

Between Tradition and Transition: Female Seafarers' Integration, Workplace Perceptions, and Institutional Barriers in Algeria

BELBRIK Mohamed

University of Continuing Education- Didouche Mourad - Algeria

mbelbrik@yahoo.fr

Abstract ;

Despite global advances toward gender equality led by the International Maritime Organization (IMO), women constitute only 1.2% of the global seafaring workforce, with even lower representation in Algeria. This study uses a sociological framework to examine the lived experiences, workplace integration, and recognition of female seafarers in a national Algerian maritime institution. Employing a mixed-methods case study approach, the research was conducted over a three-month period through intensive participant observation aboard four vessels and unstructured interviews with all six active female seafarers employed by the company, alongside a sample of male crew and senior officers. Key findings highlight persistent gender barriers, including a stark 90% rejection rate of female authority among senior male crew and cultural resistance to female leadership. Quantitative data reveals a 100% rate of career abandonment post-marriage among the female seafarers, pointing to inadequate institutional support structures. However, data also indicates emerging trends toward change, with younger male seafarers showing greater acceptance and the presence of women correlating with observed improvements in onboard decorum. The research identifies specific organizational and societal reforms needed to support sustainable gender integration and offers actionable recommendations for policy and practice, concluding that systemic intervention is crucial for aligning Algeria's maritime sector with global equality goals.

Article info

Received
July 23;2025
Accepted
September 08;2025

Keyword:

- ✓ Gender equality
- ✓ Maritime industry
- ✓ Female seafarers
- ✓ Occupational barriers;
- ✓ IMO gender strategy.

1. Introduction

The global maritime industry, a critical engine for world trade, remains one of the most gender-imbalanced sectors. Despite international advocacy led by the International Maritime Organization (IMO) and advances toward gender equality, women constitute a mere 1.2% of the global seafaring workforce, with representation even lower in specific national contexts like Algeria (International Chamber of Shipping & BIMCO, 2021). This disparity persists even as the IMO champions inclusion through its "Training-Visibility-Recognition" program, a strategic effort aligned with the United Nations' 2030 Sustainable Development Goals, particularly SDG 5 on gender equality (International Maritime Organization, n.d.; United Nations, 2015).

While the IMO's framework provides essential policy direction, its implementation and impact are highly contingent on national culture and institutional structures. In Algeria, the first female seafarer boarded a ship in 1997, marking the beginning of a slow integration process. The studied public daily, the assessment of their professional competence, and the institutional mechanisms that either hinder or support their careers.

The study is guided by the following core research questions:

RQ1. How did Algerian women enter the maritime industry?

RQ2. How do male seafarers perceive their female colleagues?

RQ3. What is the professional competence of female seafarers aboard ships?

enterprise currently employs six women with higher education diplomas in maritime fields, a tiny fraction of its total workforce. However, there is a critical lack of empirical research focusing on the North African and specifically Algerian maritime sector, where traditional social norms intersect with modern institutional policies. The existing literature, while rich in global statistics and historical analysis (e.g., Kitada et al., 2015; Stanley, 2016), offers little insight into the on-the-ground realities of these pioneering women in a traditionally conservative and male-dominated environment.

This study argues that the integration of female seafarers in Algeria is uniquely challenged not only by universal occupational barriers but also by a potent combination of deeply ingrained cultural resistance and insufficiently adapted institutional support structures. Employing a sociological framework, this research moves beyond policy-level analysis to provide a granular, ground-level examination of the lived experiences of these first-generation Algerian female seafarers. It investigates the pathways of their entry, the perceptions they navigate

RQ4. Have female seafarers in Algeria gained recognition from crews and management?

RQ5. Are they fully equipped to perform their roles effectively?

By answering these questions, this research aims to fill a significant knowledge gap and provide evidence-based, context-specific recommendations for fostering sustainable gender integration within Algeria's maritime industry.

2. Literature Review

The theoretical framework of this study focuses on understanding the gender dynamics in the global maritime sector. It draws on statistical data, historical and cultural analyses, and international strategies aimed at promoting gender inclusion in the maritime industry. This section is structured around three key pillars: global maritime gender statistics, historical barriers and cultural stereotypes, and the International Maritime Organization's (IMO) strategy of "Training – Visibility – Recognition."

2.1. The Quantitative Global Landscape: Measuring the Gender Gap

The stark gender imbalance in the maritime sector is most commonly cited through the lens of industry reports. The BIMCO/ICS (2021) Seafarer Workforce Report, the industry benchmark, estimates that women constitute a mere 1.2% of the global seafaring workforce. However, a critical analysis of this methodology is essential for understanding the reliability of this statistic. The report's figures are primarily derived from aggregated data provided by member national associations and expert estimations. While invaluable for identifying macro-level trends, this approach can obscure significant regional and national variations due to inconsistent reporting standards and definitions of "seafarer" across countries. Consequently, these figures are best understood as powerful, yet imperfect, estimates that highlight a systemic global problem but lack the granularity to inform specific national contexts. This methodological limitation underscores the need for targeted national-level studies to obtain more precise data and understanding.

2.2. Socio-Cultural and Structural Barriers: Explaining the Gap

Beyond the numbers, a more nuanced understanding of the gender gap emerges from synthesizing historical, cultural, and academic sources. The literature reveals a consistent theme: the industry's masculinity is socially constructed and fiercely guarded. Historians like Cordingley (2001) and Stanley (2016) demonstrate that this is not a recent phenomenon but deeply rooted in superstition and tradition (e.g., the belief women onboard were bad luck), which served to exclude women formally. Building on this, contemporary scholars like Kitada et al. (2015) and Kitada (2021) argue that these antiquated beliefs have evolved into modern structural and cultural barriers, including a lack of adequate facilities (e.g., separate bathrooms), pervasive gender-based stereotypes questioning women's physical and leadership capabilities, and fears of harassment in isolated environments. What emerges from synthesizing these sources is a clear evolution: from overt superstition to subtle yet equally exclusionary institutional and social norms. This synthesis challenges the assumption that the problem is merely a pipeline issue; rather, it is a complex interplay of history, culture, and institutional practice that actively dissuades women's entry and retention.

