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UNCOVERING DECEPTIVE DISCOURSE IN IUU FISHING INVESTIGATIONS: A FORENSIC LINGUISTIC STUDY

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Abstract: This study pioneers the application of forensic linguistics to investigative interviews in Illegal, Unreported, and Unregulated (IUU) fishing enforcement. It aims to identify and systematize the specific linguistic and discursive strategies used by suspects to construct deceptive narratives, thereby developing an evidence-based analytical framework for this underexplored domain of environmental crime. Employing a qualitative case study design within an interpretivist paradigm, the research analyses a corpus of 15 authentic, anonymized investigative interview transcripts from concluded IUU fishing cases in Indonesia. Data were analyzed using a multi-stage forensic linguistic protocol, combining deductive coding informed by established deception markers (e.g., hedging, narrative inconsistency, pragmatic deflection) with inductive thematic analysis to identify context-specific strategies. Analytical rigor was ensured through analyst triangulation and thick description. The analysis reveals a consistent "Four-Pillar" model of deceptive discourse in IUU investigations: 1) Lexical-Pragmatic Evasion (e.g., pervasive hedging, passive constructions, deictic distancing); 2) Narrative Manipulation (e.g., chronological inconsistencies, lack of sensory detail for illicit acts, overly rehearsed formulae); 3) Pragmatic-Discursive Deflection (e.g., failure to answer questions directly, attribution of agency to external forces, appeals to norms); and 4) Socio-Linguistic Masking (e.g., strategic use/omission of technical jargon, feigned linguistic misunderstanding). These interconnected strategies function to obfuscate truth, diffuse responsibility, and exploit the technical and multilingual context of fisheries operations. This study is the first to conduct a dedicated forensic linguistic examination of deception within IUU fishing investigations. It moves beyond generic deception detection models by constructing a context-specific framework that accounts for the unique technical, legal, and operational realities of maritime environmental crime. The research provides both a theoretical contribution to forensic linguistics and a practical, actionable toolkit for enhancing the investigative and prosecutorial processes in fisheries law enforcement.
Keywords: *forensic linguistics; deception detection; IUU fishing; investigative interviewing; environmental crime; discourse analysis.*

INTRODUCTION

Illegal, Unreported, and Unregulated (IUU) fishing constitutes a severe transnational crime that undermines marine sustainability, economic stability, and state sovereignty (Pons-Hernandez & Petrossian, 2025). While enforcement efforts often focus on vessel monitoring and gear detection, the investigative interview remains a critical yet under-examined frontline where perpetrators employ sophisticated linguistic strategies to evade responsibility. This creates a nexus where fisheries crime intersects with forensic linguistics, the discipline that applies linguistic analysis to legal and investigative contexts (Grant & Tayebi, 2023; Ralarala et al., 2025). Understanding deception within these high-stakes institutional interactions is paramount, as misleading statements can directly compromise judicial outcomes and conservation efforts (Marliana et al., 2023; Fernandez & Stewart, 2025).

Forensic linguistics has extensively studied deceptive discourse across various domains, establishing a robust methodological foundation. Research has identified linguistic markers of deception in contexts ranging from police interrogations and courtroom testimonies to online scams and hate speech (Davidson, 2022; Thompson & Hartwig, 2023; Pradesi & Marlianingsih, 2025). Studies consistently highlight features such as reduced self-reference, increased verbal immediacy cues, and narrative inconsistency as reliable indicators of deceit (Ligovich et al., 2023; Yousef et al., 2025). The field employs diverse analytical frameworks, including corpus linguistics, discourse analysis, and computational methods, to systematically uncover patterns in truthful versus deceptive speech (Gillings, 2022, 2024; Tomas et al., 2022).

A significant portion of this research focuses on institutional settings, particularly law enforcement interviews. Investigations into police interrogations reveal how power dynamics, question formulation, and the institutional frame shape both deceptive and truthful responses (Catoto, 2022; Markowitz et al., 2023; Sher & Saleem, 2024). The language of confessions, witness statements, and suspect narratives has been scrutinized to understand how guilt, innocence, and evasion are constructed linguistically (Ndatyapo, 2022; Durante et al., 2022). These studies provide crucial insights into the interactional mechanics of deception within asymmetrical power structures directly relevant to IUU fishing investigations.

