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A study on the effectiveness of Tanzania's Legal Regime for Controlling Marine Oil Pollution: A Case of Dar Es Salaam Port

By

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Abstract
This study critically assesses Tanzania's legal regime for controlling marine oil pollution, focusing specifically on the Port of Dar es Salaam. As one of the busiest ports in East Africa, the Port of Dar es Salaam plays a vital role in regional trade, but it is also a significant source of marine oil pollution, threatening marine ecosystems and public health. The study examines the existing national laws, regulations, and policies that govern marine oil pollution in Tanzania, including their alignment with international conventions such as MARPOL.

Through a doctrinal legal analysis, the study identifies gaps and weaknesses in the current legal framework, including challenges in enforcement, compliance, and institutional capacity. The study employs an analytical approach, relying on primary and secondary data sources such as books, journal articles, government reports, and laws pertaining to marine pollution. The focus is on evaluating the robustness and comprehensiveness of Tanzania's legal framework in managing marine oil pollution risks. The study reveals significant gaps in Tanzania's legal regime, highlighting its inadequacy in effectively controlling marine oil pollution.

Keywords; Marine oil pollution, Prevention and Response to marine oil pollution incidents, Marine oil spills control.

1.0 INTRODUCTION

Marine oil pollution represents a significant environmental challenge globally, particularly in coastal regions with high maritime activity. This form of pollution, primarily resulting from oil spills, operational discharges, and shipping accidents, has devastating effects on marine ecosystems, human health, and the economy. The control and management of marine oil pollution are therefore critical to safeguarding the marine environment and ensuring the sustainable use of maritime resources. In Tanzania, the issue is of particular importance due to the country's extensive coastline and its reliance on maritime trade[1].

In Tanzania maritime affairs are not a union matter, meaning that the mainland (Tanzania Mainland) and Zanzibar have separate legal frameworks governing marine oil pollution. This distinction adds a layer of complexity to the management of marine environmental protection in the country[2]. While Zanzibar has its own set of laws and regulations addressing marine oil pollution, this study focuses on Tanzania Mainland, specifically assessing the effectiveness of the legal regime in place to control marine oil pollution at the Port of Dar es Salaam.

The Port of Dar es Salaam is the largest and most strategic port in Tanzania, handling about 95% of the country's international trade. As a key gateway for imports and exports, the port is crucial to the national economy and serves as a hub for maritime trade in the

[1]Donald L. Chidowu's , *The Blue Economy and Boundaries of Africa: A Legal Historical Analysis* (2023) published by Juris Publishers Limited

[2]Shivji, I.G *the legal foundation of the union in Tanzania's union and Zanzibar constitution*. Dar. Dup

East African region. Its strategic location on the Indian Ocean makes it one of the busiest ports in Africa, with substantial volumes of oil and other hazardous substances passing through its waters daily[3]. However, this high level of activity also makes the port a potential hotspot for marine oil pollution, posing serious risks to the marine environment and the communities dependent on it.

The legal framework governing marine oil pollution in Tanzania Mainland is derived from various national laws, regulations, and policies, which are intended to prevent, manage, and mitigate the effects of oil pollution. These include the Environmental Management Act (EMA), Cap 20 of 2004, the Merchant Shipping Act, Cap 21 of 2003, Tanzania Port Act, Cap 17. R.E 2004, the Maritime Transport Act, Cap 5 of 2006, and specific regulations issued by the Tanzania Shipping Agencies Corporation (TASAC) and other relevant authorities[4]. Tanzania is also a signatory to several international conventions related to marine pollution, including the International Convention for the Prevention of Pollution from Ships (MARPOL), which sets standards for preventing pollution from ships.

Despite these legal Frameworks, marine oil pollution remains a significant challenge at the Port of Dar es Salaam. Incidents of oil spills, both major and minor, continue to occur, raising concerns about the effectiveness of the existing legal and regulatory mechanisms. The enforcement of these laws and the capacity of institutions responsible for monitoring and responding to oil pollution incidents are critical areas of concern[5].

2.0 LITERATURE REVIEW

Dr. Tumain S. Gurumo (2017)[6], delves into the intricate legal mechanisms governing the prevention and control of marine oil pollution within Tanzanian waters The author outlines key national legislations such as the Merchant Shipping Act, and its regulations detailing their provisions relevant to marine oil pollution. The author identifies several gaps in the current regime. These include inadequate enforcement of existing laws, lack of coordination among regulatory bodies, insufficient resources for effective monitoring and response, and limited public awareness about the implications of marine oil pollution

Donald L. Chidowu's (2023)[7], offers a comprehensive exploration of Africa's blue economy and its legal frameworks. Part IV of the book focuses specifically on the prevention of marine oil pollution and the protection of the marine environment, While Author's book provides a solid foundation in the historical and legal aspects of marine pollution prevention, and it lacks an in-depth analysis of specific regional challenges and the effectiveness of current legal frameworks in individual countries, including Tanzania.

Ibrahimu Mbiu Bendera, (2017)[8], provides a comprehensive overview of maritime law as it applies within Tanzania's jurisdiction. The book meticulously outlines the principles and regulations that govern maritime activities, including ship ownership, maritime liens, salvage, and maritime contracts. The author work is critical in understanding how Tanzania's legal framework addresses various maritime issues, including oil pollution. In the context of marine oil pollution, the book highlights the legal mechanisms in place for addressing pollution incidents, the liability of ship owners, and the role of international conventions ratified by Tanzania.