2.3. Institutional Responses: The IMO Framework and Its Local Implementation

In response to these persistent barriers, the primary institutional driver for change has been the International Maritime Organization (IMO). Through its gender program, launched in 1988 and

operationalized under the theme “Training – Visibility – Recognition,” the IMO has pursued a top-down strategy to dismantle structural inequities (IMO, n.d.). This tripartite approach aims to:

- Training: Improving access to maritime education and technical skills development for women, particularly in developing countries.
 - Visibility: Actively promoting female role models and success stories to challenge stereotypes and make women in maritime more seen.
 - Recognition: Advocating for the merit-based advancement of women into leadership and decision-making roles both at sea and on shore.
- A key outcome of this strategy has been the establishment of regional Women in Maritime Associations (WIMAs), such as the Arab Women in Maritime Association (AWIMA), founded in 2017 (AWIMA, 2021). These networks are designed to create supportive professional communities, facilitate mentorship, and advocate for policy development at a regional level. Algeria's subsequent establishment of the Comité des femmes marins algériennes (Committee of Algerian Women Seafarers), which maintains an active presence primarily through social media (e.g., Facebook, 2024), demonstrates a national-level, though less formalized, adoption of this IMO-sponsored model (Committee of Algerian Women Seafarers, 2024).
- However, a critical analysis of this institutional response reveals a potential disconnect between global policy and local reality. While the IMO's framework and the WIMA model provide essential high-level advocacy and networking platforms, their effectiveness is ultimately contingent on national political will, cultural

acceptance, and the specific policies of individual maritime employers. The literature on these programs often highlights their stated goals and activities (e.g., conferences, mentorship launches) but offers little critical empirical evidence on their tangible impact on the daily working lives of female seafarers within member countries. For instance, does the existence of the Comité des femmes marins algériennes actually translate to better onboard experiences, retention rates, or career advancement opportunities for the six seafarers in our study? This gap between formal institutional strategy and ground-level operational effectiveness remains underexplored, particularly in a context where traditional social structures may resist such externally encouraged reforms.

2.4. Synthesis and Identification of the Research Gap: The Unexplored Algerian Context

A synthesis of the existing literature, while informative, reveals a significant and targeted gap. The International Chamber of Shipping and BIMCO (2021) data provides a macro-view but lacks national specificity. The work of Kitada (2021) and others offers critical analytical frameworks but is often focused on Western, Asian, or global contexts. The IMO's policy work and the establishment of WIMAs (e.g., AWIMA, 2021) represent top-down strategic responses but provide little empirical evidence on their implementation within specific national cultures, particularly those with strong traditional social structures.

This confluence of factors creates a pronounced knowledge gap regarding the Maghreb and North Africa, and specifically Algeria. The experiences of female seafarers in a context shaped by

distinct socio-cultural norms, a specific nationalized industry structure, and a unique adoption of IMO policies remain almost entirely unexplored in academic literature. The global discourse, therefore, provides the what and the why, but it fails to explain the how and so what for the Algerian case. How do global barriers manifest in the daily interactions on an Algerian vessel? How do Algerian male seafarers perceive their female colleagues? What are the specific institutional hurdles within an Algerian state-owned company? This study is designed to address this critical gap. It moves beyond the compilation of global reports to provide a focused, empirical, and mixed-methods investigation into the lived experiences of female seafarers in Algeria. By grounding the global discourse on gender equality in maritime within this specific local reality, this research will generate unique insights that are both academically contributory and practically actionable for Algerian policymakers and industry leaders.

3. Research Methodology

This study employed a mixed-methods, embedded case study design to provide a comprehensive analysis of the integration of female seafarers within a single Algerian maritime institution (CNAN EL DJAZAIR). This approach allowed for the triangulation of data—using both qualitative and quantitative techniques—to enhance the validity and depth of the findings (Creswell & Plano Clark, 2017).

3.1. Data Collection Tools and Procedures

3.1.1. Participant Observation: The primary qualitative method was intensive participant observation, conducted by the researcher over a three-

month period (October-December 2024). As an employee, the researcher adopted an "**observer-as-participant**" role (Gold, 1958), where the primary role was clearly that of a researcher, but with insider access. Observation was conducted aboard four company vessels and at the company headquarters. Detailed field notes were taken to record:

- **Workplace Interactions:** Communication patterns, authority dynamics, and collaboration between female officers and male crew members.

- **Professional Performance:** The execution of technical duties by female seafarers.

- **Social Dynamics:** Changes in language, decorum, and overall atmosphere related to the presence of women.

- **Informal Conversations:** These were noted as data and distinguished from formal interviews.

3.1.2. Unstructured Interviews:

To supplement observations and capture subjective experiences, unstructured interviews were conducted. This approach was chosen for its flexibility in exploring complex, sensitive topics in depth (Bryman, 2016).

- **Participant Selection:** Interviews were conducted with (a) **the complete census** of all six active female seafarers, and (b) a purposive sample of male seafarers (including captains, chief engineers, officers, and ratings) to gain a multi-perspective view. Initial participant reluctance was overcome by clearly explaining the study's academic purpose and ensuring strict anonymity.

- **Interview Protocol:** While unstructured, all interviews followed a core protocol of

open-ended questions derived from the research questions:

- Can you describe your pathway into the maritime industry?
- How would you characterize the working relationships on board?
- In your experience, what are the strengths and challenges of mixed-gender crews?
- What does recognition and competence look like in this profession?
- What could the institution do to better support all seafarers?

- Interviews continued until thematic saturation was reached for the male participant sample.

3.2. Study Population and Sample

The study population was all employees of CNAN EL DJAZAIR. The sampling strategy was mixed:

- **Census Sampling for Female Seafarers** All six women formed the core qualitative case group. This was a deliberate choice to capture the experiences of every single woman in this unique population.