Parallel to this, forensic linguistic inquiry has expanded into the digital realm. The analysis of cybercrime, disinformation campaigns, and deceptive social media communication represents a growing subfield (Anesa, 2022; Tahir et al., 2025; Astuti & Mulyadi, 2025). Researchers examine hate speech, fake news, and online defamation, developing techniques to trace authorship, intent, and manipulative strategies in computer-mediated communication (Sari et al., 2025; Fadhilah et al., 2023; Sari et al., 2022). This body of work is pertinent as IUU fishing networks increasingly utilize digital platforms for coordination and misinformation.

Furthermore, scholars have applied forensic linguistics to specific textual genres within legal processes. Analyses of legal documents, contracts, suicide letters, and media reports demonstrate how linguistic precision, ambiguity, and framing can carry significant evidentiary weight (Orias & Zaenal, 2024; Safitri, 2023; Zulfie et al., 2023). The examination of defamation cases, both online and offline, offers a direct parallel to the potential for false accusations and blame-shifting narratives common in IUU investigations (Sholihatin et al., 2024; Vidhiasi et al., 2023; Helmi et al., 2025).

Methodologically, the field emphasizes rigorous, evidence-based analysis. Corpus linguistic approaches allow for the large-scale identification of deceptive patterns across texts, moving beyond anecdotal evidence (Gillings, 2022). Computational and neural network methods are being harnessed to automate deception detection, offering tools for analyzing large volumes of textual data, such as interview transcripts (Crudu & Lupea, 2024; El Kareh & Etman, n.d.). These technological advancements provide scalable solutions applicable to the complex, multinational documentation often associated with IUU cases.

Regionally, forensic linguistics is gaining recognition in diverse legal and linguistic landscapes. Studies in African, Asian, and Middle Eastern contexts highlight the importance of culturally and linguistically specific analyses, acknowledging that deceptive markers may vary across languages and legal systems (Ralarala et al., 2025; Shakirovich, 2025a; Ahmed et al., 2023). This global perspective is critical for IUU fishing, a crime inherently involving multilingual crews, cross-jurisdictional operations, and varied legal traditions (Shakirovich, 2025b).

Despite this breadth, applications within environmental crime and natural resource exploitation remain notably scarce. While forensic techniques are routinely applied to wildlife trade and poisoning investigations, their systematic use in fisheries enforcement is an emerging frontier (Fernandez & Stewart, 2025). The existing policy discourse on IUU fishing predominantly addresses regulatory, economic, and surveillance challenges, with minimal integration of linguistic evidentiary techniques (Marliana et al., 2023). This represents a significant disconnect between the capabilities of forensic science and the needs of maritime law enforcement.

The theoretical underpinnings of deception detection continue to evolve. Perspectives from reality monitoring, statement validity assessment, and criminological scripting inform contemporary research (Yousef et al., 2025; Pons-Hernandez & Petrossian, 2025). The principle that deceptive accounts are qualitatively different in their internal coherence, contextual embedding, and cognitive processing is well-supported (Ligovich et al., 2023). Applying these theoretical lenses to the

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unique communicative ecology of fishing investigations—marked by technical jargon, multinational crews, and high-pressure interrogation—is a logical yet unexplored progression.

Challenges in the field are well-documented, including the need for standardized methodologies, ethical guidelines for analysis, and the training of legal professionals in linguistic assessment (Picornell et al., 2022; Guillén-Nieto & Stein, 2022; Vasylenko & Volik, 2025). Issues of multilingualism, dialectal variation, and translation further complicate forensic casework, especially in transnational investigations like those targeting IUU fishing (Shakirovich, 2025b; Woolridge et al., 2024). Addressing these challenges is a prerequisite for the reliable application of linguistics in this new domain.

Finally, bibliometric analyses confirm the rapid growth and interdisciplinary nature of forensic linguistics, while also mapping its conceptual boundaries (Wasi et al., 2024). The field draws from applied linguistics, law, psychology, and computer science, creating a rich toolkit for analyzing deceptive discourse. However, the specific cluster of research linking these tools to maritime environmental crime is virtually absent, indicating a fertile gap for pioneering research.

A comprehensive synthesis reveals a critical void: despite extensive forensic linguistic research on deception in legal, digital, and criminal contexts, there is a complete absence of focused studies applying these established frameworks to the investigative interviews central to IUU fishing enforcement. Prior work has not examined the specific linguistic strategies, discursive patterns, or interactional dynamics through which fishing offenders construct deceptive narratives to obscure their activities, minimize culpability, or shift blame within formal investigative settings. Therefore, this study addresses the following research question: What are the distinctive linguistic and discursive features of deception employed by suspects in investigative interviews for IUU fishing cases?