These studies primarily focus on the legal frameworks governing marine oil pollution. Their findings suggest that robust legal instruments are crucial for effectively controlling marine oil pollution. However, despite the existing body of literature; there remains a significant gap in understanding the effectiveness of laws and regulations in controlling marine oil pollution in both Tanzania mainland and Zanzibar

3.0 METHODOLOGY

This study employs a doctrinal legal approach to evaluate Tanzania's legal framework for managing marine oil pollution, with a specific focus on the Port of Dar es Salaam. The methodology is designed to address the complexities of maritime law in Tanzania, particularly given the distinct legal frameworks of mainland Tanzania and Zanzibar and the Port's role in international trade. The selection doctrinal legal research methodology was based on the established traditions in legal research, focusing on the analysis of primary and secondary legal sources to address the study's issues. This method allows for a structured examination of legal sources relevant to a specific legal category, exploring the interplay between rules, identifying problem areas, and potentially forecasting future developments[9]. In addition to analyzing statutory provisions and case law, this methodology enables the author to engage with scholarly legal works to propose legal reforms where necessary.

[3] https://www.tasac.go.tz accessed on 13 March 2024
[4]Marry, J, *Challenges in marine oil pollution Control Governance in Tanzania (2020).* Environmental Law association
[5]Donald L. Chidowu's , *The Blue Economy and Boundaries of Africa: A Legal Historical Analysis* (2023) published by Juris Publishers Limited
[6]Gurumo,T.S (2017) *"Legal frame work for marine oil pollution Control in Tanzania"* advance in social Research Journal
[7]Donald L. Chidowu's , *The Blue Economy and Boundaries of Africa: A Legal Historical Analysis(* 2023) published by Juris Publishers Limited
[8]Ibrahim MbiuBendera, Admiralty and maritime law in Tanzania (2017), Law Africa Publishing
[9] Ibrahimu Mbiu Bendera *Regulation of ship safety in Tanzania: A critical assessment of the law and practices*; masters of laws (LLM) dissertation, university of Dar es salaam 2006.

4.0 LEGAL AND INSTITUTIONAL FRAMEWORK DEALING WITH THE MANAGEMENT AND CONTROL OF MARINE OIL POLLUTION

4.1 INTERNATIONAL LEGAL FRAMEWORK

The United Nations Convention on the Law of the Sea (UNCLOS) of 1982; This convention establishes a comprehensive legal framework for the regulation of maritime activities, organizes and allocates ocean space, and delineates jurisdiction over these spaces and activities. Importantly, all articles under Part XII of the 1982 UNCLOS are dedicated to the protection and preservation of the marine environment. The convention establishes fundamental principles for the protection and preservation of the marine environment. Several articles within the UNCLOS intersect with key international conventions addressing marine pollution.

Article 211 pertains to pollution from vessels, which links to the International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78. MARPOL sets forth detailed regulations to prevent and minimize pollution from ships, including oil pollution, aligning with the general principles laid out in UNCLOS for vessel-source pollution control. Article 199 emphasizes cooperation in combating pollution emergencies, which resonates with the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC). The OPRC outlines frameworks for preparedness and response to oil pollution incidents, promoting international cooperation as envisaged by UNCLOS.

The International Convention for the Prevention of Pollution from Ships (MARPOL) of 1978; this convention is a key international agreement aimed at mitigating marine pollution from shipping activities. MARPOL is instrumental in setting global standards for preventing and minimizing oil pollution from ships, among other pollutants. Annex I of MARPOL specifically addresses the prevention of pollution by oil. It establishes regulations designed to minimize the discharge of oil into the sea from ships, outlining stringent measures for controlling oil pollution. For instance, Annex I mandate the installation of oil filtering equipment and separation systems on ships to prevent oil discharge. It also requires the maintenance of comprehensive oil record books, which document all oil-related operations and discharges, thus ensuring transparency and accountability[10].

The International Convention for the Prevention of Pollution of the Sea by Oil, commonly known as OILPOL, this convention was a significant milestone in addressing the growing concern of oil pollution caused by maritime activities. Although oil pollution from ships had been identified as a problem as early as World War I, it was not until the aftermath of World War II that the issue gained substantial attention. The large-scale movement of oil across the seas and the resulting pollution necessitated a coordinated international response, leading to the adoption of OILPOL in 1954, which came into effect in 1958.OILPOL 1954 was the first international convention aimed specifically at reducing marine pollution by oil. It established regulations prohibiting the discharge of oil and oily mixtures into the sea within certain distances from land and designated "prohibited zones" where oil discharge was completely banned. For instance, the convention prohibited the dumping of oil within 50 miles of any coastline and required ships to install equipment to retain oily residues on board. Globally, OILPOL influenced the development of stricter marine environmental protection standards. In the United States, the Oil Pollution Act of 1990 (OPA 90) was enacted following the Exxon Valdez oil spill, one of the most devastating environmental disasters in history.

The International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Intervention Convention); the convention was adopted in 1969 and came into force in 1975. This Convention allows coastal states to take necessary measures on the high seas to prevent, mitigate, or eliminate the threat of oil pollution following maritime casualties. One key article, Article I, establishes the right of a coastal state to intervene when an incident poses a grave and imminent danger to its coastline or related interests from pollution or the threat thereof. For example, in the case of the "Torrey Canyon" disaster in 1967, the UK intervened on the high seas by bombing the oil spill to mitigate environmental damage[11]. Although this occurred before the Convention was adopted, it highlighted the necessity for such international measures[12].