- **Purposive Sampling for Male Seafarers:** Male seafarers were selected to ensure representation across different ranks, departments, and age groups to capture a wide range of perspectives and avoid bias towards a single viewpoint.

3.3. Data Analysis

3.3.1. Qualitative Analysis:

Field notes and interview transcripts were analyzed using **thematic analysis** following the process outlined by Braun and Clarke (2006). This involved:

- Familiarization with the data.
- Generating initial codes.
- Searching for themes (e.g., "Resistance to Authority",

"Demonstrated Competence", "Evolving Social Norms").

- Reviewing themes.
- Defining and naming themes.
- Producing the report.

3.3.2. Quantitative Analysis

The quantitative component was **descriptive** and served to contextualize the qualitative findings. It involved computing:

- **Frequencies and Percentages** To describe the demographic composition of the workforce (e.g., 2.01% female seafarers) and to quantify prevalent attitudes (e.g., "90% of senior male crew rejected female authority"). These statistics were derived from a combination of official company records and the systematic coding of observed behaviors and interview responses across the participant groups.

3.4. Limitations and Reflexivity

This study acknowledges several key limitations. **Firstly**, researcher bias was a consideration, as my role as a male company employee inevitably influenced the study; however, this was mitigated by practicing continuous reflexivity. Furthermore, social desirability bias was likely, meaning participants might have provided socially acceptable answers rather than their true opinions; nevertheless, the extended observation period allowed for cross-checking their statements with actual behaviors. Additionally, the case study design means the findings are not statistically generalizable to all maritime contexts; rather, they provide deep, transferable insights specifically into Algeria's industry. Finally, the Hawthorne Effect may have initially altered

behavior, but prolonged engagement helped reduce this as participants became accustomed to my presence.

4. The Entry of Women into Maritime Navigation: From Global Precedent to Algerian Reality

4.1. Global Precedents and the IMO Framework

Globally, the narrative of women in seafaring has been one of gradual, hard-won progress against a backdrop of deep-seated exclusion, historically reinforced by superstitions that deemed women onboard to be bad luck (Adkins & Adkins, 2024). Historical records from antiquity to the modern era reveal women's active but often overlooked participation in seafaring. They served as traders, navigators, shipowners, and eventually military personnel, progressively breaking down gender barriers in a male-dominated field. This long-standing involvement demonstrates that women have consistently challenged stereotypes and expanded the boundaries of their accepted societal roles, despite their achievements being frequently minimized in traditional narratives (Becker, 2024). Despite these barriers, determined pioneers like marine engineer Victoria Drummond demonstrated exceptional capability, challenging gender biases and paving the way for a more structured institutional response (DeBakcsy, 2023).

This push for inclusion found its primary champion in the International Maritime Organization (IMO). Its strategic "Training-Visibility-Recognition" program, launched in 1988, provides the essential framework for gender equality in the maritime sector (International Maritime Organization,

n.d.). However, a critical analysis reveals a significant gap between the program's aspirational goals and the complex realities of its implementation. While the IMO's role in facilitating training through scholarships and institutional support is well-documented (IMO, n.d.), its capacity to ensure the effective retention and career progression of these trained women remains a formidable challenge, particularly in traditional societies.

Similarly, efforts to enhance visibility through regional Women in Maritime Associations (WIMAs) like the Arab Women in Maritime Association (AWIMA) have successfully created networks and platforms for advocacy (AWIMA, 2021). Yet, the question remains whether this increased visibility at conferences and in media translates into tangible acceptance and authority for women on the decks of ships thousands of miles away.

Most critically for this study, the IMO's pillar of recognition often operates at a policy level, advocating for merit-based advancement. The findings of this research, however, reveal a stark nuance in the Algerian context: female seafarers can achieve *technical recognition* for their competence while being systematically denied *operational authority* and *social legitimacy* by their male crews. This distinction suggests that "recognition" is not a monolithic achievement but a fragmented process, and that the IMO's framework may be insufficiently equipped to address deep-seated cultural resistance that undermines its core principles.

The 2021 BIMCO/ICS Seafarer Workforce Report, which estimates women constitute just 1.2% of the global seafaring workforce, underscores the persistent gap between high-level policy and on-the-ground reality (ICS & BIMCO, 2021). Therefore, this global context is not merely a backdrop but a point of contrast. It highlights that the Algerian case is not an outlier but a potent example of how global policies are filtered, mediated, and often hindered by powerful national and cultural specificities. The IMO provides the blueprint, but the construction of a truly inclusive maritime industry depends on local builders who must contend with the bedrock of tradition.

4.2. The Algerian Context: A Delayed and Guided Transition

In contrast to the broader global narrative, the entry of women into the Algerian maritime sector is a very recent phenomenon, characterized not by individual pioneers but by institutional and international influence. In Algeria, the integration of women into the merchant navy began relatively recently, with the first female officers—graduates of the National Maritime School (ENSM) in Bou-Ismaïl—joining Algerian ships in 2005. By July 2021, only thirty-five (35) female sailors had been officially registered across both public and private maritime companies (Bouchellal et al., 2022).

The primary, and almost exclusive, pathway for this entry has been through state-sponsored education at the *École Nationale Supérieure Maritime (ENSM)* in Bou Ismaïl. The decision by ENSM to begin admitting female cadets in the early 2000s was a pivotal moment, heavily

influenced by Algeria's participation in IMO initiatives and its alignment with broader national policies on women's education (Saadi, 2020; Ministry of Transport, 2022). This top-down approach meant that the first generation of Algerian female seafarers were highly educated officers, bypassing the ratings sector entirely.

This integration has been further shaped by unique socio-cultural factors. The concentration of these first seafarers in the Kabylie region, noted for its comparative openness to women in non-traditional roles, is not coincidental but reflects the uneven social reception of such policies across the country. Furthermore, their entry has been almost entirely confined to the public sector, as evidenced by this study's focus on CNAN EL DJAZAIR, with the private sector remaining largely inaccessible. Therefore, the Algerian story is not one of organic, broad-based inclusion but of a managed, elite, and geographically specific integration facilitated by international frameworks and filtered through national institutions and regional cultures.