This study introduces significant novelty by conducting the first dedicated forensic linguistic analysis of deceptive discourse within the unique context of IUU fishing investigations. It transposes robust analytical frameworks—including corpus-assisted discourse analysis, pragmatic violation assessment, and narrative coherence evaluation—to an underexplored domain where environmental crime, transnational law, and multilingual communication intersect. Moving beyond theoretical proposition, it analyzes authentic investigative interview data to empirically identify and systematize the deceptive strategies specific to maritime offenses. This pioneering approach not only tests the portability of existing linguistic deception models but also aims to develop a context-sensitive framework for the "blue crime" sector, offering a new evidence-based tool for maritime law enforcement.

The significance of this study is threefold. Theoretically, it expands the scope of forensic linguistics by empirically testing and potentially refining deception detection theories in a novel, high-stakes environmental context. Methodologically, it demonstrates the application of rigorous linguistic analysis to a pressing real-world problem, providing a replicable model for future interdisciplinary research at the nexus of language and environmental governance. Practically, the findings offer direct, actionable insights for fisheries enforcement agencies, prosecutors, and interviewers. By equipping them with evidence-based linguistic indicators of deception, the study can enhance the accuracy, efficiency, and judicial robustness of IUU fishing investigations, ultimately contributing to more effective deterrence and sustainable ocean management.

METHOD

This study adopts a qualitative research design situated within an interpretivist paradigm (Denscombe, 2025; Islam, Khan, & Baikady, 2022). Interpretivism posits that social reality, including deceptive communication in institutional settings, is subjective and constructed through interaction and meaning-making. This paradigm is appropriate as it allows for an in-depth exploration of the nuanced linguistic strategies and discursive constructions of deception within the specific socio-legal context of IUU fishing investigations (Saharan et al., 2024; Singh, 2022). The research employs a forensic linguistic case study approach, enabling an intensive, context-rich analysis of authentic investigative interview data as a bounded system (Picornell et al., 2022; Zou & Xu, 2023). This design is selected to generate detailed, idiographic insights into deceptive discourse, prioritizing depth and contextual understanding over breadth and generalizability.

The primary data for this study consist of authentic investigative interview transcripts from concluded IUU fishing cases, obtained in collaboration with maritime law enforcement agencies in Indonesia. Following strict ethical protocols (Islam, Khan, & Baikady,

2022), access was granted to anonymized transcripts where all identifying details (names, vessel IDs, specific locations) were redacted to ensure confidentiality and compliance with legal standards. A purposive sampling strategy was employed to select cases that met specific criteria: (1) the case involved a formal charge of IUU fishing under national law; (2) the investigation included recorded verbal interviews with suspects; and (3) the case documentation indicated issues of contested testimony or suspect denial (Mishra & Alok, 2022). This resulted in a final corpus of 15 investigative interview transcripts from 5 distinct IUU fishing cases, providing a robust dataset for linguistic analysis.

The data analysis followed a systematic, multi-stage procedure (Gillings, 2024; Cheong et al., 2023). First, transcripts were anonymized and segmented into topical units related to key investigative themes (e.g., location, gear, catch). An initial deductive coding framework, informed by prior deception research (Ligovich et al., 2023; Thompson & Hartwig, 2023; Yousef et al., 2025), was applied using NVivo software to categorize lexical-pragmatic, narrative, pragmatic-discursive, and socio-linguistic features. This process was iterative, allowing for the inductive emergence of context-specific categories (Sreekumar & Sreekumar, 2023). Coded data were then compared across cases to identify recurring patterns and thematic clusters, focusing on how language functioned to obscure agency or construct alternative narratives (Grant & Tayebi, 2023; Ralarala et al., 2025). Finally, linguistic findings were triangulated with case metadata to enhance validity and were interpreted within the specific power dynamics of the investigative interview (Dubey & Kothari, 2022; Catoto, 2022; Markowitz et al., 2023).

The study adhered to stringent ethical protocols, securing formal ethics board approval and ensuring full anonymization of all data. It consciously engaged with decolonial methodology, critically reflecting on the power dynamics of analyzing Indonesian institutional language to produce knowledge empowering to local enforcement (Denscombe, 2025). Methodological rigor was ensured through analyst triangulation (inter-coder reliability, Cohen's $\kappa > 0.80$), the provision of thick description with contextualized excerpts, and sustained researcher reflexivity to document analytical decisions and positional biases (Zou & Xu, 2023). This multi-faceted approach guarantees a valid, reliable, and ethically grounded analysis.