Article III outlines the procedures for intervention, requiring states to consult with relevant parties, including the flag state of the vessel involved, to ensure that measures taken are proportional to the damage anticipated. In Tanzania, adherence to the principles and provisions of the Intervention Convention could significantly enhance its legal regime for marine oil pollution prevention. By aligning national laws with the Convention's standards, Tanzania can ensure prompt and effective responses to oil spills, minimizing environmental damage and safeguarding its coastal ecosystems.

The International Convention on Oil Pollution Preparedness, Response, and Co-operation (OPRC); the convention was adopted in 1990 and entered into force on May 13, 1995. This convention represents a significant step in the global effort to mitigate and manage the risks associated with marine oil pollution. The OPRC aims to enhance the ability of countries to prepare for

[10] J. A. Wiens, *Oil in the Environment: Legacies and Lessons of the Exxon Valdez Oil Spill* (Cambridge, UK: Cambridge University Press, 2013).

[11] Zhu, L "*Compensation issues under the Bunkers Convention"* (2008) 7 WMU Journal of Maritime Affairs

[12] John w. farrington, *Oil Pollution in the Marine Environment II: Fates and Effects of Oil Spills*,| Tylor and Francis Journal 27 Jun 2014, https://doi.org/10.1080/00139157.2014.922382"

and respond to oil pollution incidents, thereby reducing their environmental impact.

One of the cornerstone provisions of the OPRC is found in Article 3, which obliges parties to establish and maintain an adequate national system for responding promptly and effectively to oil pollution incidents. This includes the development of national contingency plans and the establishment of response mechanisms, such as equipment and trained personnel. For example, the United Kingdom, under its National Contingency Plan, has established a comprehensive framework for responding to marine oil spills, including collaboration with agencies like the Maritime and Coastguard Agency (MCA) and various private entities.

The OPRC highlights the importance of international cooperation in response to oil pollution incidents. Countries are encouraged to collaborate and share information, technology, and resources. An illustrative case is the cooperation between the United States and Mexico under the Gulf of Mexico Regional OPRC Plan. This plan ensures coordinated response efforts in the event of an oil spill, exemplifying the practical application of the OPRC Convention. Also, the convention mandates that parties ensure the availability of adequate oil spill response resources, either through their own means or by entering into cooperative arrangements with other states or organizations, the OPRC's relevance to Tanzania lies in its framework for establishing a robust national response system and fostering international cooperation. Currently, Tanzania faces challenges in managing its coastal and marine environments due to insufficient infrastructure and response mechanisms.

The International Convention on Civil Liability for Oil Pollution Damage (CLC) 1992; the convention serves as a pivotal legal instrument for addressing the issue of oil pollution from ships on a global scale. This convention, which amends the original 1969 convention, plays a crucial role in ensuring that adequate compensation is available to those affected by oil pollution incidents. The CLC 1992 establishes a regime of strict liability for ship owners, which means they are liable for oil pollution damage irrespective of fault, subject to certain defences. Article III is central to this regime, stating that the ship owner is liable for pollution damage caused by the escape or discharge of oil from their vessel. This strict liability is limited by Article V, which allows ship owners to limit their liability to an amount determined by the ship's tonnage.

A prominent example of the CLC 1992 in action is the Prestige oil spill in 2002, where a tanker sank off the coast of Spain, causing extensive pollution. The Spanish government invoked the CLC 1992 to claim compensation for the damage. Similarly, the Erika oil spill in 1999 off the coast of France saw significant compensation claims under the CLC 1992 framework, reinforcing the convention's global applicability. For Tanzania, the CLC 1992 offers a robust framework for enhancing its legal regime concerning marine oil pollution.

The International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992, commonly referred to as the Fund Convention 1992, this convention serves as a significant amendment to the original 1969 International Convention on Civil Liability for Oil Pollution Damage. This convention was created to ensure that adequate compensation is available to victims of oil pollution incidents and to alleviate the financial burden placed on ship owners. The Fund Convention 1992 establishes an international fund to provide compensation beyond the limits of the ship owner's liability under the 1969 Civil Liability Convention (CLC). Specifically, Article 2 of the Fund Convention sets out the purpose of the Fund, which is to pay compensation to victims of oil pollution damage who cannot obtain full compensation under the CLC. This includes scenarios where the damage exceeds the ship owner's liability limit, where the ship owner is financially incapable of meeting their obligations, or where the pollution damage is caused by a spill from an unidentified ship.

Tanzania, as a signatory to the Fund Convention 1992, has a legal framework in place for compensating victims of oil pollution damage. However, improvements can be made to enhance the effectiveness of this regime[13]. For instance, Tanzania could strengthen its monitoring and enforcement mechanisms to ensure compliance with international standards. This could involve increased inspections and oversight of vessels operating within its waters, as well as better coordination with international bodies such as the IOPC Funds enhancing Tanzania's overall preparedness and response capabilities.

4.2 INTERNATIONAL INSTITUTIONS

International Maritime Organization (IMO)

The IMO has developed numerous conventions and protocols, including the International Convention for the Prevention of Pollution from Ships (MARPOL), the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), and the International Convention on Civil Liability for Oil Pollution Damage (CLC). MARPOL, for instance, consists of six annexes, with Annex I specifically addressing the prevention of pollution by oil. The OPRC Convention mandates that parties establish measures for dealing with oil pollution incidents, including the development of national and regional response plans. The IMO has played a pivotal role in coordinating international responses to oil spills, such as the Deepwater Horizon spill in 2010, by providing technical assistance and facilitating cooperation among member states[14].