4.3. Synthesis: Implementing Global Strategy Locally

The Algerian case exemplifies the challenges of implementing global equality strategies at the national level. While the IMO's framework provided the necessary impetus and model (e.g., through scholarships and the subsequent, less formalized creation of national groups like the Comité des femmes marins algériennes), the actualization of these goals has been uniquely Algerian—delayed, channeled through a single

educational institution, and shaped by distinct regional and societal norms. This history directly sets the stage for analyzing the workplace experiences of this first, small cohort of women, who are products of this very specific historical and institutional context.

5. Findings and Discussion

5.1. Study Organization Profile and Workforce Demographics

The research focuses on CNAN EL DJAZAIR, a state-owned maritime transport company established in 2023. As a public shareholding company specializing in cargo transport, it operates a fleet of 9 vessels and employs 298 individuals. Its core activities encompass ship leasing, maritime cargo transport, ship agency services, and customs brokerage.

Table 1: Employment Contracts (as of Dec 2024)

Contract Type	Shore Staff	Seafarers	Total
Permanent	97	103	200
Fixed-term	11	87	98
Total	108	190	298

Source: Administration Department of CNAN EL DJAZAIR

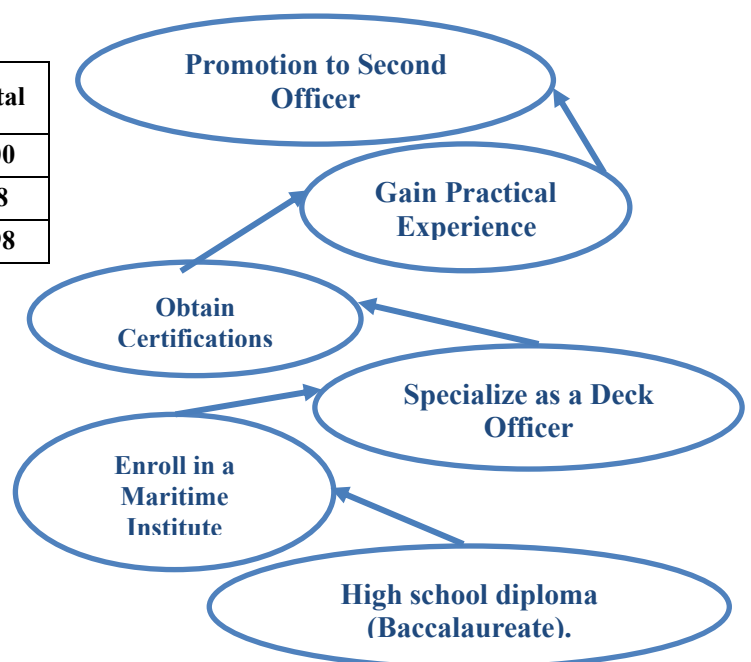
According to records, men constitute 87.25% (260 employees) of the workforce, while women account for only 12.75% (38 employees). Crucially, a mere 2.01% of the total workforce (6 women) are seafarers, all of whom are officers (four Deck Lieutenants and two Engineering Officers). This 2% figure, while minuscule, is notably higher than the global average of 1.2% (International Chamber of Shipping & BIMCO, 2021), potentially indicating the relative success of Algeria's state-sponsored training pathway. However, it also reveals a complete absence of women

in rating positions, highlighting that access is limited to the higher education track. All six were unmarried, with an average age of 29, and most originated from the Kabylie region, a detail that suggests regional socio-cultural factors play a significant role in either encouraging or permitting women to enter this non-traditional field.

5.2. Career Pathways and Structural Frameworks

The career structure within the company follows international maritime standards, divided into Deck, Engineering, and Service departments. The pathways to becoming an officer are formalized through Algeria's higher maritime education system, as outlined below:

Figure 1. How to Become a Merchant Navy Deck Officer (Algeria- ENSM)



Source: ENSM. Algeria

This figure outlines the progression to become a navigating officer, ultimately aiming for the rank of Captain or Master.

Typical Pathway Explained:

- Entry Point (Cadet): A student enters the ENSM, typically after passing a

competitive exam post-high school (Baccalaureate). They enroll in a program for Maritime Transportation or Navigation.

b. Education & Training: The program is a blend of:

- Theoretical Education: Subjects like navigation, seamanship, meteorology, maritime law, cargo work, and ship stability.
- Practical Training (Sea Phases): Mandatory periods spent at sea on training ships or commercial vessels to gain hands-on experience.

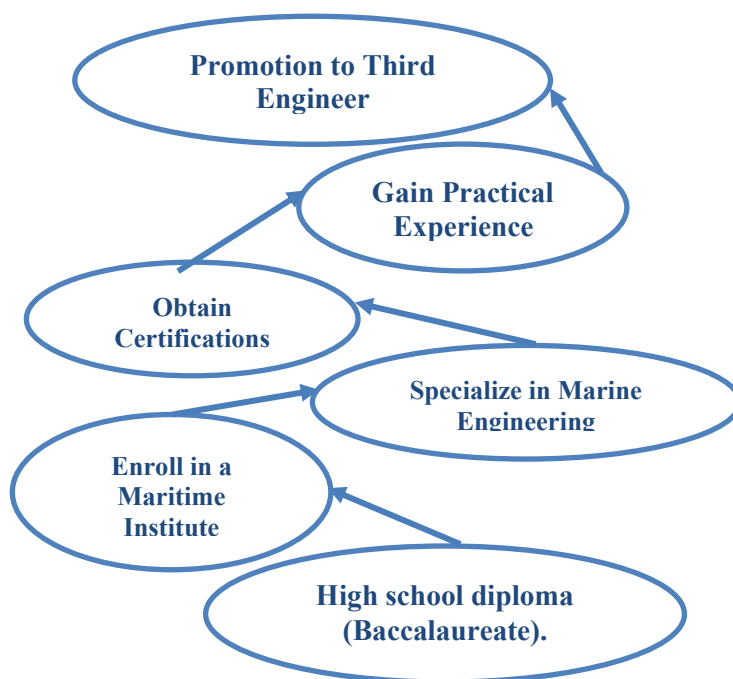
c. Graduation & First Certificate: Upon successful graduation, the cadet receives a diploma and, after passing national exams, their first official officer certificate from the maritime authority. This is typically the Officer in Charge of a Navigational Watch (OICNW) or Third Mate license.

d. Career Progression (The Pathway): The figure likely shows a ladder of promotions, which requires a combination of sea time (experience in rank), advanced training courses, and passing higher-level exams.