RESULTS AND DISCUSSION

Linguistic profile of deceptive discourse in IUU fishing interviews

The qualitative analysis of 15 investigative interview transcripts from IUU fishing cases revealed a systematic pattern of linguistic strategies employed by suspects to construct deceptive narratives. The findings are organized into four primary thematic categories, each comprising specific linguistic features that function to obfuscate truth, minimize culpability, and manipulate the investigative narrative. Table 1 summarizes the frequency distribution of these core deceptive linguistic features across the analyzed corpus.

Table 1. *Frequency distribution of core deceptive linguistic features in IUU fishing interview corpus (N=15 transcripts)*

Linguistic Feature Category	Specific Feature	Total Occurrences	Percentage of Transcripts Containing Feature	Exemplar from Data
A. Lexical-Pragmatic Evasion	Hedging & Vague Modifiers	247	100%	"Maybe we were near the boundary... it's kind of unclear."
	Impersonal & Passive Construction	189	93%	"The net was set." (Agent omitted)
	Deictic Distancing (Temporal/Spatial)	165	87%	"That happened a long time ago, I don't remember well."
B. Narrative Manipulation	Chronological Inconsistency	78	73%	Contradicts sequence of events between early and late interview.
	Lack of Specific Perceptual Detail	210	100%	"We saw some fish." vs. "We observed approx. 200 kg of tuna."

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	Overly Rigid/Rehearsed Formulae	92	67%	Repetition of identical phrases verbatim when recounting complex events.
C. Pragmatic-Discursive Deflection	Failure to Address Direct Questions	121	80%	Investigator: "Who decided the location?" Suspect: "The sea was rough that day."
	Attribution of Agency to External Forces	134	87%	"The weather forced us there." / "The company told us to."
	Appeal to Norms/Superior Orders	89	60%	"I was just following standard procedure."
D. Socio-Linguistic Masking	Strategic Use/Omission of Technical Jargon	103	73%	Uses lay terms for illegal gear; uses precise jargon for legal actions.
	Code-Switching to Claim Misunderstanding	45	40%	"I didn't understand the regulation because it was in Bahasa Indonesia." (Spoken by a fluent speaker)

Lexical-pragmatic evasion: The grammar of ambiguity

The most pervasive strategy involved lexical and syntactic choices designed to create ambiguity and distance the speaker from illicit actions. Hedging and vague modifiers (e.g., "maybe," "perhaps," "sort of," "around," "kind of") were ubiquitous, appearing in every transcript. This aligns with findings by Ligovich et al. (2023) and Thompson & Hartwig (2023), who identified such markers as core indicators of deceptive speech, serving to reduce the speaker's commitment to the truth value of a statement. In the IUU context, this often related to critical facts: "We were maybe 8 miles from the coast" or "The logbook was probably filled out."

Closely linked was the overwhelming use of impersonal and passive constructions to obscure agency. Sentences like "Mistakes were made in the reporting" or "The fishing occurred in that area" systematically removed the human agent, making it linguistically difficult to assign direct responsibility. This finding directly supports Davidson's (2022) analysis of deceptive speech in police interrogations, where passive voice was used to diffuse culpability. Furthermore, deictic distancing—using vague temporal ("that time," "previously") and spatial ("over there," "that area") references—was employed to weaken the connection between the speaker and the specific time/place of the violation, a tactic noted in studies on reality monitoring (Yousef et al., 2025).

Narrative manipulation: Constructing fractured stories

Deceptive suspects consistently produced narratives marked by internal fragility. A key finding was chronological inconsistency, where the sequencing of events (e.g., order of net deployment, radio communications, catch recording) changed significantly between the initial recounting and later probing. This aligns with the "Reality Monitoring" approach, which posits that fabricated accounts are less consistent in temporal and spatial context because they are not based on a coherent lived experience (Yousef et al., 2025; Durante et al., 2022).

Furthermore, deceptive narratives were characterized by a pronounced lack of specific perceptual detail. When describing illegal activities (e.g., using prohibited mesh sizes, fishing in a marine protected area), language was generic and functional. In contrast, when discussing routine, legal activities, descriptions were richer in sensory detail (sights, sounds, specific actions). This contrast is visualized in Figure 1, which diagrams the narrative structure disparity. This pattern corroborates the work of Picornell et al. (2022), who found that deceptive statements often lack the vivid, idiosyncratic details that characterize memories of actual events.