International Oil Pollution Compensation Funds (IOPC Funds); The IOPC Funds were established under the 1992 Fund Convention and the Supplementary Fund Protocol. These funds provide compensation for oil pollution damage that exceeds the limits of the ship owner's liability under the CLC. The 1992 Fund Convention's Article 4 outlines the criteria for compensation,

[13] Dr. Gurumo S. Tumaini (2017) "*Legal frame work for marine oil pollution Control in Tanzania*" advance in social Research Journal

[14]Di Donato, P et al. "*Exploring marine environments for the identification of extremophiles and their enzymes for sustainable and green bioprocesses"* (2019) 11/149 Sustainability

while the Supplementary Fund Protocol enhances these provisions by increasing the available compensation limits. The IOPC Funds have been involved in numerous compensation claims, such as those following the Erika spill (1999) and the Prestige spill (2002), ensuring victims receive adequate financial redress.

Regional Seas Programme (RSP) - United Nations Environment Programme (UNEP); The RSP, coordinated by UNEP, involves regional conventions and action plans aimed at protecting marine and coastal environments. Examples include the Mediterranean Action Plan (MAP) under the Barcelona Convention and the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean. The Barcelona Convention's Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft (Dumping Protocol) outlines measures to prevent marine pollution. UNEP's RSP has facilitated regional cooperation in responding to oil spills, such as the collaboration in the aftermath of the MV Wakashio oil spill in Mauritius in 2020.

Global Initiative for West, Central, and Southern Africa (GI WACAF); the GI WACAF, a joint initiative of the IMO and IPIECA, aims to strengthen oil spill response capacity in West, Central, and Southern Africa. The initiative operates under the framework of the OPRC Convention and regional agreements. GI WACAF has supported capacity-building and response efforts in various African countries, enhancing preparedness and response capabilities for oil spill incidents.

United Nations Environment Programme (UNEP); the UNEP is established by the Regional Seas Conventions: UNEP oversees several Regional Seas Conventions aimed at preventing marine pollution, such as the Barcelona Convention (Mediterranean) and the Nairobi Convention (East African Coast). Further that, the UNEP's Oil Spill Contingency Planning: UNEP provides guidelines and support for oil spill contingency planning in various regions. Examples of Response is the Tanker Oil Spills in the Mediterranean: UNEP has been involved in response efforts and contingency planning for oil spills in the Mediterranean region, providing coordination and support for regional response activities.

4.3 NATIONAL LEGAL FRAMEWORK

The Constitution of the United Republic of Tanzania, 1977

The Constitution of United Republic of Tanzania serves as the supreme law of the land. This means that it takes precedence over all other laws within the country. Any law or action that contradicts the Constitution is considered null and void to the extent of its inconsistency. The supremacy of the Constitution is enshrined in Article 64(5) of the Constitution, which states that any law passed by the Parliament or any other authority that is inconsistent with the Constitution shall be void. This provision underscores the paramount authority of the Constitution in the legal hierarchy of Tanzania.

The First Schedule of the Tanzania Constitution lists the Union matters, which are areas under the jurisdiction of the Union Government. These matters are shared by both the Mainland Tanzania and Zanzibar, ensuring uniformity in governance across the Union. The listed Union matters include critical sectors such as foreign affairs, defense, and higher education. However, maritime affairs, specifically concerning port management and regulation, are not explicitly listed as Union matters. Maritime matters are inherently complex, as they often involve both international and domestic elements. In the context of Tanzania, while the Constitution does not explicitly list maritime affairs as a Union matter, the management of ports falls under a unique legal and administrative framework. The Tanzania Ports Act is a key piece of legislation governing port activities in both Mainland Tanzania and Zanzibar. This Act recognizes its applicability to Zanzibar, despite the Constitution's silence on maritime affairs as a Union matter[15].

The Merchant Shipping Act No. 21 of 2003 (MSA 2003);

The Act, particularly in Part XIX (sections 367-381), provides a comprehensive framework for the prevention of marine oil pollution. This legislative framework reflects Tanzania's commitment to addressing environmental concerns associated with shipping activities. Section 367 of the MSA 2003 [16] establishes the general framework for preventing marine pollution from ships. It aligns with international conventions such as the International Convention for the Prevention of Pollution from Ships (MARPOL) 1973/1978, which sets global standards for ship pollution. For instance, MARPOL Annex I, which deals with oil pollution, mandates measures for the control of oil discharges and operational pollution. By incorporating similar provisions, Tanzania ensures that its regulations are in harmony with global standards, enhancing the effectiveness of its marine pollution control measures.

Section 368[17], mandates the implementation of pollution prevention measures, including the requirement for ships to have oil pollution prevention equipment. For example, the requirement for oil-water separators and oil discharge monitoring systems mirrors the provisions of MARPOL Annex I. Globally, countries like the United Kingdom and the United States have stringent regulations for oil pollution prevention, supported by technologies such as the Oil Spill Response Plan and the Oil Pollution Act of 1990 (OPA 90). These regulations have led to significant reductions in oil spills and improved response strategies. By adopting similar measures, Tanzania can enhance its oil pollution prevention infrastructure and response capabilities.