- Third Officer / Junior Deck Officer: The first officer rank, responsible for safety equipment, navigation watches, and cargo monitoring.
- Second Officer / Second Mate: Focuses on navigation planning, maintaining navigational charts and publications, and often acts as the ship's medical officer.
- Chief Officer / First Mate: The second-in-command. Manages the deck crew, oversees cargo operations, stability, and maintenance of the deck areas.
- Captain / Master: The ultimate authority on the ship. Responsible for the overall safety of the vessel, crew,

cargo, and the environment. Makes all critical decisions.

Figure 2. How to Become a Marine Engineer Officer (Algeria - ENSM)



Source: ENSM. Algeria

This figure outlines the progression to become an engineering officer, ultimately aiming for the rank of Chief Engineer.

Typical Pathway Explained:

- a. Entry Point (Cadet): A student enters the ENSM, typically after a Baccalaureate in science or technology. They enroll in a program for Marine Engineering.
- b. Education & Training: The program includes:
 - Theoretical Education: Subjects like thermodynamics, mechanics, naval architecture, electrical engineering, electronics, and marine engineering systems.
 - Practical Training (Sea Phases): Mandatory periods in the engine room of training or commercial ships to learn from practicing engineers.
- c. Graduation & First Certificate: Upon graduation, the cadet receives a diploma and, after

exams, their first engineering officer certificate. This is typically the Officer in Charge of an Engineering Watch (OICEW) or Fourth Engineer / Third Assistant Engineer license.

- d. Career Progression (The Pathway): Like the deck path, promotion is based on sea time, advanced courses, and exams.
- Fourth / Third Engineer / Junior Engineer: Often responsible for auxiliary machinery like generators, pumps, and boilers.
- Second Engineer / First Assistant Engineer: The second-most senior engineer. In charge of day-to-day maintenance, repairs, and managing the engine room crew. The chief engineer's right hand.
- Chief Engineer: The head of the engineering department. Responsible for the entire technical operation of the ship, from the main engine to all electrical and mechanical systems. Manages the budget, spare parts, and ensures compliance with technical and environmental regulations.

Table 2: Maritime Ranks by Department

Deck Department	Engineering Department	Service Department
Captain	Chief Engineer	Chief Steward
Chief Officer	1st Engineer	Cook
2nd/3rd Officers	2nd/3rd Engineers	Stewards
Deck Cadets	Engine Cadets	
Able Seamen	Motormen/Oilers	

Source: Administration department

This table outlines the standard hierarchy of crew ranks aboard a commercial ship, organized by the three main departments. The Deck Department, led by the Captain, manages navigation and vessel operations, with officers and ratings supporting this

function. The Engineering Department, headed by the Chief Engineer, maintains all mechanical and electrical systems, are running, with a team of engineers and motormen. Finally, the Service Department, under the Chief Steward, handles catering and living provisions for the entire crew. This clear rank structure establishes a chain of command and defines areas of responsibility, which is critical for safety and efficient operation at sea.

5.3. Thematic Analysis of Workplace Integration and Barriers

The field study yielded rich qualitative and quantitative data, revealing a complex picture of technical acceptance overshadowed by social and institutional barriers.

The inclusion of women in maritime crews has yielded several observable positive impacts. Empirical findings indicate their presence is correlated with improved on-board decorum, manifesting as reduced profanity and greater attention to personal grooming among crew members—a shift openly acknowledged in declarations by male officers and sub-lieutenants who report, *'we have changed our manners when the seafarer woman is among us.'* Furthermore, the study confirms that women have consistently demonstrated technical competence and proven their capability in leadership roles, thereby challenging traditional perceptions of maritime authority—a view supported by senior captains and chief engineers who declared, *'the women did their job seriously and with consistency.'*

Nevertheless, significant barriers persist. A strong resistance to female authority remains prevalent, creating difficulties for women in supervisory positions. This is quantitatively underscored by the finding that 90% of senior male crew members surveyed (n=18/20) explicitly stated they 'never accept to be commanded by women.' This forces female officers to rely on male captains to enforce their instructions, a clear indicator that their authority is not intrinsic but mediated. In addition, employment practices continue to reflect inequality, with female staff on fixed-term contracts often being excluded from retirement benefits, highlighting the profound structural challenges that still undermine full gender parity in the industry."

5.4. Triangulation of Key Barriers: Beyond Anecdote to Evidence

The research identified two paramount barriers, substantiated by triangulating quantitative data, interviews, and observation:

5.4.1 Career Abandonment Post-Marriage- This is not merely an anecdotal observation but a quantifiable trend. The fact that 100% of the active female seafarer cohort was unmarried, combined with internal company records showing a 100% attrition rate from seafaring roles upon marriage, provides compelling evidence. This barrier was directly articulated in interviews, with one female officer stating, "This job is only for single women. Everyone knows you must choose: a family or the sea."