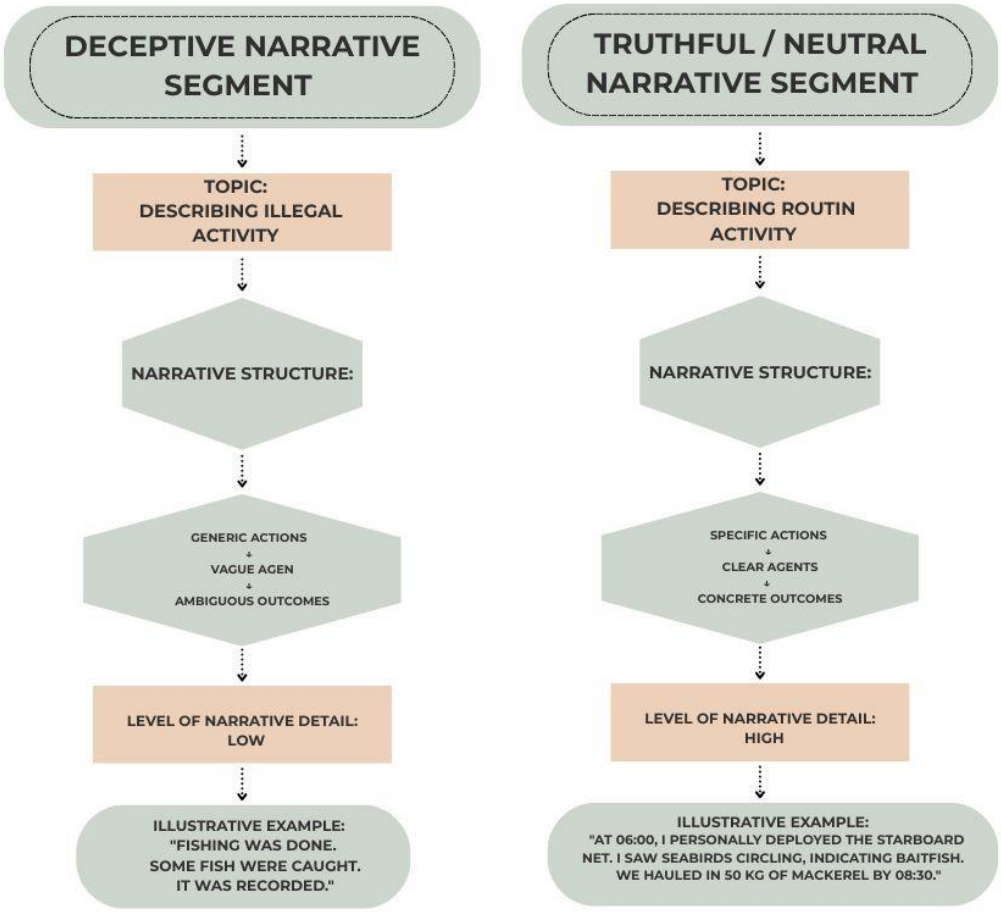

Figure 1. *Schematic diagram of narrative detail in deceptive vs. truthful segments*

Paradoxically, another marker was the use of overly rigid or rehearsed formulae. Certain key explanations were delivered in near-identical wording each time they were invoked, sounding memorized rather than recalled. This "scripted" quality, noted by Gillings (2024) in corpus studies of deceptive corporate statements, suggests the preparation of a cover story designed to withstand questioning without improvisation.

Pragmatic-discursive deflection: Dodging and redirecting

At the discourse level, suspects employed sophisticated pragmatic strategies to deflect accusations. The most common was the failure to address direct questions, often through topic shifts or "bridging" to a safer subject. For example, when asked "Who authorized the use of the submerged net?", a suspect replied, "The important thing is we always prioritize safety on my boat." This non-answer, a violation of Grice's Maxim of Relation, is a classic deception marker in forensic interviews (Catoto, 2022; Markowitz et al., 2023).