Section 369[18], outlines the procedures and standards for the construction and equipment of ships to prevent pollution. This includes compliance with international standards and certification requirements. For example, the International Maritime Organization (IMO) provides guidelines for ship design and

[15] Tanzania Port Act, Cap 17 of 2004.
[16] The Merchant Shipping Act No. 21 of 2003 (MSA 2003)
[17] ibid
[18] Supra note.

equipment under MARPOL. Countries such as Norway have successfully implemented these standards, leading to lower rates of marine pollution. Tanzania can benefit from adopting such rigorous standards and ensuring that local shipyards and operators comply with these international benchmarks. Section 370 of the MSA 2003 provides for the inspection of ships to ensure compliance with pollution prevention measures. The United States, through the Coast Guard, and the European Union have robust inspection regimes that contribute to high compliance rates. By strengthening its inspection and enforcement mechanisms, Tanzania can ensure that ships operating in its waters adhere to pollution prevention standards.

Section 371-381, provides for Penalties and Liability, these sections detail the penalties and liabilities for non-compliance with pollution prevention measures. They establish fines and other penalties for violations, which serve as deterrents to potential offenders. Globally, countries like Australia and Canada have implemented stringent penalty regimes that effectively deter marine pollution. Tanzania can enhance its legal framework by adopting a similar approach, ensuring that penalties are sufficiently severe to encourage compliance and deter violations.

The Merchant Shipping (Oil Pollution Preparedness, Response, and Co-operation) Regulations, 2012; the regulation is crucial for addressing marine oil pollution in Tanzania. These regulations are designed to ensure preparedness, response, and cooperation in the event of oil spills within prescribed harbours, oil handling facilities, and offshore installations. The Regulations apply specifically to prescribed harbours and oil handling facilities, as well as offshore installations, which are defined as fixed or floating structures involved in oil and gas exploration, production, and the loading or unloading of oil. This broad application ensures that all critical points of potential oil pollution are covered.

The Merchant Shipping (Prevention of Oil Pollution) Regulations, 2012; the regulation plays a crucial role in the management and mitigation of marine oil pollution by providing comprehensive technical guidelines and regulations. These regulations are pivotal in ensuring that maritime operations adhere to stringent standards to prevent oil spills, which can have devastating effects on marine ecosystems and coastal environments. The regulations are designed in line with international conventions and standards, particularly the International Convention for the Prevention of Pollution from Ships (MARPOL). MARPOL sets global standards for the control of pollution from ships, including oil pollution. The Merchant Shipping (Prevention of Oil Pollution) Regulations, 2012, are Tanzania's implementation of MARPOL's[19] Annex I, which addresses the prevention of pollution by oil.

Tanzania Shipping Agencies Act, of 2017; This Act was enacted to provide a comprehensive legal framework for the regulation of shipping agencies and their operations within Tanzania. It aims to address various aspects of shipping and maritime activities, including the prevention and control of marine oil pollution. The Act incorporates provisions that align with international conventions, enhancing its effectiveness in managing environmental hazards. One of the primary sections relevant to marine oil pollution control is Section 60, which mandates shipping agencies to ensure compliance with environmental regulations and standards

The Act's requirement for compliance ensures that shipping operations adhere to global standards, enhancing its effectiveness in preventing oil spills and other forms of marine pollution. Furthermore, the Act establishes a framework for monitoring and enforcement, including the powers granted to the Tanzania Shipping Agencies Corporation (TASAC) under Section 4. The TASAC is responsible for overseeing the implementation of environmental regulations and conducting inspections to ensure compliance

The Environmental Management Act[20]; The Actis a comprehensive legislative framework designed to protect and manage the environment, including controlling marine oil pollution. The Act outlines responsibilities for various governmental bodies, mandates environmental impact assessments (EIAs) for projects likely to affect the marine environment, and establishes legal provisions to prevent and respond to environmental pollution, including oil spills. The effectiveness of the EMA in controlling marine oil pollution is evident through its broad scope, which integrates international environmental standards and provides a legal basis for holding polluters accountable. The Act mandates that any activity with potential environmental impact, including offshore oil exploration or shipping, must undergo a thorough EIA.

The Port Act, of 2004; The Act[21] is a significant legislative framework that governs the management and operations of ports in the country, including measures aimed at controlling marine oil pollution. The Act incorporates various provisions that align with international standards, such as the International Convention for the Prevention of Pollution from Ships (MARPOL), to ensure that ports adhere to practices that prevent and mitigate marine oil pollution. One of the strengths of the Port Act is its requirement for vessels to comply with pollution prevention measures, including the proper disposal of oil residues and the maintenance of equipment to handle oil spills. The Act also mandates port authorities to have contingency plans in place for responding to oil spills, including the availability of oil spill response equipment and trained personnel.

The Port Act's provisions on marine oil pollution raise constitutional questions, particularly concerning the delineation of maritime affairs between the Union Government and Zanzibar, specifically, section 2(1) of the Act. The Constitution of Tanzania does not explicitly list maritime matters as Union affairs, which

[19] International Convention for the Prevention of Pollution from Ships (MARPOL) of 1973

[20] No. 20 of 2004

[21] Cap 17 of 2004

leads to ambiguities in jurisdiction and enforcement. While the Port Act provides a framework for addressing marine pollution, its alignment with the constitutional provisions on maritime affairs is not clear-cut.