In reality, most female seafarers transition to shore-based positions within maritime

companies after marriage. This career shift was confirmed by a ship captain interviewed for this study, who has extensive experience in both national and international maritime institutions. He observed that moving from sea to shore is a prevalent trend among women in the industry following marriage. Similarly, a recent study supported these observations (Bouchellal et al., 2022), involving 35 female students at the National Maritime School (ENSM) in Algeria, which explored their perceptions of marriage—a matter regarded as both a central societal expectation and a religiously significant institution. The findings revealed that 63.6% of the participants had considered marriage prior to their admission to ENSM. However, a significant proportion expressed concerns that their chosen profession might constitute a major obstacle to achieving this personal milestone. These concerns were primarily associated with the demanding nature of maritime employment, marked by prolonged absences at sea, irregular schedules, and the challenges of reconciling professional commitments with family and marital responsibilities. This mass transition from sea to shore is not a simple career choice but a forced adaptation to structural incompatibilities between the nature of seafaring duties and traditional societal expectations of married women. The role of a seafarer is fundamentally characterized by:

Prolonged and Absolute Absence Voyages can last for several months at a time, during which the seafarer is completely absent from home. This directly conflicts with the deeply ingrained social and familial expectations in Algerian

society for a wife to be physically present to manage the household, care for children, and fulfill her role within the extended family network. The role of a mother, in particular, is culturally difficult to reconcile with extended periods of absence. The study by Bouchellal et al. (2022) supported this observation. According to the participants' responses, the majority (63.6%) of the 35 female students identified prolonged absence from home as the greatest challenge associated with this profession. Furthermore, many expressed concerns about working in an environment perceived as highly dangerous and predominantly male-dominated, which they regarded as another significant obstacle for women pursuing a maritime career.

Rigid and Uninterruptible Schedules

A ship's operational schedule is inflexible. There is no possibility for personal leave, flexible hours, or working remotely to attend to family emergencies, a child's needs, or social obligations. This lack of flexibility makes it impossible for women to manage the dual responsibilities expected of them after marriage.

The "Total Institution" Model of Ship Life- A vessel operates as a "total institution," where work, life, and social space are merged and confined. There are no clear boundaries between professional and personal time. For a married woman, this model eliminates any possibility of achieving a work-life balance, as there is literally no "home life" while at sea.

Consequently, the shore-based roles—in operations, logistics, human resources, safety, or administration within the

maritime company—become the only viable alternative. These roles offer regular working hours, daily return home, and the possibility of maternity leave and other family-related benefits. Therefore, the exodus of women from seafaring roles upon marriage is a direct result of the clash between the immutable, all-consuming nature of maritime duties and the powerful, traditional gender roles that define a woman's place within the Algerian family structure. The company, by not creating supportive policies like rotational shore postings or enhanced maternity support, implicitly reinforces this binary choice, forcing women out of seafaring careers they are fully qualified to perform.

5.4.2 The Authority Paradox- A central paradox emerged from the data: female officers earn recognition for their competence but are systematically denied organizational authority. They are valued for their technical skills but are not permitted to lead effectively. This is a critical nuance for the IMO's "Recognition" pillar, suggesting that in the Algerian context, recognition can be a limited concept that grants women a place on the team but not a full voice in its command structure.

This is evidenced in daily and annual reports, which highlight the inability of female seafarers to impose discipline and authority over the subordinate sailors under their command. The women themselves acknowledge this issue but refrain from taking disciplinary action due to fear of reprisal. Each time, they must request the assistance of the ship's captain to enforce discipline. It is important to note that maintaining discipline on a vessel is

critically important and constitutes one of the fundamental pillars of work in the maritime field.

Furthermore, the resistance to female authority presents not just a social challenge, but a tangible operational and safety risk. This was starkly illustrated by a critical incident in December 2024, where a sailor fell overboard after failing to comply with orders given by a female officer on deck. This event tragically underscores how the systematic denial of a female officer's authority can directly compromise the strict and precise protocols essential for maritime safety, potentially leading to accidents where lives are lost.

This incident is not an isolated reflection but is consistent with the expressed views of senior leadership. Out of five captains interviewed (a number that fluctuates due to the rotational nature of maritime work, including leave, illness, and the mandatory six-month maximum service period), four explicitly acknowledged that female seafarers possess an excellent maritime culture and the necessary knowledge and competencies acquired through their training. However, they simultaneously reported that these women cannot control the elements they supervise, frequently requiring the captain's intervention to resolve issues.

This creates a dangerous paradox: the institution produces highly competent female officers but fosters a culture that prevents them from exercising the command authority essential for maintaining safety. The reluctance of crew members to obey their direct superiors—based solely on gender—directly impedes the chain of command and can delay critical procedures. As the December

incident proves, this is not a theoretical concern but a concrete vulnerability that jeopardizes the safety of the entire crew and the safe operation of the vessel.

A pronounced generational divide emerged as a critical factor influencing attitudes towards female authority. Notably, younger crew members, particularly those with a university-level education obtained from modern Algerian institutions, consistently demonstrated significantly greater acceptance and willingness to follow orders from female officers. This cohort, socialized in more co-educational and progressive academic environments, appears to base respect on professional competence and rank rather than traditional gender norms. As one young cadet succinctly stated, *"For us, it is normal. She is an officer; I follow her orders. It's about the rank, not the gender."*

In stark contrast, older, senior crew members—often with decades of experience but frequently educated within a more traditional, male-only system—exhibited deep-seated resistance. Their concept of maritime authority remains intrinsically linked to masculinity and seniority, viewing the delegation of command to a woman as a challenge to the established "natural order" onboard. A chief engineer in his fifties expressed this sentiment clearly: *"The ship is a man's world. I have respect for her knowledge, but a man cannot be commanded by a woman; it is against our culture and creates disorder."*

This intergenerational dynamic creates a complex social environment onboard. A female officer might find cooperation and professional respect from junior cadets and engineers while facing passive resistance or outright insubordination from older,

more experienced able seamen or motormen under her command. This forces them to navigate a dual system of authority, relying on their technical competence to earn the respect of the young while often depending on the symbolic power of the Captain to enforce discipline among the old. This divide, however, signals a potential for organic cultural change as this more educated and accepting younger generation ascends to senior ranks themselves.