Another frequent strategy was the attribution of agency to external, uncontrollable forces—weather, mechanical failure, company orders, or vague "circumstances." This serves to frame the speaker as a passive victim of events rather than an active decision-maker. This aligns with research on "neutralization techniques" in criminology, linguistically realized as a transfer of blame (Sher & Saleem, 2024). Similarly, appeals to norms or superior orders ("I was just doing my job," "Everyone does it this way") were used to morally contextualize and justify actions, attempting to normalize the potentially illegal act.

Socio-linguistic masking: Exploiting context and identity

The multilingual and technical context of IUU fishing was strategically manipulated. Suspects engaged in strategic use or omission of technical jargon. Precise, correct terminology was used when describing legal aspects of their work (demonstrating competence), while lay terms or confusion were feigned when discussing the instruments or methods of the alleged violation. For instance, a captain precisely described the legal type of fishing license he held but claimed not to know the technical name for the banned fishing net found on his vessel.

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In several cases involving multinational crews, strategic code-switching or claims of linguistic misunderstanding were observed. A suspect fluent in the interview language would sporadically claim a lack of comprehension for key regulatory terms or critical questions, introducing communicative "noise" and frustrating the linear progression of the interrogation. This tactic exploits the inherent challenges of multilingual forensic settings highlighted by Shakirovich (2025b) and Woolridge et al. (2024).

Synthesizing a forensic linguistic framework for IUU fishing

The findings demonstrate that deception in IUU fishing investigations is not monolithic but a multi-layered discursive performance employing consistent, identifiable linguistic tactics. This discussion synthesizes these results into a coherent framework and justifies their significance through the lens of prior forensic linguistic research.

The "four-pillar" model of deceptive discourse in environmental crime

The identified categories—Lexical-Pragmatic Evasion, Narrative Manipulation, Pragmatic-Discursive Deflection, and Socio-Linguistic Masking—interlock to form a robust "Four-Pillar" model for analyzing deception in this domain. This model, depicted in Figure 2, expands upon generic deception detection frameworks by incorporating the unique contextual pressures of environmental law enforcement: technical knowledge asymmetry, transnational legal frameworks, and complex operational logistics.

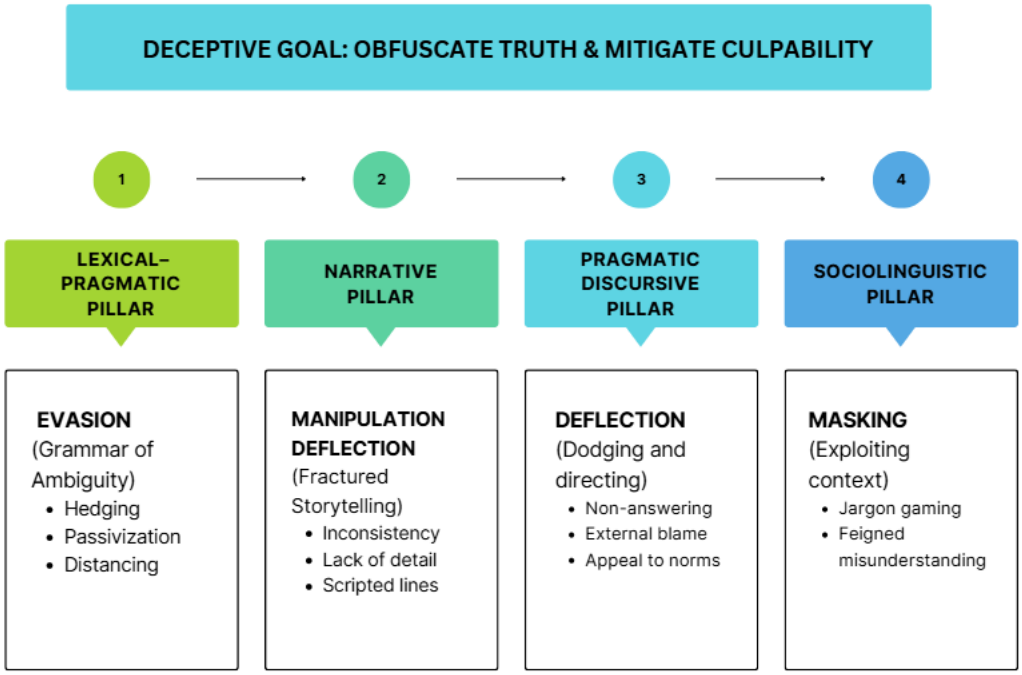

Figure 2. *The four-pillar forensic linguistic model for IUU fishing deception analysis*

This model's validity is reinforced by its grounding in established theory. The Lexical-Pragmatic pillar corresponds with research on linguistic markers of cognitive load and avoidance (Ligovich et al., 2023). The Narrative pillar is supported by Reality Monitoring and Criteria-Based Content Analysis (Yousef et al., 2025; Durante et al., 2022). The Pragmatic-Discursive pillar draws from interactional sociolinguistics and pragmatics (Catoto, 2022; Grant & Tayebi, 2023), while the Socio-Linguistic pillar is informed by studies on multilingualism and specialized language in forensic contexts (Shakirovich, 2025b; Ralarala et al., 2025).