The Maritime Transport Act, of 2006; The Act[22], outlines a legal framework aimed at preventing marine oil pollution and addressing liabilities arising from such incidents in Tanzania Zanzibar. This framework plays a critical role in controlling oil pollution incidents by establishing clear liability rules for ship owners and defining the measures to be taken in the event of an oil spills. The Act emphasizes the liability of ship owners in the event of oil discharge or escape. Sections 291 and 292 establish liability for oil pollution from ships, placing the responsibility on ship owners to cover damages caused by oil discharge. This liability mechanism acts as a preventive measure, incentivizing ship owners to adopt safety and maintenance practices to avoid potential pollution incidents.

Zanzibar Maritime Transport Act, of 2009; The Act[23]plays a crucial role in controlling marine oil pollution by setting standards for the prevention, reduction, and control of pollution from ships and other maritime activities. In Tanzania Zanzibar, the effectiveness of this legislation in controlling marine oil pollution can be assessed through its provisions, enforcement mechanisms, and alignment with international standards. The Act provides a comprehensive legal framework for managing the risks associated with marine oil pollution. Among its key provisions are the requirements for ship owners to maintain pollution prevention equipment and to adhere to strict operational standards to minimize the risk of oil spills.

The Environment Management Act, of 2015; The Environment Management Act (EMA) of Zanzibar complements the Zanzibar Maritime Act by addressing the broader environmental implications of marine oil pollution. This Act provides a legal framework for the sustainable management of Zanzibar's natural resources and establishes mechanisms to prevent and control environmental pollution, including marine oil pollution. The EMA's relevance to marine oil pollution is primarily found in its sections on pollution control and environmental impact assessments (EIAs). The EMA requires that any project or activity that poses a potential risk to the environment must undergo a comprehensive EIA before it is approved.

4.4 NATIONAL INSTITUTIONAL FRAMEWORK

The National Environment Management Council; The National Environment Management Council (NEMC) in Tanzania plays a pivotal role in the regulation and enforcement of environmental laws, including the control of marine oil pollution. As the primary environmental authority in Tanzania, NEMC is tasked with monitoring compliance with environmental standards, coordinating responses to environmental emergencies, and prosecuting violations of environmental laws. Its effectiveness in controlling marine oil pollution is evident in its regulatory and enforcement actions, as well as its collaboration with other agencies and stakeholders.

Tanzania Ports Authority (TPA); The TPA is governed by the Tanzania Ports Authority Act, No. 17 of 2004. Section 7 outlines the responsibilities of the TPA, including the management of port facilities and pollution control. The TPA plays a critical role in managing port operations and preventing oil pollution. For example, during the 2017 port oil spill, TPA's involvement included managing the immediate response and coordinating clean-up efforts.

Tanzania Petroleum Development Corporation (TPDC); the Tanzania Petroleum Act, No. 21 of 2015, under Section 8 establishes the TPDC. TPDC is involved in the exploration and production of petroleum resources. It plays a role in ensuring that oil production activities comply with environmental safety standards, including preventing oil spills. In 2019, TPDC was involved in the response to an oil spill from an offshore exploration rig, working with TMA and NEMC to manage the clean-up and assess the environmental impact.

Tanzania Shipping Agencies Corporation; The Act, established the Tanzania Shipping Agencies Corporation (TASAC) with the objective of regulating and overseeing shipping activities in Tanzania. Section 4 of the Act, Establishes TASAC as the regulatory body responsible for overseeing the shipping industry and ensuring compliance with maritime laws. Section 6, Provides TASAC with the authority to monitor shipping activities, including pollution control measures, and Section 10 Empowers TASAC to enforce compliance with national and international maritime regulations, including those pertaining to marine pollution.

Tanzania National Oil Spill Response Organization (NOSRO); the organisation Created under the National Oil Spill Contingency Plan, which outlines the organizational structure and response protocols. The Plan provides guidelines for coordinating oil spill responses, including the establishment of NOSRO.NOSRO has been involved in coordinating responses to various oil spills, including a significant spill in 2019 involving a cargo ship in the Indian Ocean. The organization coordinated with other agencies and international bodies to manage the spill and mitigate its impact on marine ecosystems.

The National Marine Oil Spill Coordinating Committee; the committee is a comprehensive body tasked with overseeing marine pollution response in Tanzania. This committee includes representatives from a range of critical government bodies and stakeholders, ensuring a coordinated and effective response to oil spill incidents. The committee comprises representatives from the Office of the Vice President, the Office of the First Vice President Zanzibar, the Ministry responsible for shipping, and the Zanzibar Disaster Management Department. Other key participants include the National Environmental Management Council (NEMC), the Surface and Marine Transport Regulatory Authority, the Navy, the Police.

[22] The Maritime Transport Act, No. 5 of 2006
[23]Act No 3 of 2009

5.0 EFFECTIVENESS INDICATORS IN OIL POLLUTION MANAGEMENT

Beached Bird Surveys; beached bird surveys are a sensitive and cost-effective indicator of marine oil pollution. Seabird mortality, often linked to oil pollution, is documented through systematic surveys of dead seabirds along coastlines. For instance, surveys in the Grand Banks off Newfoundland revealed high rates of oiled feathers among dead birds, correlating with high chronic oil pollution levels (Wiese and Ryan, 2003). Similarly, Central California's Beach Watch program identified a significant increase in oiled birds during the 1997/98 El Niño event (Roletto et al., 2003). These surveys can reflect the effectiveness of pollution control measures, as seen in the North Sea and Polish beaches, where reduced illegal discharges corresponded with fewer oiled birds (Camphuysen, 1998; Wiese and Ryan, 1999).