5.5. Discussion: Contextualizing the Findings

The results reveal a profound tension between tradition and transition, a dynamic that defines the current state of gender integration in Algeria's maritime sector. The demonstrated technical competence of female officers, consistently validated by high performance scores and praise from senior captains, signifies a clear breaking of the *technical* glass ceiling and represents the forces of transition. This progress is further evidenced by the observed "civilizing effect" their presence has on onboard social dynamics and the markedly greater acceptance shown by the younger generation of seafarers, suggesting a gradual, bottom-up cultural shift.

However, this progress is sharply constrained by powerful traditional forces. The study empirically documents a deep-seated cultural resistance to female authority, quantified by the stark statistic that 90% of senior male crew members explicitly reject being commanded by a woman. This forces female officers into a paradoxical position: they are recognized as competent technicians but are systematically denied organizational authority, reliant on male captains to

enforce their instructions. Furthermore, the institutional framework remains a bastion of tradition, offering no support for work-life balance. The 100% rate of career abandonment post-marriage, confirmed by company records, is not a choice but a forced decision due to the complete lack of maternity support or viable shore-based transition programs.

Therefore, the industry currently operates a costly and unsustainable cycle: it invests in training highly competent female officers through state-sponsored programs, only to lose them entirely when they marry, thereby perpetuating the very gender disparity it seeks to overcome. The generational divide offers a window of opportunity for change, but it is insufficient on its own. Without proactive, targeted institutional policies—such as mandated maternity leave, structured rotation programs into onshore technical roles, and strictly enforced anti-harassment protocols that protect women who report misconduct—this potential for change will remain unrealized. The risk is not merely maintaining the status quo but actively squandering human capital and financial investment, ensuring that the deck remains stacked against women seeking a long-term, commanding career at sea.

6. Conclusion: Synthesis, Limitations, and Regional Implications

This study has moved beyond global statistics to provide a granular analysis of the integration of female seafarers within Algeria's specific socio-cultural and institutional context. The findings reveal a central paradox: female officers have successfully attained technical recognition for their demonstrated competence but are systematically denied social authority and face profound institutional barriers that

precipitate near-total career abandonment upon marriage. This distinction is critical, revealing that the IMO's pillar of "Recognition" is multifaceted and can be severely limited in practice.

The Algerian case offers a vital lens through which to view a broader North African challenge. While the region shares common constraints—such as deeply ingrained cultural norms and familial structures that prioritize traditional gender roles—Algeria's experience is distinct. The integration of women was a state-led, top-down initiative, channeled exclusively through higher maritime education into public sector companies. This has created a unique cohort of highly qualified officers who are now navigating the tension between modern professional identity and traditional societal expectations. Therefore, Algeria's journey provides a critical case study for the wider Maghreb, illustrating both the potential of policy-driven inclusion and the formidable obstacles that remain.

This study also exposes a critical gap: the limited impact of formal gender equality structures, such as the Comité des femmes marins algériennes, on the daily lives of seafarers. Their activities have yet to translate into the substantive institutional changes needed to support retention and career advancement.

This study's conclusions must be considered alongside its limitations. The single-case study design, while providing unparalleled depth, limits the statistical generalizability of the findings. Furthermore, the potential for social desirability bias, where participants provided answers they deemed socially

acceptable, was a persistent challenge mitigated through prolonged observation. These limitations, however, chart a course for future research: a comparative multi-company analysis incorporating Algeria's private sector, a longitudinal study tracking ENSM cadets to model attrition projections, and a regional comparative study with Tunisia and Morocco to identify shared and unique barriers across North Africa.

7. Actionable Recommendations for a Sustainable Pathway Forward

Moving from diagnosis to action, the following recommendations are strategically designed to address the specific barriers identified within the Algerian context, with applicability across similar regions.

7.1 For CNAN EL DJAZAIR and Algerian Maritime Institutions

To build a more inclusive and sustainable maritime workforce, a structured mentorship and advocacy program should be established, pairing each female cadet and junior officer with a senior Captain or Chief Engineer. Moreover, these mentors must be held accountable through performance metrics that measure their active support in championing the authority of those they mentor and providing strategic career guidance. However, mentorship alone cannot resolve the critical challenge of a 100% post-marriage attrition rate. Furthermore, to address this, the company should implement a shore-based rotation policy, allowing officers to transition into strategic onshore roles in operations, safety, or training for 1–2 years, thereby eliminating the restrictive 'sea-or-

nothing' career path. Finally, in order to embed these initiatives into the organization's core values rather than treating them as isolated measures, inclusive leadership must be integrated into performance evaluations by introducing specific, measurable KPIs—such as 'fostering an inclusive environment' and 'upholding gender equality policies'—linking senior officers' leadership success and compensation directly to the integration and retention of diverse talent.

7.2 For Algerian Policy Makers and ENSM

To foster long-term gender inclusion in the maritime sector, curriculum reform should mandate the integration of modules on unconscious bias, cross-gender leadership, and company anti-harassment policies within the ENSM training program for all officer cadets. Moreover, this will not only prepare the next generation of male officers for inclusive leadership but also equip female officers with the tools to navigate authority challenges effectively. Furthermore, to address the loss of experienced female talent, ALGEWIMA, with the support of the Ministry of Transport, should develop a 'Return to Sea' initiative aimed at recruiting and retraining women who left seafaring for family reasons, thereby facilitating their reintegration as officers or into essential shore-based maritime roles and unlocking a valuable yet overlooked talent pool.

7.3 For Regional Collaboration (AWIMA & IMO)

To advance gender equality in the maritime sector, it is essential to establish a Maghreb Maritime Gender Observatory, advocated

as an IMO-funded initiative and hosted by AWIMA, to standardize data collection on female participation, attrition, and retention across Algeria, Tunisia, and Morocco. Moreover, this would create the first robust empirical baseline for regional benchmarking and evidence-based policy evaluation. Furthermore, to strengthen regional cooperation and foster professional development, a North African Officer Exchange Programme should be introduced, enabling short-term exchanges for female officers among national companies. This initiative would not only build cross-border professional networks but also expose participants to diverse operational cultures, thereby reinforcing regional solidarity.

