. In contrast, coordinated operations involving multiple agencies increased their confidence and reduced concerns regarding personal safety. The presence of law enforcement personnel from different institutions not only strengthened operational capacity but also enhanced the legitimacy of enforcement actions in the eyes of local communities. This collaborative approach contributed to more efficient implementation of fisheries regulations while minimizing the likelihood of conflict during apprehension operations.

These findings reinforce the growing recognition that effective marine governance depends on institutional collaboration rather than isolated organizational efforts. Coastal resource management is inherently multidisciplinary and requires coordinated action among agencies responsible for fisheries management, environmental protection, maritime security, and local governance. Weeks *et al.* (2009) similarly observed that successful marine protected areas in the Philippines are characterized by strong institutional partnerships, active stakeholder participation, and coordinated enforcement mechanisms. Likewise, Halik *et al.* (2018) emphasized that effective marine governance emerges from collaborative institutional arrangements that promote shared responsibility, collective decision-making, and stakeholder engagement.

The findings also support the principles of contemporary public governance, which recognize collaboration as a central element of effective public service delivery. Bovaird and Loeffler (2016) argue that complex public-sector challenges increasingly require inter-organizational cooperation because no single institution possesses all the expertise, authority, or resources necessary to address multifaceted environmental problems. In the context of fisheries management, collaboration enables agencies to complement one another's capabilities while strengthening accountability and improving the consistency of law enforcement.

Overall, the participants' experiences suggest that coordinated enforcement should not be viewed merely as an operational strategy but as an essential governance mechanism that enhances institutional effectiveness, improves officer safety, and strengthens long-term marine biodiversity conservation.

Initiative and educational campaign boost law implementation

The findings further revealed that participants regarded community education and public awareness as indispensable components of effective fisheries law enforcement. Although enforcement activities primarily focus on detecting and responding to violations, participants consistently emphasized that long-term compliance is more likely to be achieved when coastal communities understand the objectives and importance of fisheries regulations. Consequently, many implementers actively complemented enforcement activities with educational initiatives designed to promote responsible fishing practices and environmental stewardship.

Participants described various approaches used to increase public awareness, including radio broadcasts, community assemblies, house-to-house information campaigns, consultations with fisherfolk organizations, and educational meetings conducted before or during fishing seasons. These activities provided opportunities to explain prohibited fishing

methods, legal responsibilities, seasonal fishing restrictions, and the ecological significance of conserving marine ecosystems. According to the participants, continuous information dissemination gradually improved community understanding of fisheries laws and encouraged voluntary compliance, thereby reducing the frequency of violations.

Several participants observed that educational initiatives were particularly effective because they addressed the underlying causes of non-compliance rather than relying exclusively on punitive measures. They explained that many fishers were more willing to comply with regulations after understanding the long-term ecological and economic benefits of sustainable fisheries management. This finding suggests that education functions not only as a preventive strategy but also as a means of strengthening trust between enforcement agencies and coastal communities.

The participants' experiences are consistent with contemporary approaches to community-based coastal resource management, which emphasize education, participation, and shared responsibility as essential components of sustainable environmental governance. Community involvement has been widely recognized as an important determinant of conservation success because local stakeholders who understand the ecological consequences of resource depletion are more likely to support management initiatives and voluntarily comply with environmental regulations (Weeks *et al.*, 2009). Similarly, Halik *et al.* (2018) argue that effective marine governance depends on integrating regulatory enforcement with community participation and environmental awareness, thereby fostering a shared commitment to resource conservation.

The findings also reflect the principles of Bandura's (1986) Social Cognitive Theory, which proposes that knowledge acquisition, observational learning, and social interaction influence individual behavior. Through continuous educational campaigns and direct engagement with coastal communities, implementers

facilitate learning processes that encourage responsible fishing practices and strengthen collective commitment to marine conservation. Rather than relying solely on sanctions, education promotes internal motivation for compliance by increasing awareness of the environmental and social consequences of illegal fishing.

The findings indicate that public education should be regarded as a complementary strategy to formal law enforcement. While effective legislation and enforcement remain indispensable, long-term protection of marine biodiversity also depends on informed and engaged coastal communities that actively participate in conserving fisheries resources. Integrating enforcement with sustained educational initiatives therefore provides a more comprehensive and sustainable approach to fisheries governance.

CONCLUSION

This study explored the lived experiences of fisheries law implementers responsible for enforcing Republic Act No. 8550, as amended by Republic Act No. 10654, and related local fisheries ordinances in the Northern Zamboanga Peninsula. The findings demonstrate that effective fisheries law enforcement is shaped by the interaction of institutional support, governance practices, operational capacity, inter-agency collaboration, and community participation.

The experiences of the participants revealed that adequate logistical and organizational support enhanced motivation, strengthened enforcement capacity, and fostered professional satisfaction. Conversely, inadequate resources, political and institutional interference, safety and security risks, and logistical limitations constrained the consistent implementation of fisheries laws and affected the efficiency of marine conservation efforts. Despite these challenges, the implementers demonstrated resilience by adopting strategies centered on professional integrity, inter-agency coordination, and sustained public education, enabling them to continue protecting coastal and marine resources under demanding conditions.

The study further highlights that effective implementation of fisheries legislation depends not only on the existence of comprehensive legal frameworks but also on transparent governance, adequate institutional support, sufficient operational resources, and meaningful collaboration among government agencies, local communities, and other stakeholders. These interconnected factors strengthen compliance with fisheries regulations, improve enforcement effectiveness, and contribute to the long-term conservation of marine biodiversity.

The findings underscore the critical role of frontline fisheries law implementers in advancing sustainable coastal resource management. Strengthening institutional capacity, minimizing external interference, enhancing logistical support, and promoting collaborative governance will be essential for improving the implementation of Republic Act No. 8550, as amended by Republic Act No. 10654, and for ensuring the sustainable management and conservation of the Philippines' marine ecosystems.

IMPLICATIONS FOR PRACTICE

The findings highlight that effective implementation of Republic Act No. 8550, as amended by Republic Act No. 10654, requires more than a comprehensive legal framework. Successful fisheries law enforcement depends on adequate institutional support, sufficient logistical resources, strong inter-agency collaboration, and active community participation.

The study suggests that local government units (LGUs) should strengthen logistical and operational support for frontline implementers by providing adequate patrol boats, communication equipment, fuel, manpower, and financial resources. Improving these resources would enhance the capacity of enforcement agencies to conduct regular patrols, respond promptly to violations, and sustain fisheries law enforcement activities.

The findings also emphasize the importance of minimizing political and institutional interference to ensure the fair and consistent application of fisheries

laws. Transparent governance and accountability are essential for maintaining the credibility of enforcement agencies and strengthening public confidence in marine resource management.

Furthermore, collaboration among BFAR, the Philippine Coast Guard, the Philippine National Police–Maritime Group, Municipal Agriculture Offices, Bantay Dagat, and other relevant agencies should be further strengthened to improve operational efficiency and ensure the safety of implementers during enforcement activities.

Finally, continuous information and education campaigns should remain an integral component of fisheries management. Increasing awareness among fishers and coastal communities regarding sustainable fishing practices and the objectives of fisheries legislation can promote voluntary compliance, strengthen community participation, and support the long-term conservation of marine biodiversity.

IMPLICATIONS FOR FUTURE RESEARCH

This study focused on the lived experiences of fisheries law implementers in selected coastal communities of the Northern Zamboanga Peninsula. Future studies may expand this work by examining fisheries law enforcement across other coastal regions of the Philippines to determine whether similar institutional, operational, and governance challenges exist in different contexts.

Future research may also investigate the influence of political intervention on environmental law enforcement and explore governance mechanisms that promote greater transparency, accountability, and institutional independence in fisheries management.

Given the importance of community participation identified in this study, further research is recommended to evaluate the effectiveness of public education programs, community-based conservation initiatives, and collaborative enforcement approaches in improving compliance with fisheries regulations.

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