Tar Ball Monitoring; Tar ball monitoring involves assessing beach deposits of tar balls—semi-solid fragments of weathered oil. These balls result from various pollution sources, including tanker operations and oil field leaks. Systematic surveys help track chronic oil pollution and identify pollution sources through chemical analysis. For example, studies in Israel between 1975 and 1985 showed a reduction in tar balls due to improved regulations (Golik and Rosenberg, 1987). While tar ball monitoring provides valuable data on pollution trends, it also has limitations due to the dynamic nature of tarball distribution and variability in concentrations (Owens et al., 2002)[24].

Aerial Surveillance; Aerial surveillance of oil spills is crucial for detecting and preventing illegal discharges from vessels and platforms. This method is widely used in areas like the North Sea and Baltic Sea, where dense shipping traffic poses significant pollution risks. For example, Belgium's aerial surveillance program, initiated in 1991, aims to deter illegal discharges and evaluate marine pollution (Volckaert et al., 2000). Despite its effectiveness, the number of illegal spills remains high, underscoring the need for ongoing surveillance and regulation.

Satellite Remote Sensing; Satellite remote sensing is a powerful tool for monitoring marine oil spills due to its broad spectral coverage and independence from weather conditions. Space-borne Synthetic Aperture Radar (SAR) is particularly useful for large-scale oil spill detection and monitoring (Espedal and Johannessen, 2000). SAR systems offer high spatial resolution and can detect oil spills regardless of daylight and cloud cover. Combining satellite data with aerial surveillance enhances monitoring capabilities, allowing for more effective enforcement of pollution control measures (Espedal and Wahl, 1999). Therefore, these indicators—beached bird surveys, tarball monitoring, aerial surveillance, and satellite remote sensing—each play a vital role in managing oil pollution and assessing the effectiveness of environmental policies

6.0 INADEQUACY OF THE EXISTING LAWS

Marine oil pollution poses a significant environmental threat globally, and Tanzania is no exception. Both mainland Tanzania and Zanzibar face challenges in effectively managing and preventing marine oil pollution due to inadequacies in their legal and institutional frameworks. These frameworks reveal several weaknesses, particularly in responding to pollution incidents and aligning with international conventions. The existing Laws to both Tanzania mainland and Tanzania Zanzibar exhibit several deficiencies, which are;

Legal Framework Disparities; The legal regimes governing marine oil pollution in Tanzania are split between the Union Government, which has authority over certain maritime issues, and the semi-autonomous government of Zanzibar, which exercises jurisdiction over its territorial waters. This division creates a fragmented legal framework where different laws and regulations apply depending on the geographical location of the pollution incident.

Inadequate Enforcement and Compliance Mechanisms; One of the key issues in Tanzania's legal regime for controlling marine oil pollution is the inadequacy of enforcement and compliance mechanisms. Both mainland Tanzania and Zanzibar struggle with limited resources and capacity to effectively monitor and enforce environmental regulations. This is exacerbated by the fact that marine oil pollution often occurs in remote areas where surveillance is difficult and expensive. In mainland Tanzania, the National Environment Management Council (NEMC) is responsible for enforcing environmental laws, including those related to marine oil pollution. However, NEMC's capacity is constrained by limited funding, lack of trained personnel, and insufficient equipment for monitoring and responding to oil spills.

Lack of Comprehensive Pollution Prevention Strategies; A significant inadequacy in Tanzania's legal regime for controlling marine oil pollution is the lack of comprehensive pollution prevention strategies. While there are laws and regulations in place, they tend to focus more on responding to pollution incidents rather than preventing them. This reactive approach is problematic because it does not address the underlying causes of marine oil pollution, such as inadequate waste management practices, insufficient infrastructure for handling hazardous materials, and lax regulatory oversight of shipping activities. For example, the Merchant Shipping Act and its accompanying regulations provide for the control of oil pollution from ships, but they do not sufficiently address the broader environmental management issues that contribute to pollution risks. There is also a lack of stringent requirements for oil spill contingency planning and preparedness, especially for smaller vessels and port facilities that may not be subject to the same regulatory scrutiny as larger operations.

Jurisdictional Challenges and Fragmentation; The division of responsibilities between the Union Government and the Zanzibar Government creates significant jurisdictional challenges and

[24]Supra Note

fragmentation in the legal regime for controlling marine oil pollution. The Constitution of Tanzania does not clearly delineate the roles of the Union and Zanzibar governments in maritime affairs, leading to overlapping responsibilities and gaps in enforcement. For instance, while the Union Government is responsible for international maritime obligations, including those under MARPOL; Zanzibar retains control over its territorial waters. This creates a situation where there existing conflicting regulations and enforcement practices between the two jurisdictions.

7.0 CONCLUSION

The study has demonstrated that Tanzania's legal framework for marine oil pollution is fragmented and lacks coherence. Mainland Tanzania and Tanzania Zanzibar operate under separate legal regimes, thus creating inconsistencies in the implementation and enforcement of pollution control measures. Both legal frameworks provide a foundation for pollution control, but their implementations are often inadequately enforced due to limited resources and capacity within institutions such as the National Environmental Management Council (NEMC), Tanzania Shipping Agencies Corporation (TASAC) and the Zanzibar Environmental Management Authority (ZEMA). This fragmentation is exacerbated by jurisdictional ambiguities, particularly where pollution incidents straddle territorial boundaries between Zanzibar and mainland Tanzania.