In conclusion, achieving gender equality in Algeria's maritime sector requires a decisive shift from ad hoc inclusion to strategic institutional reform. The journey is not merely about placing women on ships but about systematically dismantling the barriers that prevent them from leading, thriving, and building enduring careers.

When placed in a comparative regional context, Algeria's experience reflects a pattern common across many Arab and Muslim-majority nations, yet with notable distinctions. Although the overarching challenge of low female participation remains a regional constant—with the global seafaring average at 1.2% (International Chamber of Shipping & BIMCO, 2021) dropping to around 0.5% or less in much of the Arab world (IMO, 2021)—Algeria, with approximately 2% female seafarers concentrated in a single state-owned company, emerges as a relative leader, largely due to its state-led

training initiatives. Moreover, similar to Egypt and Tunisia, this progress is primarily confined to the public sector, while the private sector continues to present significant barriers. Furthermore, the authority paradox persists, whereby female officers, despite their technical competence, often struggle to gain unquestioned command and rely on male authority figures to validate their orders. In addition, the near-total attrition rate post-marriage remains the most formidable barrier across the region, reflecting entrenched cultural norms that prioritize women's domestic roles and create a persistent 'leaky pipeline.' However, what may distinguish Algeria is the pronounced generational divide and the observed 'civilizing effect' among younger crew members, which could serve as an underutilized asset. Therefore, by implementing targeted measures—such as structured mentorship programs, shore-based rotation policies, and inclusive leadership metrics—Algeria has the potential not only to address its internal challenges but also to establish a replicable model for how a state-led maritime sector in a traditional society can transition from merely training women to genuinely retaining and empowering them. Finally, this transformation could enable Algeria to shift its narrative from one of limitation to one of regional leadership, providing a blueprint for neighboring countries and turning a shared struggle into a collective opportunity for progress.

8. Bibliography List

1. Adkins, R., & Adkins, L. (2024, March 27). *Women ships and the sea the dangers of custom and superstition*. Hec.LR Foundation. Retrieved January 15, 2025, from :<https://hec.lrfoundation.org.uk/whats-on/stories/women-ships-and-the-sea-the-dangers-of-custom-and-superstition>.
2. AWIMA. (2021). *Proceedings of the 3rd Arab Women in Maritime Conference*. Arab Women in Maritime Association.
3. Becker, L. (2024, December 27). The history of female sailors and maritime pioneers. *Seafaring History*. Retrieved April 22, 2025, from <https://seafaringhistory.com/the-history-of-female-sailors-and-maritime-pioneers/>
4. Bouchellal, Y., Daddi Addoun, N., & Tighilt, F. (2022). Impact des femmes marins sur la vie à bord d'un navire -Cas de l'Algérie [The impact of women seafarers on life aboard a ship -Case of Algeria]. *Revue des Sciences Humaines*, 9(3). <http://www.revue.umc.edu.dz/index.php/rsh/issue/view/68>.
5. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
6. Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.
7. Committee of Algerian Women Seafarers. (n.d.). *Home* [Facebook page]. Facebook. Retrieved March 26, 2025, from <https://www.facebook.com/profile.php?id=100067008264980>.
8. Cordingly, D. (2001). *Seafaring women: Adventures of pirate queens, female stowaways, and sailors' wives*. Random House.
9. Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.

10. Gold, R. L. (1958). Roles in sociological field observations. *Social Forces*, 36(3), 217–223.
11. International Chamber of Shipping & BIMCO. (2021). *Seafarer workforce report: The global supply and demand for seafarers in 2021*. Retrieved January 12, 2025, from <https://www.ics-shipping.org/publication/seafarer-workforce-2021/>
12. International Maritime Organization. (2021). *Women in maritime: Survey 2021 - A study of maritime companies and IMO Member States' maritime authorities*. https://wwwcdn.imo.org/localresources/en/OurWork/TechnicalCooperation/Documents/women%20in%20maritime/Women%20in%20maritime_survey%20report_high%20res.pdf
13. International Maritime Organization (IMO). (n.d.). *Présentation de l'OMI* [About IMO]. Retrieved December 15, 2024, from <https://www.imo.org/fr/About/Pages/Default.aspx>
14. Kitada, M. (2021). Women seafarers: An analysis of barriers to their employment. In V. O. Gekara & H. Sampson (Eds.), *The world of the seafarer* (pp. 59-72). Springer. https://doi.org/10.1007/978-3-030-49825-2_6
15. Kitada, M., Ölçer, A., & Ghorbani, A. (2015). Women in shipping: A cross-cultural analysis. In *Maritime women: Global leadership* (pp. 13-24). Springer. https://doi.org/10.1007/978-3-662-45385-8_2
16. Ministry of Transport. (2022). *Stratégie nationale pour la promotion de la femme dans le secteur des transports* [National strategy for the promotion of women in the transport sector]. Algerian Government Publications.
17. DeBakcsy, D. (2023, October 14). *The lady of the engine room: Victoria Drummond, Britain's first woman marine engineer*. Women in Science Archive. Retrieved May 5, 2025, from <https://www.wisarchive.com/post/the-lady-of-the-engine-room-victoria-drummond-britain-s-first-woman-marine-engineer>
18. Saadi, N. (2020). La formation maritime en Algérie: Évaluation de l'accès des femmes aux instituts de formation [Maritime training in Algeria: Evaluation of women's access to training institutes]. *Algerian Journal of Economic Development*, 12(3), 78-91.
19. Stanley, J. (2016). *From cabin 'boys' to captains: 250 years of women at sea*. The History Press.
20. United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development* (A/RES/70/1). Retrieved June 10, 2025, from <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>.