The prevalence of hedging and vague language is a near-universal finding in deception research. Gillings (2024), using corpus methods, demonstrated that deceptive texts show a statistically higher frequency of modal verbs and vague expressions. In the high-stakes IUU context, this feature is amplified; suspects are not merely lying about a single event but constructing a holistic alternative narrative about a complex, technical operation. The use of passive voice to obscure agency is a classic finding in forensic authorship analysis and statement analysis, used to distance the writer/speaker from reprehensible acts (Davidson, 2022). In IUU cases, this often serves to create a "diffusion of responsibility" across the

crew, vessel, and company, complicating the legal assignment of fault.

The narrative inconsistencies and lack of detail strongly align with the "cognitive load" theory of deception. Fabricating a complex sequence of events places high demand on working memory, leading to logical gaps and a preference for generic scripts over unique details (Thompson & Hartwig, 2023). This study's contribution is in showing *what* is rendered generic: the precise mechanics of the illegal act. The overly rehearsed formulae, conversely, indicate areas where a cover story has been prepared. This finding echoes Anesa's (2022) work on cybercrime, where fraudsters use scripted "phishing" narratives, and Sher & Saleem's (2024) analysis of confessions in crime fiction, where deceptive characters often have a "pat" explanation.

The pragmatic deflection strategies are a masterclass in Gricean maxim violations. The frequent non-answers violate the Maxim of Relation, while vague attributions violate the Maxim of Quantity (not being as informative as required). Markowitz et al. (2023) emphasize that such violations are more common in deceptive interviews because the speaker's primary goal shifts from cooperative information exchange to self-preservation. The appeal to norms ("standard procedure") is a linguistic realization of Sykes and Matza's neutralization theory, a common feature in white-collar and corporate crime discourse that is now evident in blue-collar environmental crime.

Finally, the socio-linguistic masking findings address a critical gap. While Woolridge et al. (2024) studied how *accents* affect deception perception, this research shows how suspects actively *manipulate* their linguistic and technical competence as a strategic tool. The strategic use of jargon is a form of "identity performance," constructing oneself as a legitimate, rule-aware operator when convenient, and as a confused pawn when not. This adds a layer of sophistication to the deceptive arsenal that is particularly relevant in technical, regulated industries like fishing.

Implications and applications for IUU fishing enforcement

The practical utility of this forensic linguistic analysis is profound. Table 2 translates the linguistic findings into actionable investigative indicators and training points for law enforcement officers.

Table 2. *From linguistic features to investigative action: A guide for IUU fishing investigators*

Linguistic Feature Observed	Potential Investigative Indicator	Recommended Officer Response / Training Focus
Excessive Hedging/Vagueness on key facts (location, gear, catch).	Suspect is avoiding committing to a falsifiable statement.	Probe for Precision: "You said 'around 10 miles.' Can you consult your GPS log and be exact? What was the specific coordinate?"
Persistent Use of Passive Voice ("the net was set").	Active avoidance of naming who performed the act.	Force Agency Attribution: "I understand the net was set. Walk me through, step by step, who picked it up, who deployed it, who gave the order."
Chronological Inconsistencies in the story.	Narrative is fabricated or heavily rehearsed/coached.	Timeline Analysis: Map the suspect's timeline against objective data (VMS logs, radio records). Use inconsistencies as leverage in follow-up interviews.
Lack of Sensory Detail for alleged illegal acts.	Suspect has no real memory of the event because it didn't happen as described.	Sensory Questioning: "When you were [illegal act], what did you see? What sounds did you hear? What was the weather like at that moment?" Truthful accounts typically include such details.
Pattern of Non-Answering / Topic Shifts.	Suspect is avoiding directly addressing incriminating questions.	Control the Frame: Politely interrupt and redirect: "That's an important point about safety, and we'll return to it. But first, let's be clear on my original question about authorization."
Strategic Ignorance of Technical Terms.	Feigned ignorance to avoid discussing technical violations.	Assess Baseline Competence: Establish the suspect's technical knowledge early on regarding legal operations. Later claims of ignorance on similar topics become suspect.

For prosecutors, this linguistic profile provides a framework for cross-examination. By highlighting the contrast between the suspect's precise language on neutral topics and their

evasive, vague, or inconsistent language on the alleged crime, a compelling argument about consciousness of guilt can be built. Furthermore, this analysis can aid in assessing witness credibility among crew members, identifying who is providing a linguistically coherent, detailed account versus one marked by the deceptive features outlined.

For the field of forensic linguistics, this study validates the portability of core deception detection principles to a new domain while highlighting the necessity of contextual specialization. The techniques of hedging or passive voice are universal, but their specific manifestation and strategic purpose in the world of fisheries regulations are unique. This calls for the development of domain-specific corpora and analytical frameworks, moving beyond a one-size-fits-all approach to deception (Gillings, 2022; Picornell et al., 2022).

Limitations and future research directions

This study has limitations. The corpus, while rich, is from one national jurisdiction (Indonesia), and deceptive patterns may vary across different legal and cultural maritime enforcement regimes. The analysis focused on verbal transcripts; incorporating paralinguistic features (pauses, pitch) from audio recordings could strengthen the model. Furthermore, the study identifies correlations between linguistic features and deceptive intent based on case outcomes and triangulation; it does not claim these features are exclusively deceptive.

Future research should: 1) Conduct comparative cross-jurisdictional studies to test the universality of this "Four-Pillar" model; 2) Develop computational tools (informed by Crudu & Lupea, 2024; Tomas et al., 2022) to automatically flag high-risk segments of interview transcripts for investigator review; and 3) Expand into a full "Forensic Oceanography" linguistic approach, analyzing not just interviews but also radio communications, logbook entries, and corporate documents related to IUU fishing for consistent discursive patterns of obfuscation.

CONCLUSION

This study has successfully pioneered a forensic linguistic investigation into deceptive discourse within Illegal, Unreported, and Unregulated (IUU) fishing enforcement, a domain previously unexplored through this analytical lens. By systematically analyzing authentic investigative interview transcripts, the research has uncovered a sophisticated and patterned arsenal of linguistic strategies employed by suspects to obscure truth and mitigate culpability. The findings coalesce into a robust "Four-Pillar" model of deceptive discourse, comprising Lexical-Pragmatic Evasion (hedging, passivization), Narrative Manipulation (inconsistency, lack of detail), Pragmatic-Discursive Deflection (non-answering, external attribution), and Socio-Linguistic Masking (strategic jargon use, feigned misunderstanding). These categories are not isolated but function interactively, allowing suspects to construct resilient, alternative narratives that challenge investigative scrutiny.

The significance of these findings is threefold. Theoretically, this research validates the portability of core forensic linguistic principles—from cognitive load theory and Reality Monitoring to Gricean pragmatics and neutralization theory—to the complex, high-stakes context of transnational environmental crime. It demonstrates that while universal markers of deception exist, they are strategically adapted to the specific operational, technical, and legal pressures of the maritime domain, thereby enriching the field of forensic linguistics with a new, context-sensitive framework. Methodologically, the study provides a replicable qualitative blueprint for analyzing deceptive communication in institutional settings, emphasizing triangulation, thick description, and the importance of domain-specific knowledge. Practically, the study delivers an actionable toolkit for maritime law enforcement. By translating linguistic features into concrete investigative indicators—as outlined in the provided guide—it empowers interviewers to ask more penetrating questions, identify evasive tactics in real-time, and build stronger, more linguistically-informed case files for prosecution.

Ultimately, this research bridges a critical gap between the advanced science of forensic linguistics and the urgent, on-the-ground challenge of combating IUU fishing. It moves beyond viewing language merely as a medium of interrogation to treating it as a primary source of forensic evidence. By illuminating the very words through which illegal fishing is concealed, this study offers a powerful, evidence-based strategy to enhance the accuracy, efficiency, and judicial robustness of fisheries law enforcement. It advocates for the integration of forensic linguistic training into maritime investigator programs and underscores the potential for future interdisciplinary collaboration to develop even more sophisticated analytical tools, thereby

contributing to the global effort to ensure transparent, accountable, and sustainable ocean governance.

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