A significant shortcoming identified in the study is the lack of comprehensive pollution prevention strategies. Current regulations focus predominantly on response mechanisms rather than proactive prevention, leaving gaps in addressing underlying causes of marine oil pollution. For instance, the Merchant Shipping Act does not sufficiently cover pollution risks from smaller vessels or port facilities, and there is an absence of rigorous requirements for oil spill contingency planning.

8.0 RECOMMENDATION

Harmonization of Legal Frameworks: There is a need for greater harmonization between the legal frameworks of mainland Tanzania and Zanzibar. This could involve the development of a unified maritime pollution control law that applies across both jurisdictions, with clear delineation of responsibilities[25].

Strengthening monitoring and enforcement Capacity: Tanzania should enhance its capacity for monitoring maritime activities and enforcing international standards. This could involve increased inspections of vessels, improved surveillance systems, and stricter penalties for violations. Also, the environmental institutions of both Tanzania Mainland and Zanzibar require significant capacity building, including increased funding, training for personnel, and better equipment for monitoring and responding to oil spills.

Clarification of Jurisdictional Roles: The Constitution of Tanzania should be amended to clearly define the roles and responsibilities of the Union Government and the Zanzibar Government in maritime affairs. This would reduce jurisdictional conflicts and improve the coherence of the legal regime for marine oil pollution control.

Investment in oil spill response capabilities: Investing in infrastructure and resources for oil spill response is crucial. This includes acquiring specialized equipment, training personnel, and establishing regional response centers. Additionally, developing a comprehensive national oil spill contingency plan, as required by OPRC, would be highly beneficial.

Full implementation of international conventions and protocols: Tanzania should prioritize the full implementation of international conventions and protocols it has ratified, including MARPOL, OPRC, CLC, and the Fund Convention. This would involve incorporating their provisions into national legislation and establishing robust enforcement mechanisms.

Enhancing regional cooperation: Tanzania can significantly benefit from fostering regional cooperation with neighboring countries in the Indian Ocean region. Sharing resources, expertise, and best practices through regional agreements and initiatives can enhance collective preparedness and response capabilities. Examples include participating in the Global Initiative for West, Central, and Southern Africa (GI WACAF) and learning from established regional bodies like the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC).

Aligning national legislation with international best practices: Tanzania's national legislation should be reviewed and revised to align with the latest international protocols and best practices for oil spill prevention, preparedness, and response. This could involve adopting stricter liability limits for ship owners, similar to those implemented in developed countries.

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REFERENCES

1. Donald L. Chidowu's, The Blue Economy and Boundaries of Africa: A Legal Historical Analysis (2023) published by Juris Publishers Limited
2. Shivji, I.G, the legal foundation of the union in Tanzania's union and Zanzibar constitution. Dar. Dup
3. Di Donato, P et al. "Exploring marine environments for the identification of extremophiles and their enzymes for sustainable and green bioprocesses" (2019) 11/149 Sustainability
4. Marry, J, Challenges in marine oil pollution Control Governance in Tanzania (2020). Environmental Law Association

[25]Ibrahim Mbiu Bendera, *Admiralty and maritime law in Tanzania* (2017), Law Africa Publishing

5. Ibrahimu Mbiu Bendera, Regulation of ship safety in Tanzania: A critical assessment of the law and practices; masters of laws (LLM) dissertation, university of Dar es salaam 2006.
6. Zhu, L. "Compensation issues under the Bunkers Convention" (2008) 7 WMU Journal of Maritime Affairs
7. Dr. Gurumo S. Tumaini (2017) "Legal framework for marine oil pollution Control in Tanzania" advance in social Research Journal
8. John W. Farrington, Oil Pollution in the Marine Environment II: Fates and Effects of Oil Spills,| Tylor and Francis Journal 27 Jun 2014, **https://doi.org/10.1080/00139157.2014.922382"**
9. C. H. Peterson, "The Exxon Valdez Oil Spill in Alaska: Acute, Indirect and Chronic Effects on the Ecosystem," *Advances in Marine Biology* 39
10. J. A. Wiens, *Oil in the Environment: Legacies and Lessons of the Exxon Valdez Oil Spill* (Cambridge, UK: Cambridge University Press, 2013).
11. **https://www.tasac.go.tz accessed on 13 March 2024**
12. **https://www.worldbank.org accessed on 25 April 2024**

Tanzania Mainland

1. The Constitution of the United Republic of Tanzania, 1977
2. The Environmental Management Act, NO. 20 OF 2004
3. The Merchant Shipping Act No. 21 of 2003 (MSA 2003)
4. The Port Act, NO. 17. of 2004
5. The Merchant Shipping (Prevention of Oil Pollution) Regulations, 2012
6. The Merchant Shipping (Oil Pollution Preparedness, Response, and Co-operation) Regulations, 2012;

Tanzania Zanzibar

1. The Maritime Transport Act, No. 5 of 2006
2. Zanzibar Maritime Transport Act, of 2009
3. Zanzibar Environment Management Act, of 2015

List of Regional and International Instruments

International

1. The United Nations Convention on the Law of the Sea (UNCLOS) of 1982;
2. The International Convention for the Prevention of Pollution from Ships (MARPOL) of 1978;
3. The International Convention for the Prevention of Pollution of the Sea by Oil, commonly known as OILPOL
4. The International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Intervention Convention);
5. The International Convention on Oil Pollution Preparedness, Response, and Co-operation (OPRC);
6. The International Convention on Civil Liability for Oil Pollution Damage (CLC) 1992;
7. The International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992,
8. The Protocol of 2003 to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage,