

**REPORT OF THE REGIONAL CONFERENCE ON
IMPLEMENTATION OF THE 2023 IMO GHG STRATEGY AND
THE GREEN TRANSITION OF SHIPPING IN AFRICA HELD ON
6TH AND 7TH FEBRUARY 2025 IN MOMBASA, KENYA**



A Roadmap for Maritime Decarbonization and Just Transition in Africa.

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1. INTRODUCTION

The Regional Conference on Implementation of the 2023 IMO GHG Strategy and the Green Transition of Shipping in Africa was held on the 6th and 7th of February 2025 in Mombasa, Kenya, at the Sarova Whitesands Hotel.

The Republic of Kenya hosted the conference and was jointly supported by the International Maritime Organization (IMO) through the IMO GHG-TC Trust Fund and the Danish Maritime Authority (DMA).

1.1. Executive Summary

This document presents the key outcomes of the conference. The workshop aimed to advance discussions on maritime decarbonisation, strengthening sustainable shipping governance in Africa, sustainable port development, developing a sustainable and energy-efficient African fleet, accelerating alternative fuel production and availability, and promoting green corridors. In addition, the conference explored actions related to seafarer training and skill development, energy transition, green job creation, and the recognition of skills and recruitment opportunities for African seafarers.

The overall goal of the conference was to develop follow-up actions and a roadmap for Maritime Decarbonisation and a Just Transition in Africa. Key recommendations and follow-up actions are outlined below.

2. PARTICIPATING COUNTRIES

2.1. AFRICAN COUNTRIES REPRESENTED

Representatives of the following countries attended the Regional Conference on Implementation of the 2023 IMO GHG Strategy and the Green Transition of Shipping in Africa: Benin, Cabo Verde, Cameroon, Comoros, Congo, Congo (DRC), Cote D'Ivoire, Djibouti, Egypt, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea-Bissau, Guinea, Kenya, Lesotho, Liberia, Libya, Morocco, Madagascar, Malawi, Mauritius, Mozambique,

Namibia, Nigeria, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Uganda, United Republic of Tanzania and Zimbabwe.

2.2. INTERNATIONAL ORGANIZATIONS THAT ATTENDED THE CONFERENCE

International Maritime Organization (IMO), Maritime Organization for Eastern, Southern, and Northern Africa (MOESNA), Danish Maritime Authority, Danish Shipping, Association for women in the maritime sector in Eastern and Southern Africa (WOMESA), UN Conference on Trade and Development (UNCTAD), African Green Hydrogen Alliance, African Shipowners Association, Climate Champions Team, The International Power-to-X Hub, The International Transport Workers' Federation (ITF), African Development Bank, World Recruit Services Limited, GIZ, UN Foundation, European Commission, University College of London, Nigeria Chamber of Shipping, Climate Action Platform-Africa (CAP-A), Maritime Technology Cooperation Centre (MTCC) Africa, Trademark Africa, Port Management Association of Eastern and Southern Africa (PMAESA).

2.3. Opening Ceremony

The National Anthem of the Republic of Kenya and the African Union were performed.

The conference was officially opened by distinguished speakers, including;

Ms Devotha Mandanda, President of the Association for Women in the Maritime Sector in Eastern and Southern Africa (WOMESA)

Ms. Rikke Wetter Olufsen, Deputy Director General, Danish Maritime Authority.

Hon. Geoffrey Kaituko, Principal Secretary, State Department for Shipping and Maritime Affairs

Mr. Arsenio Dominguez, Secretary-General, International Maritime Organization (IMO)

Hon. Ali Hassan Joho, Cabinet Secretary, Ministry of Mining, Blue Economy, and Maritime Affairs, delivered a Keynote address, which was read by Hon. Geoffrey Kaituko.

Their remarks underscored the importance of maritime decarbonisation, the role of Africa in global efforts, and the need for strategic investment in green maritime solutions.

3. OBJECTIVES OF THE CONFERENCE

The workshop covered various themes, each addressing critical aspects of maritime decarbonisation.

3.1. Conference Objectives

The conference objectives were presented by Mr Michael Mbaru, Deputy Director of Marine Environment Protection at the Kenya Maritime Authority.

Mr Mbaru acknowledged the urgent need for maritime decarbonisation, aligning with the International Maritime Organization's (IMO) 2023 Revised GHG Strategy, which aims to reduce annual greenhouse gas (GHG) emissions from international shipping. He emphasised that the transition would require the adoption of low- to zero-emission fuels and technologies, necessitating specialised training for seafarers to handle emerging fuels such as hydrogen and ammonia, which were noted to pose safety risks.

He highlighted that Africa faced significant challenges in this transition. Some of these challenges include;

- a. Beneficial ownership in Africa represented less than 2% of the global fleet, with many of these vessels being ageing and energy inefficient.
- b. Most African ports lacked the necessary infrastructure to support alternative fuels such as hydrogen, ammonia, or LNG.

- c. Several African nations had yet to ratify or implement MARPOL Annex VI, which governs air pollution from ships.
- d. Securing capital for cleaner technologies and fleet modernisation remained a significant challenge for African governments and private shipping companies.
- e. It was estimated that by the mid-2030s, 800,000 seafarers would require additional training to operate new fuel technologies safely.

Despite these obstacles, he noted that Africa could leverage several opportunities in the maritime energy transition. He suggested that:

- a. The continent could attract investment in renewable energy and alternative fuel infrastructure.
- b. Africa could position itself as a global hub for the production of alternative fuels.
- c. Enhancing port infrastructure would improve Africa's competitiveness in international trade.
- d. The transition to sustainable shipping would generate green jobs in areas such as alternative fuel handling, ship retrofitting, and emissions monitoring.
- e. Strengthening partnerships with organisations such as the IMO, the African Union, the European Union, and regional economic blocs would be essential for coordinated action.

Participants were informed that the conference was structured to develop practical and implementable strategies for maritime decarbonisation in Africa, focusing on the following areas:

- a. Strengthening governance frameworks to support sustainable shipping.
- b. Promoting sustainable port development and encouraging an energy-efficient African fleet.
- c. Accelerating the production and adoption of alternative fuels.
- d. Green corridors should be developed to facilitate green shipping routes.
- e. Enhancing training and skills development for seafarers to support the energy transition.

- f. Creating employment opportunities and improving recruitment for African seafarers.

The participants were further informed that a follow-up action document would be developed at the end of the conference. Kenya, as the host country, planned to submit this document to future IMO meetings and other international forums, ensuring that Africa's role in maritime decarbonisation remained a key priority on the global agenda.

3.2. Updates and the Current State of Shipping in Africa

3.2.1 Update on relevant AAMA resolutions on Africa's role in the reduction of GHG emissions from international shipping

This session was presented by **Mr. John Omingo**, representing Kenya as the current Chair of the Association of African Maritime Administrations (AAMA).

The presentation provided updates on relevant AAMA resolutions concerning Africa's role in reducing greenhouse gas (GHG) emissions from international shipping.

AAMA highlighted its role as the coordinating body for maritime administrations in Africa, working towards enhancing marine safety and security, environmental sustainability, capacity building, compliance with international frameworks, and economic development within the blue economy.

The presentation covered green shipping opportunities, including climate change mitigation, job creation in renewable energy and shipbuilding, port modernisation, and the development of green fuel production hubs (e.g., LNG, green hydrogen, and ammonia). It also emphasised the potential for regional collaboration through the African Continental Free Trade Agreement (AfCFTA) and the development of eco-friendly inland waterways.

However, challenges such as high costs of developing infrastructure, infrastructure gaps, incompatibility with new requirements, technological uncertainties, limited

financial support, and the slow adoption of digitalization were identified as key barriers to green shipping in Africa.

The AAMA Member States outlined their priorities, including a just and inclusive energy transition, financial assistance, technology transfer, integrating decarbonisation into the broader blue economy, incentives for green financing, and capacity-building initiatives.

The presentation also detailed **AAMA resolutions on decarbonisation**, which commit to:

- a. Active engagement in IMO GHG discussions to ensure the implementation of just and equitable measures.
- b. Fast-tracking the ratification of MARPOL Annex VI.
- c. Supporting the IMO GHG 2050 agenda while addressing food security concerns in Africa.
- d. Adopt digital solutions (AI-driven logistics, route optimisation, and innovative shipping technologies to enhance fuel efficiency and reduce emissions
- e. Strengthening technology transfer and renewable energy capacity building.
- f. Green financing mechanisms, including incentives, subsidies and green financing options
- g. Integration of decarbonisation into broader Blue Economy strategies
- h. Capacity building and training
- i. Developing national action plans for decarbonisation.

Additionally, other **AAMA resolutions** were discussed, focusing on workforce training, sustainable financing, maritime safety enhancement, improved governance, the ratification of the Revised African Maritime Transport Charter (2010), and gender diversity action plans.

The session emphasised Africa's commitment to green shipping and the need for strong global partnerships to drive an inclusive, sustainable transition in maritime transport.

3.2.2 Shipping in Africa: state-of-play, trends, and projections in maritime trade and port operations

This session was presented by **Ms Frida Youssef**, Chief Transport Section, Trade and Logistics Branch, Division on Technology and Logistics, UN Conference on Trade and Development (UNCTAD)

The presentation provided insights into the current state of Africa's maritime trade, its challenges, and opportunities alongside global shipping trends that impact the continent.

UNCTAD outlined key global shipping trends, emphasising growing volatility, complexity, and uncertainty in the maritime transport sector, intensified by:

- a. Economic uncertainty stemming from the global economic slowdown, inflationary pressures, and trade protectionism has impacted global demand for shipping.
- b. Geopolitical tensions arising from ongoing conflicts, including the war in Ukraine, tensions in the Middle East, and the crisis in the Red Sea, have disrupted major trade routes, resulting in increased freight costs and the rerouting of vessels.
- c. Climate change risks, including rising sea levels, extreme weather events, and stricter environmental regulations, are affecting shipping routes and infrastructure investments.
- d. Disruptions at key global trade chokepoints, such as the Suez Canal, Panama Canal, and the Red Sea, have led to increased shipping delays, congestion, and hikes in freight rates.

Impacts on African Trade and Shipping

Africa's maritime trade has been significantly impacted by global shipping disruptions, particularly in Eastern and Southern Africa, which rely heavily on the Suez Canal and the Red Sea for trade. Key impacts include:

- a. Trade Disruptions in African countries such as Djibouti (31%), Sudan (34%), Kenya (15%), and Tanzania (10%) have faced supply chain disruptions due to diminished vessel traffic through the Suez Canal.
- b. Increased Freight Costs and Delays due to rerouting cargo around the Cape of Good Hope have resulted in a 40-60% increase in shipping distances, leading to delays, congestion at alternative ports, and higher costs for imports and exports.
- c. Port Congestion in Southern Africa, resulting from a surge in vessel traffic at South African ports, has created bottlenecks. Meanwhile, ports in Madagascar, Mauritius, Namibia, Mozambique, Kenya, and Tanzania are emerging as viable alternatives for transshipment and bunkering services.
- d. Shipping delays have impacted food security and trade, particularly for perishable goods such as tea, coffee, and avocados, resulting in supply shortages and price increases.
- e. The rise in GHG Emissions as a consequence of rerouting vessels has caused a 20% increase in shipping-related greenhouse gas (GHG) emissions over the past decade, posing further regulatory and environmental challenges.

Africa's Maritime Sector: Current Trends and Developments

Despite these challenges, Africa's maritime sector has seen growth in port activity and trade connectivity. Key developments include:

- An increase in port calls between 2018 and 2023, where container ship port calls rose by 20%, while tanker port calls surged by 38%, reflecting Africa's expanding role in global shipping.
- Shipping connectivity is improving as African ports continue to enhance their connectivity, with countries such as Morocco, Egypt, and South Africa ranking among the top 10 in Africa for liner shipping connectivity.

- Ship registration growth, which has seen Liberia maintain its status as the world's largest ship registry, accounting for 17.3% of the global fleet in deadweight tonnage (DWT). Other notable registries include Cameroon and Nigeria, which have recorded steady growth in fleet registration.
- The African Continental Free Trade Agreement (AfCFTA) is expected to increase intra-African freight by 28% and maritime freight demand by 62%, creating new opportunities for shipping and port development.

Green Transition and Infrastructure Needs

UNCTAD highlighted Africa's potential for maritime decarbonisation and green shipping, emphasising the need for:

- Green hydrogen and renewable Energy – Several African countries, including Djibouti, Egypt, Ghana, Namibia, Morocco, and South Africa, are emerging as hubs for the production, storage, and transportation of green hydrogen.
- Sustainable port infrastructure – Investments in renewable energy at ports in Mauritius, Morocco, Namibia, South Africa, and Togo are helping drive sustainable shipping practices.
- Digitalization and innovative port initiatives – Adoption of AI-driven logistics, route optimisation, and digital platforms to improve efficiency and reduce emissions.

UNCTAD's Technical Assistance and Capacity Building

UNCTAD highlighted its ongoing support for African maritime development through:

- Resilient Maritime Logistics – Capacity-building programs for African ports to enhance risk management and supply chain resilience.
- Sustainable Freight Transport Framework – A structured approach to measuring emissions and implementing green logistics.

- Smart Port Solutions – Development of AI-driven maritime technologies and sustainable energy initiatives for African ports.
- Public-Private Partnerships (PPPs) – Supporting infrastructure financing models to enhance maritime connectivity and facilitate trade.
- Collaboration with IMO and Global Partners – Engagement in comprehensive impact assessments for maritime decarbonization and regulatory compliance.

Policy Recommendations for Strengthening Africa’s Maritime Sector

To address the current challenges and unlock Africa’s maritime potential, UNCTAD proposed several policy measures:

- Investing in port modernisation through upgrades to port infrastructure, capacity expansion, and the adoption of digital technologies is crucial for reducing congestion and enhancing efficiency.
- Strengthening regional cooperation among African nations to enhance collaboration on maritime security, trade facilitation, and supply chain resilience, thereby mitigating external disruptions.
- Decarbonization and climate resilience, where Africa must prioritise green shipping solutions, carbon pricing strategies, and investment in alternative fuels to ensure compliance with evolving international regulations.
- Enhancing trade facilitation and logistics through initiatives such as the East African Community’s Single Customs Territory and One-Stop Border Posts, which help streamline trade processes and reduce transit times.
- Monitoring market trends and adapting policies through continuous tracking of freight rates, supply chain disruptions, and climate-related risks will help African countries develop long-term maritime strategies.

In conclusion, the presentation reinforced the critical role of shipping in Africa's economic transformation, trade growth, and sustainability agenda. While geopolitical tensions and climate risks pose challenges, strategic investments in port modernisation, digitalisation, regional cooperation, and green shipping solutions can position Africa as a competitive player in global maritime trade. UNCTAD remains committed to supporting Africa's maritime sector through technical assistance, policy guidance, and capacity-building initiatives.

3.3. Towards developing an African maritime decarbonisation needs assessment and action plan

3.3.1. Results of the pre-workshop questionnaire.

A pre-workshop questionnaire was circulated to IMO member states that had confirmed participation in the workshop to assess the challenges, ongoing initiatives, planned actions, and areas of regional cooperation related to the implementation of the 2023 IMO Greenhouse Gas (GHG) Strategy in Africa. **Dr. Harry Conway**, Chair of the IMO Marine Environment Protection Committee, presented a summary of the results of the questionnaire. These results provided critical insights into the current landscape of maritime decarbonisation efforts across the continent.

Key Challenges in Implementing the IMO 2023 GHG Strategy

Participants were asked to identify the two primary challenges their countries face in implementing the IMO 2023 GHG Strategy and advancing the green transition of shipping in Africa. The responses highlighted the following significant barriers.

1. Financial Limitations

The majority of the respondents (62%) highlighted financial constraints as the major challenge. Difficulty in securing funds for port modernisation, the introduction of alternative fuels, and the acquisition of energy-efficient vessels. Limited access to climate finance and sustainable investment opportunities for green maritime projects.

2. Technical Capacity Constraints

Sixty-two per cent (62%) of the respondents also noted Technical Capacity Constraints as another significant barrier. Inadequate port infrastructure for low-carbon fuels, such as LNG, hydrogen, and ammonia. Skill deficit among maritime officers, leading to limited expertise in GHG monitoring, energy efficiency technologies, and alternative fuel systems. Slow adoption of digitalisation and innovative shipping technologies.

3. Regulatory and Policy Gaps

Forty-seven per cent (47%) of respondents noted regulatory and policy challenges, including delays in ratifying and implementing MARPOL Annex VI, which is crucial for enforcing GHG reduction measures. Weak integration of IMO climate regulations into national maritime laws and inconsistent policies result in delays in policy enforcement and private sector engagement.

These challenges hinder the implementation of the IMO 2023 GHG Strategy and slow the transition to sustainable maritime transport in Africa.

Ongoing Actions by African States

When asked about national initiatives currently being implemented to reduce GHG emissions from shipping, respondents identified two key focus areas:

1. Strengthening Policy and Regulatory Frameworks

- Several African states are in the process of ratifying MARPOL Annex VI.
- Revision of Merchant Shipping Acts to include climate-focused regulations.
- Development of National Action Plans (NAPs) for maritime decarbonisation.

2. Capacity Building and Awareness Initiatives

- Training programs for port authorities, ship operators, and regulators on emerging IMO climate regulations.

- Awareness campaigns to encourage stakeholders to adopt low-emission shipping technologies.

Planned Actions for GHG Reduction

Countries also shared their plans to advance maritime decarbonisation, with the following priority areas:

1. Legal and Policy Reforms

- Establishment of clear regulatory frameworks for maritime decarbonisation.
- Fast-tracking the ratification and implementation of MARPOL Annex VI.

2. Development of Green Maritime Infrastructure

- Investment in green corridors to facilitate low-carbon shipping routes.
- Expansion of LNG bunkering facilities, shore power infrastructure, and renewable energy-driven port operations.

Areas of Support & Regional Collaboration

Respondents were asked to identify the key areas where external support and regional cooperation are needed to accelerate decarbonisation.

The key areas of support are:

1. Technical Assistance (25%) – Need for expert guidance on alternative fuels, energy efficiency, and climate reporting.
2. Capacity Building & Training (26%) – Upskilling maritime professionals in GHG monitoring, emissions reduction strategies, and the adoption of green technology.
3. Financial Support (25%) – Assistance in mobilising funds from climate finance mechanisms, development banks, and private investors.

4. Infrastructure Development (14%) – Support for developing low-carbon maritime infrastructure, ship retrofitting programs, and digital solutions to enhance fuel efficiency.
5. Policy & Regulatory Guidance (10%) – Harmonizing national climate policies with IMO requirements and enhancing private sector engagement.

As regards to Regional Collaboration Opportunities,

1. *The majority (72%)* see strong potential for joint infrastructure projects and harmonised regulations to facilitate cross-border green shipping initiatives.
2. Opportunities to work through regional bodies such as the African Union (AU) and other bodies to:
 - Share best practices on climate adaptation strategies.
 - Establish regional climate finance mechanisms.
 - Strengthen Africa’s voice in IMO negotiations on GHG reduction measures.

Recommendations from Breakout Discussions

Participants attended breakout sessions to explore ways to enhance regional and sub-regional collaboration. The breakout session discussions focused on how African states can collaborate more effectively at the regional and sub-regional levels to facilitate the green transition of shipping and implement the IMO 2023 GHG Strategy. The key themes that emerged from these discussions include policy harmonisation, capacity building, financing, infrastructure development, and regional cooperation.

1. Strengthening Regional Collaboration and Policy Harmonization

- Participants emphasised the need for harmonised policies and standardised regulatory frameworks across African countries to ensure coordinated implementation of MARPOL Annex VI and other IMO decarbonisation measures.

- It was agreed that governments should jointly develop maritime decarbonisation policies and ensure their alignment with regional economic blocs such as ECOWAS, EAC, SADC, and AU initiatives.
- Countries highlighted the need to develop regional action plans that take into account the varying levels of readiness among states and define clear implementation roadmaps.
- A unified African voice at the International Maritime Organization (IMO) was identified as crucial for ensuring that Africa's unique challenges and priorities are adequately represented in global maritime climate negotiations.

2. Capacity Building and Knowledge Sharing

- There is a need to enhance regional training programs for maritime professionals, policymakers, and port authorities on GHG monitoring, alternative fuels, and energy efficiency.
- Participants advocated for the sharing of best practices and technical expertise between countries, with some states already ahead in implementing green port initiatives and alternative fuel strategies.
- It was suggested that joint sub-regional research projects on smart shipping, port modernisation, and emissions tracking be undertaken to strengthen evidence-based policymaking.

3. Financing the Green Transition

- Countries recognised the high cost of decarbonisation and emphasised the need for regional collaboration in mobilising climate finance, including through joint funding applications to international development banks and climate funds.
- Governments were encouraged to create investment-friendly policies to attract private sector participation in green shipping initiatives.

- Institutions such as MTCC-AFRICA, AAMA, PMAESA, MOESNA and regional and sub-regional maritime authorities were identified as key players in coordinating financial and technical support for Africa's green transition.

4. Infrastructure Development and Technological Innovation

- There is a need to invest in green port infrastructure, energy-efficient port facilities, alternative fuel bunkering hubs, and shore power technology to support the transition to low-carbon shipping.
- Countries emphasised the importance of establishing green corridors that facilitate low-emission trade routes within the continent.
- The adoption of digital platforms to track emissions, improve port efficiency, and monitor progress on climate action was recommended.

5. Enhancing Regional Coordination and Institutional Collaboration

- African states should strengthen diplomatic ties and engage in structured regional and sub-regional agreements for joint regulatory enforcement and policy implementation.
- There was a strong call for collaboration between neighbouring countries to ensure that decarbonisation efforts do not create market distortions or regulatory disparities.
- Participants proposed the establishment of regional monitoring and evaluation frameworks to track progress on maritime decarbonisation and hold stakeholders accountable.

4. THEME 1: SUSTAINABLE SHIPPING GOVERNANCE

4.1. Summary of Introductory Presentations

Mr Camille Bourgeon from the International Maritime Organisation (IMO) presented an overview of the current status of the implementation of the 2023 IMO Greenhouse Gas (GHG) Strategy. It focused on regulatory developments, technical cooperation, and the impacts of decarbonisation on maritime stakeholders in Africa.

The presentation highlighted that shipping is the most energy-efficient mode of long-distance cargo transportation but still accounts for 2 to 3% of total anthropogenic GHG emissions, according to the Fourth IMO GHG Study (2020). With increasing pressure for climate action, the IMO has expedited measures to ensure a progressive reduction in GHG emissions from shipping, aligning with the objectives of the Paris Agreement.

The 2023 IMO GHG Strategy is a landmark commitment to phasing out GHG emissions from shipping as soon as possible while ensuring a just and equitable transition. The strategy provides a framework for action, covering technical measures, economic incentives, safety and human elements, and the need for capacity-building in developing countries.

The IMO's ongoing climate actions encompass initiatives to enhance energy efficiency, fuel transition mechanisms, and impact assessments. The presentation outlined the execution of short-term measures, including the Energy Efficiency Existing Ship Index (EEXI), the Carbon Intensity Indicator (CII), and the Ship Energy Efficiency Management Plan (SEEMP).

The 2023 IMO GHG Strategy foresees the adoption of a "basket of candidate measures" to achieve full decarbonisation under the IMO Net-Zero Framework. These measures include a technical element and an economic element.

A key issue in implementing the IMO's decarbonization strategy is its economic impact on developing states, particularly in Africa. The Comprehensive Impact Assessment

(CIA) of mid-term measures was conducted by WMU, DNV, UNCTAD, and Star crest under the oversight of IMO Member States observed that;

- a. Potential cost increases due to decarbonisation measures could impact Africa's GDP.
- b. African nations expressed concerns about the potential impact on food security and trade competitiveness.
- c. Further work is required to assess policy scenarios and develop targeted mitigation strategies.

The presentation detailed the development of the IMO's Life Cycle GHG Assessment (LCA) Framework, which is essential for evaluating the actual carbon footprint of alternative fuels. Current IMO regulations focus only on Tank-to-Wake emissions (emissions from fuel combustion). The LCA framework expands this approach to Well-to-Wake emissions, considering the upstream production emissions of fuels such as hydrogen, ammonia, and biofuels.

The presentation highlighted that decarbonisation introduces new safety risks and training needs for seafarers and ship operators. The IMO is working on developing a safety regulatory framework for alternative fuels, including interim guidelines for ships using ammonia and hydrogen, enhancing training programs for seafarers under the IMO's Human Element, Training, and Watchkeeping (HTW) Sub-Committee and participating in the Maritime Just Transition Task Force (MJTTF) to support workforce adaptation to alternative fuel operations.

A significant part of the presentation focused on technical cooperation and capacity-building initiatives to support the implementation of the 2023 IMO GHG Strategy in developing countries, which include;

- a. The IMO Integrated Technical Cooperation Programme (ITCP) provides support to African states for the ratification and enforcement of MARPOL Annex VI.

- b. Special attention is given to Africa, Small Island Developing States (SIDS), and Least Developed Countries (LDCs) to ensure a just transition.
- c. The IMO's Partnerships and Projects are further supporting the implementation of the 2023 IMO GHG Strategy and work to develop funding and investment opportunities with international stakeholders.

These efforts aim to bridge the capacity gap and ensure that African states fully benefit from the global shift to green shipping.

In conclusion, the presentation highlighted the significant steps taken by the IMO to implement the 2023 GHG Strategy, outlining regulatory updates, technical frameworks, and capacity-building efforts.

4.2. Breakout sessions

Following the presentation, participants engaged in breakout sessions on ratifying MARPOL Annex VI, formulating National Action Plans, and fostering sub-regional cooperation. The sessions produced actionable recommendations for implementation.

4.3. Breakout session regarding the ratification and implementation of MARPOL Annex VI

The session was attended by countries that had and had not ratified MARPOL Annex VI. Participants were informed that various States had taken steps and expressed an intention to ratify MARPOL Annex VI. Various states intimated that they had a policy in place, whereas others intimated that the policies were before the Cabinet and were awaiting approval.

This session focused on the challenges and opportunities for increasing the ratification of MARPOL Annex VI by African countries. Participants discussed barriers to implementation, including regulatory gaps, capacity constraints, and enforcement challenges. Strategies to accelerate ratification and ensure effective enforcement were explored.

The session highlighted specific challenges that countries are facing in ratifying, domesticating and implementing MARPOL Annex VI, which they mentioned as;

- a. Unclear understanding of the benefits from ratification of MARPOL Annex VI
- b. Competing priorities and interests within their countries.
- c. Inadequate political support and commitment
- d. Inadequate awareness at various levels, e.g., politicians, parliament, ministry of justice, and stakeholders, among others;
- e. Institutional instability;
- f. Unclear competency distribution and working in silos within the institutions;
- g. Unclear which Ministry should take the lead;
- h. Limited legal capacity and expertise to develop and draft the needed framework;
- i. Inadequate human and technical capacity to implement and enforce the provisions;
- j. Unclear what will be the obligations of the country as a Party;
- k. Complicated national processes towards ratification and implementation;
- l. Budgetary constraints.

The session further discussed various support mechanisms (technical, financial, or policy-related) needed to overcome the barriers that included;

- a. IMO technical cooperation activities on MARPOL Annex VI;
- b. Country-specific assistance by IMO to progress the ratification and, where possible, drafting of legal instruments (make this conditional to participation by all administrations taking part in the process, e.g., transport, environment, climate, justice);
- c. Capacity-building at the technical level, including port state control and enforcement;
- d. Develop IMO material to highlight the benefits, requirements, and concrete tools for ratification and implementation (e.g., 'MARPOL Annex VI How to do it', handbooks, manuals, communication materials, etc.).

- e. Financial support for infrastructure, e.g., installation of land-based emissions monitoring systems in ports/coastal regions
- f. Develop/enhance platforms for regional and sub-regional knowledge sharing
- g. Opportunities for staff training at institutions such as WMU, IMLI, regional training institutions

4.4. Breakout session regarding developing a National Action Plan for GHG Reduction

This session examined the steps necessary to develop and implement National Action Plans (NAPs) for reducing greenhouse gas (GHG) emissions in the maritime sector. Participants shared insights on policy frameworks, funding mechanisms, and the importance of stakeholder collaboration. Participants identified country-specific priorities and challenges.

The key challenges in initiating and developing the National Action Plan (NAP) that were highlighted include;

- a. Inadequate awareness amongst the different stakeholders on developing NAPs
- b. Limited institutional and technical capacity for the development of NAPs
- c. There is a lack of political will in different countries
- d. Data gap limitation and analysis tools constraints for developing baseline emission inventories.
- e. Engagement of the private sector in the NAP stakeholders and NAP discussions
- f. Uncertainty regarding technology and fuel availability for planning purposes.
- g. Alignment with existing policies relating to GHG emission reduction strategies
- h. Financial and Budget constraints
- i. Poor interagency communication and coordination within different agencies, as well as conflicting mandates regarding GHG Reduction.

- j. Legal and regulatory barriers

The session further discussed the critical elements to ensure that the NAP is practical, Inclusive, and aligned with existing national strategies and are outlined as follows;

- a. In-depth stakeholder engagement and inclusivity with the different MDAs
- b. Massive awareness is created among the different stakeholders, especially in the maritime sector
- c. Evidence-based decision-making using data from baseline assessments
- d. Clear goals and measurable, implementable targets
- e. , Integration of sector policies into national policies whilst formulating the NAP
- f. Monitoring, Reporting and Verification (MRV) implementation mechanism
- g. Selection of a lead agency to drive the NAP development process
- h. Stakeholder capacity building and institutional strengthening to ensure that no one is left behind.
- i. Agree on a country's vision for emission reduction
- j. Political leaders' support and will in the IMO ongoing resolutions and development of NAP
- k. KThere is a need for a financial mechanism/strategy to implement the NAP
- l. There is a need to develop an implementation plan for the NAP.
- m. Integration of other sectors

How to improve national and regional coordination before IMO meetings

Participants outlined the challenges they face in realising national, sub-regional, and regional coordination before IMO meetings. The following challenges were discussed.

- a. Financial constraints required for coordination
- b. Inadequate structures for coordination
- c. Level of awareness of IMO processes for adequate contribution
- d. Shifting representation from the African member states
- e. , Lack of national, sub-regional and regional collaboration
- f. Need for an African coalition for greener shipping
- g. AAMA need to step up and provide structures for coordination.

Recommendations for enhanced coordination

- a. Link AMAG to the national policy and decision-makers for a unified position
- b. Establish within AAMA thematic committees corresponding to the IMO committees to handle specific issues.
- c. Alignment among heads of state to promote common African interests and mandates, thereby coining a unified position.
- d. Feedback mechanisms from those participating are used to provide feedback on the negotiations
- e. Increase permanent representation at the IMO
- f. Establish an African coalition for greener shipping
- g. The Association of African Maritime Administrations (AAMA) can play a significant role in coordinating African members' efforts towards IMO negotiations.
- h. Effective collaboration and coordination at the national, sub-regional and regional level

5. THEME 2: SHIPPING AND PORT INFRASTRUCTURE DEVELOPMENT

The discussions centred on sustainable port development, energy-efficient African fleets, and alternative fuel production. Participants provided insights into investment opportunities and policy requirements.

5.1. Summary of Introductory Presentations

In introducing this theme, The African Shipowners Association (ASA), represented by Mr. Juvenile Shiundu, presented the state of Play in African Shipping. The presentation outlined the current status of Africa's shipping sector, emphasising its potential to play a key role in the global green transition. While Africa's coastline and ports offer significant opportunities for economic growth through maritime trade, the lack of investment in modern infrastructure and fleet renewal poses a considerable challenge. Key issues raised included the ageing African fleet, which requires urgent modernisation and the adoption of low-emission vessels, the inadequate port infrastructure to support alternative fuel bunkering, shore power, and energy-efficient logistics, as well as the fragmentation of policies and regulations across the continent, making it challenging to implement green shipping initiatives effectively.

The presentation outlined key challenges in African Shipping & Port Infrastructure that currently hinder the advancement of green shipping in Africa, including:

- a. Lack of green port infrastructure, where several African ports lack the necessary infrastructure for LNG bunkering, shore-side electricity, and renewable energy integration. Limited investments in port modernisation are slowing down Africa's transition to energy-efficient maritime transport.
- b. The majority of African-owned vessels are older, less fuel-efficient, and highly polluting, requiring urgent upgrades or replacements. Shipowners face high capital costs in acquiring new energy-efficient vessels.
- c. The adoption of cleaner fuels such as LNG, biofuels, hybrid, and electric propulsion systems remains slow due to infrastructure and regulatory gaps. There is uncertainty about fuel availability, pricing, and compatibility with existing fleets.
- d. There is a lack of trained maritime professionals with expertise in GHG reduction, energy-efficient ship operations, and alternative fuel technologies.

- e. Limited investments in local shipbuilding and repair facilities restrict Africa's ability to develop a self-sustaining maritime industry.
- f. Lack of regional coordination in implementing IMO's greenhouse gas (GHG) regulations, including MARPOL Annex VI.
- g. Limited public-private partnerships (PPPs) to fund and implement sustainable shipping projects.

ASA proposed a set of key strategic approaches and policy recommendations to accelerate Africa's green shipping transition that includes;

- a. Establish green shipping corridors, where low-emission ships operate between ports, with the necessary infrastructure for alternative fuels and energy efficiency measures.
- b. Regional cooperation should be strengthened to ensure that African ports and shipping routes align with global decarbonisation targets.
- c. Enhancing investment in shore power facilities, enabling ships to reduce emissions while docked.
- d. Encouraging the adoption of newer, energy-efficient vessels through financial support, incentives and technical support.
- e. Supporting shipowners in transitioning to sustainable fuel sources, including biofuels, hydrogen, and ammonia.
- f. Investing in African shipyards to support local ship construction, retrofitting, and maintenance.
- g. Establish regional maritime training centres to focus on reducing GHG emissions, energy efficiency, and alternative propulsion systems, as well as expanding training programs to equip African seafarers with skills in green shipping technologies and sustainable fleet management.
- h. Promoting greater collaboration between governments, regional organisations, and private sector players in green shipping initiatives.
- i. Identifying financing mechanisms such as climate funds, green bonds, and concessional loans to support green maritime projects.

- j. Encouraging regional banks and development institutions to prioritise investment in sustainable shipping initiatives.
- k. Promoting incentives for shipowners to adopt energy-efficient technologies and cleaner fuels.

Mr. Stanley R. K. Ahorlu, President of the Ghana Chamber of Shipping, presented “A Sustainable African Shipping Industry: Obstacles, Opportunities, and the Way Forward.” The presentation examined the current state of Africa’s maritime transport sector, highlighting key structural inefficiencies and opportunities for transformation.

Key Challenges Identified:

- a. **Dependence on External Shipping Services:** Africa remains a net importer of shipping services, with minimal ownership of maritime assets and a system that has historically been structured to facilitate the export of raw materials and the import of consumer goods.
- b. **Fragmented Policies & Lack of Coordination:** The maritime sector lacks regional policy harmonisation and suffers from ineffective coordination among African nations, limiting the implementation of sustainable shipping practices.
- c. **High Freight Costs:** Africa experiences disproportionately high shipping costs compared to other global regions, mainly due to inefficient connectivity and an over-reliance on foreign shipping lines.
- d. **Limited Private Sector Participation:** The sector remains primarily state-driven, resulting in inefficiencies and limiting private sector investment in sustainable shipping infrastructure and fleet modernisation.
- e. **Weak Linkages Between Ports and Trade Hubs:** There is an inadequate connection between African production centres, industrial zones, and ports, leading to bottlenecks in intra-African trade and logistics inefficiencies.

To address these challenges, the presentation proposed the establishment of a “Common African Maritime Transport Corridor (CAM-Corridor)” based on the following:

- The Trans-African Cabotage Policy (Article 15 of the Revised African Maritime Transport Charter).
- The Combined Exclusive Maritime Zone of Africa (CEMZA) (Chapter XII (a) of the AU’s 2050 AIM Strategy).

The CAM-Corridor seeks to promote intra-African trade, reduce freight costs, and enhance Africa’s maritime self-sufficiency through the development of:

- A sustainable, fit-for-purpose African merchant fleet owned and operated by African companies.
- Energy-efficient, short-sea shipping networks along Africa’s coastline and inland waterways.
- A regulatory framework that supports African-registered ships, while allowing individual states to manage long-haul international shipping in accordance with their policies.

The presentation highlighted several strategic advantages of the CAM-Corridor:

- a. Enhancing intra-African trade under the AfCFTA through the full implementation of the African Continental Free Trade Agreement (AfCFTA) is expected to increase demand for shipping services by over 60%.
- b. Establishing an African-controlled merchant fleet is essential for securing regional supply chains and reducing dependence on foreign shipping services. This initiative will increase employment opportunities for African seafarers and create a thriving indigenous maritime industry.

- c. The CAM-Corridor will provide cost-efficient and environmentally sustainable transportation, boosting trade while lowering emissions. A robust regional shipping industry will enhance Africa's capacity to respond to geopolitical shifts and mitigate supply chain vulnerabilities.

The successful establishment of the CAM-Corridor requires:

- a. Development of an AfCFTA Regulatory Framework for Maritime Transport through Harmonization of Ship Ownership, Registration, Operation, and Safety Regulations across African States and Implementation of Standardized Taxation, Tariffs, and Berthing Policies to Facilitate Seamless Shipping between African Ports.
- b. Formation of key maritime institutions, such as an African Classification Society to set seaworthiness standards for ships operating in the CAM-Corridor, an African P&I Club to provide insurance for regionally owned vessels, and an African Maritime Cluster Organization to represent the interests of private sector players across the entire maritime value chain.
- c. Creation of a CAM-Corridor Common Fund, a continent-wide financing mechanism under AfCFTA, supported by a uniform tax on raw material exports and manufactured goods imports. Funds are to be allocated to ship financing, port infrastructure, and green shipping initiatives.
- d. Strengthening Regional Governance and Monitoring through the establishment of a Joint Consultative Committee under the AfCFTA, comprising transport ministers, maritime regulators, and private sector representatives, with regular reviews of the implementation and effectiveness of the CAM-Corridor policy.

The presentation concluded with a call to action for African states to:

- a. Implement a unified regional maritime policy to reduce trade barriers and enhance Africa's competitive advantage in global shipping.

- b. Fast-track the adoption of the CAM-Corridor as a strategic framework for intra-African shipping.
- c. Invest in the development of an African-owned fleet to promote self-reliance and reduce external dependence.
- d. Enhance financing mechanisms by leveraging AfCFTA's trade facilitation provisions to mobilise capital for shipbuilding and infrastructure projects.
- e. Strengthen capacity-building programs to train African seafarers, shipowners, and maritime regulators on sustainable shipping practices.
- f. Encourage public-private partnerships to attract investment in green maritime technologies and port infrastructure.

5.2. Breakout Session Regarding Sustainable Port Development

With a focus on the role of ports in maritime decarbonisation, this session examined strategies for developing sustainable and energy-efficient port infrastructure. Discussions covered technological innovations, regulatory support, and investment requirements for green ports.

Outline of challenges in Sustainable Port Development

1. Infrastructure and Energy challenges

- a. Most African ports lack a reliable power supply, leading to interruptions in port services and operations.
- b. Lack of diversification of power supply options: This is a valuable tool for limiting our carbon footprint. Challenges include an overall assessment of power requirements, delivery infrastructure, and the source of power, as well as a reliable source of clean energy.

- c. Congestion in ports located within cities or proximity to cities contributes to high GHG emissions. Africa should consider constructing greenfield ports outside towns as a means of promoting low-carbon operations.
- d. Inadequate and outdated infrastructure systems in most existing ports.

2. Financing Challenges

- e. Inadequate funding for investment in green port initiatives.
- f. Inadequate knowledge and technical capacity in preparing bids for funding green port projects.

3. Optimization of Port Operations

- g. Most of the ports within Africa do not have green port policies to provide the impetus for greening port operations
- h. Inefficient management of port equipment and challenges in conducting baseline assessments of GHG emissions, resulting in recommendations on minimising and mitigating GHG emissions from port operations.
- i. Inefficient port operations due to inadequate data mining and analysis. There is a need to undertake an assessment of port operations and utilise data tools to identify areas for streamlining port operations and catalysing the reduction of GHG emissions.

Suggested Interventions for promoting sustainable Port Development.

1. Promotion of Accountability of Port Stakeholders towards Decarbonization in ports.

- a. Provide accountability among port stakeholders to enhance operational efficiency and attainment of the port community's GHG targets.

- b. Provide a mechanism for establishing commitments among all port stakeholders and ensuring accountability for implementation initiatives.
- c. Provide periodic reviews of the sustainable port development roadmap to be incorporated into the National Maritime Decarbonization Plan.
- d. Streamline port community overlapping roles and provide marine spatial planning to harmonise working / engagements within the Port's master plan.
- e. The port community should define a vision for greening the port and develop a framework for a shared work plan to achieve this goal.

2. Development of National Policy Instruments to Support Port Greening Principles

There is a need for the domestication of MARPOL Annex VI to facilitate the implementation of green principles, provide incentives through emerging local policy instruments, and anchor global policy.

3. Development and Harmonization of port development plans at the sub-regional level.

Neighbouring ports have similar and competing objectives: There is a need to optimise the port's business models and have specialised ports. Need for sub-regional port development and operations strategies that provide specialisation amongst ports.

4. Private Sector Investment in African Ports

- a. Private sector participation is necessary to support sustainable port development and build modern ports that facilitate decarbonization efforts.
- b. The government should promote public-private partnership (PPP) development and create opportunities for the private sector to fast-track the implementation of greening initiatives.

- c. The government and stakeholder community should define key maritime decarbonisation priorities and make them available for consideration by the private sector.

5. The Digitalization of African Ports

African ports are characterised by congestion and inefficiencies. Just in Time arrival (JIT) and Maritime Single Window (MSW) initiatives provide excellent opportunities for GHG reduction and low-carbon port operations. Need for more funding towards MSW as an essential tool for JIT Operations in African Ports. In my opinion, this would provide more opportunities for sensitisation and technical assistance to support the implementation of Port Digitization solutions.

6. Strategy Re-orientation of African Ports into Energy hubs

- a. There is a need for reforms in port investment policy to encourage the development of energy initiatives that promote low-carbon development while maintaining synergy with ports' cargo handling mandate.
- b. There is a need for Maritime administrators to develop NAPs that will provide a facilitative environment.
- c. Sustainable port development can be mainstreamed by incorporating greenfield operations designs that introduce greening initiatives as default features in the design.

7. Capacity building and training of port workers on green operational principles.

There is a need to develop specific capacity-building initiatives for senior management and port workers on green principles to support implementation.

5.3. Breakout Session regarding Developing a sustainable and energy-efficient African fleet

The transition to a sustainable and energy-efficient fleet is a critical component of Africa's maritime decarbonisation strategy. As part of the broader discussions on maritime decarbonisation and energy transition, this breakout session focused on the development of a sustainable and energy-efficient African fleet. This session provided a platform to discuss the state of play, barriers to progress, and actionable solutions to accelerate fleet decarbonisation across the continent. The session explored pathways for modernising Africa's maritime fleet, reducing emissions, and ensuring long-term sustainability in alignment with international climate commitments.

Barriers to Developing a Fleet

- a. Political instability, which may undermine investor confidence, making it difficult to secure long-term funding for fleet development.
- b. Many African ports lack modern shipbuilding, repair, and bunkering facilities, which makes it difficult to support an African-owned fleet.
- c. Many African nations do not possess the technical expertise and workforce required to manage modern fleets powered by alternative fuels such as LNG, hydrogen, and hybrid propulsion systems.
- d. Fragmented maritime policies among African states create inconsistent regulatory environments, preventing unified fleet development. There is limited collaboration between the public and private sectors, leaving critical initiatives underfunded or poorly implemented.
- e. Africa has few operational shipyards, meaning most ships must be purchased from foreign suppliers, increasing costs and limiting self-sufficiency.
- f. Numerous African nations prioritise national interests over regional cooperation, resulting in duplicated efforts and underutilised maritime potential.

- g. Many African shipping companies are either owned or controlled by foreign entities, which restricts the development of a genuinely African-owned fleet.
- h. High import duties, financing costs, and limited tax incentives deter African entrepreneurs from investing in ships. African governments do not provide subsidies or tax breaks to promote the development of an indigenous fleet.
- i. Most African exports are Free on Board (FOB), which means that buyers, primarily foreign companies, control the shipping process, fleet ownership, and logistics. Consequently, African states possess minimal influence over trade logistics, with foreign companies primarily controlling vessel ownership and freight profits.
- j. There are limited African insurance providers, classification societies, and financing institutions dedicated to supporting fleet ownership and maintenance. African shipowners must rely on international P&I (Protection & Indemnity) Clubs, foreign classification societies, and external ship financing options, increasing costs.

The discussions proposed the following recommendations and possible solutions to the challenges;

Policy and Regulation Development

- a. Implementation of our current policies, such as the African Integrated Maritime Strategy (AIMS) 2050 and the Combined Exclusive Maritime Zone of Africa (CEMZA). Align national policies with AIMS 2050 and CEMZA by incorporating them into legislation, investment policies, and trade agreements.
- b. Prioritise expediting the ratification of MARPOL Annex VI and incorporate it into national maritime legislation.
- c. Offer tax incentives for African-owned cargo ships operating in regional trade under the CEMZA framework. Implement African cargo preference policies that mandate a portion of intra-African trade to be transported by ships owned by Africans.

- d. Align national maritime policies with the provisions of the AfCFTA to establish a harmonised regional shipping market. Introduce regional trade facilitation measures, including single customs clearance, harmonised tariffs, and enhancements in port efficiency.
- e. Standardise fleet ownership laws across regional economic blocs (ECOWAS, SADC, EAC) to encourage joint ownership models. Introduce reciprocal recognition agreements that permit ships registered in one African state to operate freely within regional trade corridors.
- f. Establish mutual fleet-sharing agreements to enable African shipping companies to access markets beyond their national boundaries.
- g. Streamline vessel registration procedures, ensuring faster approvals and cost reductions. Create one-stop maritime investment windows to facilitate ship financing, insurance, and registration in a simplified process.
- h. Introduce legislation to support alternative fuels, including LNG, hydrogen, and ammonia, while ensuring that infrastructure development aligns with future energy needs.
- i. Develop national decarbonisation roadmaps for shipping, ensuring that regulations incentivise the reduction of GHG emissions.
- j. Need for a clear signal from IMO for pathways to decarbonisation – which fuel?
- k. Provide favourable tax conditions and operational incentives to encourage shipowners to register vessels under African flags.
- l. Establish investment protection frameworks to provide legal and financial security for African and foreign investors in fleet development.

Finance

- a. Organize regional workshops that bring together bankers, shipowners, maritime operators, and policymakers to demystify financing procedures.
- b. Establish government-backed guarantees or credit enhancement mechanisms to reduce lender risk and encourage investment in fleet development

- c. Engage with commercial banks and development finance institutions (DFIs) to tailor loan products that align with the needs of African fleet developers.
- d. Establish dedicated maritime financing funds via a levy on cargo movements, including exported raw materials and imported consumer goods.
- e. Establish a Maritime Investment Fund under AfCFTA to support fleet renewal, shipbuilding, and alternative fuel infrastructure.
- f. Ensure that funds are accessible to local shipowners rather than solely to multinational shipping lines by establishing clear eligibility criteria for businesses owned by Africans.
- g. Conduct capacity-building workshops for financial institutions and maritime investors, ensuring they understand the long-term economic benefits of investing in African fleet development, how to structure maritime financing models that align with global best practices and the risk factors and mitigation strategies in green and energy-efficient shipping investments.
- h. Develop maritime finance literacy programmes for project developers, providing them with the skills to prepare robust business cases that fulfil banking criteria.
- i. Create a Maritime Financing Toolkit, providing templates for structuring investment proposals, guidance on risk assessment and mitigation strategies, case studies on successful African maritime investments and Step-by-step guides for accessing international climate and shipping finance.
- j. Encourage public-private partnerships (PPPs) to distribute investment risks, thereby enabling African shipping firms to attract private capital.
- k. Develop online platforms and financial toolkits to help shipowners navigate financing options.

Partnerships

- a. Strengthen intra-African shipping partnerships through harmonised regulations, joint ventures, and government-backed collaborations.
- b. Encourage private sector partnerships for collective bidding, lobbying, and technology sharing to drive fleet modernisation.

- c. Create regional maritime clusters to promote investment in decarbonisation technologies, shipbuilding, and alternative fuels.
- d. Invest in industry-academia research collaborations to enhance local innovation in energy-efficient shipping.
- e. Align fleet development with cargo movement, ensuring that African-flagged vessels benefit from intra-African trade.
- f. Enhance cooperation among sub-regional economic blocs to ensure integrated maritime strategies across different African regions.

5.4. Breakout session regarding Accelerating Alternative Fuel Production and Availability in Africa

Global shipping is under pressure to cut carbon emissions, spurring a search for clean and scalable fuels. Africa's energy sector – rich in fossil and renewable resources – is poised to play a pivotal role in this transition. The continent's strategic location along major trade routes (from the Suez Canal to the Cape of Good Hope) and its vast solar, wind, and bioenergy potential position it as a key supplier of alternative marine fuels. However, despite its enormous renewable energy resources, Africa lags behind in developing alternative fuel infrastructure.

This session delved into the production, distribution, and adoption of alternative fuels for the maritime sector. The focus was on accelerating the production, distribution, availability and adoption of alternative fuels for the marine sector in Africa by exploring the role of Africa's energy sector in providing sustainable and scalable fuel solutions for the maritime industry, as well as the challenges and opportunities in developing fuel production hubs across Africa, policy, investment, and regulatory frameworks are required to promote alternative fuel adoption and infrastructure and supply chain development to ensure regional availability and accessibility of green fuels.

The discussions observed the following;

- a. Africa boasts enormous renewable energy potential, providing a foundation for green fuel production.
- b. Different African regions offer unique strengths for alternative maritime fuels.
- c. Establishing fuel production and bunkering hubs across Africa offers significant economic upside, with the maritime sector projected to demand millions of tons of green hydrogen for fuel by 2030.
- d. Africa can capture a new market by positioning itself as a supplier.
- e. Many African ports are already energy trade hubs where fossil fuels are handled in ports today, so repurposing and upgrading these facilities to handle green fuels would build on existing infrastructure and expertise.
- f. A robust supply of green fuels for shipping will require extensive new infrastructure in Africa.
- g. African ports must evolve to handle, store, and supply these new fuels to vessels. Bunkering facilities for fuels like LNG, methanol, hydrogen, or ammonia often require new terminals or retrofitting of existing oil bunkers

Challenges;

- h. The financing and investment scale required to build infrastructure for the production and supply of alternative fuels is massive.
- i. Securing funding requires stable economic conditions, investor confidence, and often international partnerships with many African countries facing competing development needs.
- j. Many African ports currently lack this infrastructure and will need upgrades or entirely new construction zones.
- k. Training and expertise are concerns – handling hydrogen or ammonia safely at scale is new, even globally.
- l. Beyond the port infrastructure, the entire supply chain for green fuels must be established for subregional, regional and international distribution.

Enablers;

- m. Strong political and policy support will be the backbone of Africa's transition to alternative maritime fuels
- n. Ratifying MARPOL Annex VI and formulating National Action Plans for GHG reduction in shipping
- o. Encouraging public-private partnerships (PPPs) and foreign direct investment are being encouraged
- p. Need for investment frameworks that are designed to de-risk projects: this includes grant funding for feasibility studies, political risk insurance, and exploring carbon credit schemes that could improve project economics by monetising the CO₂ emissions avoided.
- q. Developing international green corridors to ensure end-to-end supply of green fuel along specific shipping routes. African countries must consider demand beyond Africa for scaling production.
- r. Coherent regulatory frameworks at national and regional levels spanning energy, transport, and environment ministries will ensure that as new fuels and technologies emerge, they can be adopted smoothly and scaled across Africa's ports.
- s. Investment & Bankable Demand – There is a need to connect green fuel investments with large-scale demand; economic viability is key for attracting finance.
- t. Market Incentives & Carbon Trading – Countries that are land-linked are also exploring carbon markets, an opportunity for Africa to engage in emissions trading mechanisms.
- u. Global South Competitiveness – Decarbonization offers Africa a chance to gain a competitive edge rather than play catch-up in green shipping.
- v. Regulatory Certainty & Market Confidence – IMO decisions on fuel standards and GHG pricing measures will drive investment and de-risk sizeable renewable energy projects.

Recommendations;

1. Develop clear national roadmaps for hydrogen, ammonia, biofuels, and LNG adoption, integrating maritime decarbonisation into national energy strategies.
2. Implement tax incentives, subsidies, and low-interest loans for companies investing in alternative fuel production infrastructure.
3. Develop public-private partnerships (PPPs) to accelerate investment in fuel storage, bunkering, and distribution facilities at African ports.
4. Fast-track ratification and enforcement of MARPOL Annex VI to ensure compliance with international fuel emissions standards.
5. Align policies across regional economic blocs (EAC, ECOWAS, SADC, COMESA) to ensure harmonised regulations and incentives for alternative fuel production and use.
6. Invest in multi-country fuel corridors, ensuring infrastructure for fuel storage, transportation, and distribution is developed along key trade routes.
7. Encourage partnerships between African governments, research institutions, and the private sector to accelerate R&D in green fuel technologies.
8. Launch alternative fuel training programs for African seafarers, fuel producers, and maritime professionals to ensure workforce readiness for fuel transition.
9. Develop African green investment funds to support early-stage alternative fuel projects.
10. Strengthen access to multilateral climate finance mechanisms (e.g., Green Climate Fund, African Development Bank's climate investment programs) to accelerate fuel infrastructure development.
11. Encourage local banks to create financing packages for alternative fuel investments, ensuring the availability of credit for SMEs in the green shipping supply chain.

6. THEME 3: JOB CREATION AND TRAINING SKILLS

6.1. Summary of the Introductory Presentation

Mr. Mohammed Dauda Safiyanu, the African Regional Secretary of the International Transport Workers' Federation (ITF), gave the introductory presentation. The presentation underscored the importance of ensuring that the global shipping industry's transition to zero-emission vessels (ZEVs) and alternative fuels is fair, inclusive, and worker-centred. The Maritime Just Transition Task Force, established at COP26, plays a crucial role in ensuring that seafarers and maritime communities are adequately supported during this transition, minimising socio-economic disruptions while maximising opportunities for workforce development.

The presentation expounded on the Concept of a Just Transition, which is a people-centred approach to addressing the climate emergency in shipping by ensuring that:

- a. The shift to green shipping and decarbonisation is managed in a way that does not leave seafarers, maritime workers, or affected communities behind.
- b. Economic and social opportunities from climate action are maximised, while risks and challenges (such as job losses or workforce displacement) are effectively managed.
- c. Seafarers are provided with fair working conditions, training, and employment opportunities in the low-carbon maritime economy.

The presentation highlighted that the shift toward zero-emission vessels (ZEVs), alternative fuels (hydrogen, ammonia, methanol, LNG), and digitalised operations will require new skills in the maritime workforce. The key concerns highlighted include:

- a. The transition to ZEVs will require specialised engineering, operational, and safety training that is currently not widely available in Africa.
- b. While it takes up to three years to build a ZEV, it takes at least 10 years to train a chief engineer who is qualified to operate such a vessel. This underscores the urgency of early investments in workforce development.

- c. The current STCW framework for deck officers, engine cadets, and senior maritime personnel must be updated to reflect the competencies required for ZEVs.
- d. The future of shipping will demand a higher-skilled workforce with expertise in STEM (Science, Technology, Engineering, and Mathematics) disciplines.

The presentation provided insights into Africa's current seafaring workforce and its positioning compared to leading maritime nations. Key Observations include;

- a. Africa's seafarer employment numbers remain significantly lower than those of top maritime nations.
- b. The continent has the potential to expand its maritime workforce but requires investments in training, certification, and employment facilitation programs.
- c. Africa should focus on developing specialised skills in ZEV operations, alternative fuels, and digital maritime technologies to remain competitive in global shipping.

The presented further highlighted that a Just Transition in the maritime industry extends beyond seafarers to include:

- a. Upgrading port infrastructure to support alternative fuel bunkering, emissions monitoring, and energy-efficient port operations.
- b. Strengthening Africa's role in alternative fuel supply chains (hydrogen, ammonia, biofuels) to ensure fuel availability for green shipping.
- c. Utilizing Africa's renewable energy potential (solar, wind, and hydroelectricity) to power port operations and fuel production

To support Africa's Maritime Just Transition, the presentation emphasised the need to strengthen Africa's Institutional Framework for Just Transition. The presentation proposed that the AUC consider creating a specialised Maritime Department to drive strategic oversight of seafarer training and employment policies and coordination of maritime decarbonisation efforts in alignment with AIM 2050 and Agenda 2063.

The presentation proposed the development of a **10-point Action Plan** to guide African governments and maritime institutions as follows;

- a. Updating seafarer training curricula to incorporate green shipping technologies.
- b. Aligning national policies with the Maritime Just Transition framework.
- c. Strengthening partnerships with global maritime training institutions.

- d. Expanding financial support for workforce development programmes.
- e. Creating digital learning platforms for remote and blended maritime training.
- f. Increasing female participation in maritime employment and training.
- g. Improving employment facilitation for African seafarers in international markets.
- h. Integrating Just Transition principles into African maritime policies.
- i. Developing specialised training for port workers and alternative fuel handlers.
- j. Advocating for Africa's interests at the IMO concerning Just Transition policies.

In conclusion, the presentation highlighted the urgent need for a Just Transition framework in Africa's maritime sector to ensure seafarers, port workers, and industry stakeholders are not left behind in the shift towards zero-emission shipping. By investing in workforce development, strengthening institutional coordination, and leveraging Africa's renewable energy potential, the continent can position itself as a leader in the green maritime economy.

Each breakout session resulted in key action points and policy recommendations. The following were the primary outcomes from the discussions:

6.2. Breakout Session on Seafarer Training and Skill Development

This session emphasised the necessity for training and skill development to equip seafarers with competencies aligned with emerging maritime technologies and environmental regulations. Discussions centred on curriculum updates, recognition of certifications, and capacity-building programmes. The primary highlights of the discussions include:

- a. The transition to green energy and decarbonisation presents a new focus area that must be expedited into the STCW Convention, ensuring new competencies for managing alternative fuels and low-carbon technologies.
- b. Awareness of seafaring careers among students is low, which limits enrolment in maritime education and training (MET) programmes.
- c. Some countries lack digitalised seafarer certification systems, creating verification challenges and limiting employment opportunities for their graduates.

- d. Confidence in African cadets is low due to inconsistent training quality, making shipowners hesitant to hire from the region.
- e. Seafarers should be employment-ready upon graduation to minimise the need for additional onboard training.
- f. A standardised quality assurance system for training institutions will ensure consistency in curricula, policies, and certification standards across the region.
- g. Inconsistencies in training quality diminish employment opportunities for African seafarers, as global shipowners favour graduates from well-regulated institutions.
- h. African seafarers encounter difficulties in securing employment due to the limited number of African-owned vessels operating in international trade.
- i. Maritime education institutions often operate in isolation, resulting in fragmented investment in training infrastructure.
- j. Many institutions lack access to modern simulators, alternative fuel handling laboratories, and digital learning resources due to limited funding and capacity.
- k. A quality management system for the training institutions, comprising standardised systems, will establish a uniform framework and ensure similar policies throughout.
- l. Incentives should be provided for African ship owners employing African seafarers.
- m. Establishing a regional fleet to cater to respective sea-time needs will enhance the output of the required competence levels in the international market.
- n. Collaboration among learning institutions is essential to pool investments for training equipment and upgrade trainers for MET.

Key recommendations from the discussions include;

- a. Integrating decarbonisation and alternative fuel training into seafarer education.
- b. Enhancing collaboration between states and institutions to share best practices.
- c. Strengthening digital certification systems for employment transparency
- d. Ensuring seafarers graduate job-ready, reducing the need for retraining on ships.
- e. Standardizing quality management systems across maritime training institutions.
- f. Providing incentives for African shipowners to prioritise local seafarers.
- g. Pooling resources to invest in modern maritime training infrastructure.

6.3. Breakout Session on Energy Transition and Green Job Creation

Participants in this session explored employment opportunities arising from the maritime energy transition. Discussions covered the development of green maritime jobs, workforce readiness, and policies to support just transitions.

- a. Policy and Investment for Green Shipping Jobs – African countries should implement policy incentives and attract investments, including Public-Private Partnerships (PPPs), to create employment opportunities in the green shipping sector while ensuring a just transition for the existing maritime workforce through reskilling.
- b. The policies should include local content policies that will ensure that jobs are available for Africa’s workshop.
- c. The policies should also support collaboration between institutions to prevent working in silos among institutions.
- d. Collaboration Between Academia and Industry – Strong partnerships between learning institutions and the maritime industry are essential to align academic programs with the evolving needs of green shipping, ensuring a workforce equipped with the right skills for emerging technologies.
- e. Capacity Building and Skills Development – Conducting capacity needs assessments, developing specialised curricula, and investing in training facilities will help prepare workers for roles in green shipping, including areas like storage and safety. Ensuring continuous capacity building for trainers and lifelong training opportunities for the instructors. Reskilling of the current maritime workforce so that they also do not lose their jobs.
- f. Regional and International Cooperation – Collaboration among African countries and engagement with international stakeholders can enhance knowledge sharing, standardise training, and create globally competitive professionals for the green maritime sector.
- g. Data-Driven Policy and Workforce Alignment – Policymakers should use data-driven approaches to assess gaps in the maritime job market, adapt flexible policies to emerging technologies, and standardise training to ensure African graduates are competitive in the global green shipping industry.
- h. Awareness Creation – There should be efforts to create awareness for the public, and schools should provide information that could help students understand the new pathways available for green jobs in sectors such as green shipping while providing opportunities for internships and having them ready for the job market.

- i. Overarching the entire value chain of maritime that looks from the production of fuels to operations of the ships needs to be assessed and not limit ourselves to only the shipping part.

Recommended actions from the session include;

- a. Develop targeted policies and investment incentives to promote job creation in the green shipping sector.
- b. Develop local content policies that prioritise employment opportunities for African seafarers and maritime professionals in renewable energy-powered shipping.
- c. Establish industry-academia partnerships to co-develop training curricula that align with new green shipping technologies, including alternative fuels, carbon capture, and energy-efficient ship operations.
- d. Implement joint internship and apprenticeship programs where students gain hands-on experience in the green maritime sector through placements in port authorities, shipping companies, and shipbuilding firms.
- e. Create regional centres of excellence in maritime training institutions that specialise in green technology applications, fuel transition strategies, and digital maritime operations.
- f. Conduct national and regional capacity needs assessments to identify gaps in maritime training and workforce readiness for green shipping.
- g. Develop specialised curricula focused on low-emission ship operations, alternative fuel bunkering, and maritime decarbonisation.
- h. Invest in upgrading maritime training facilities with modern simulation technologies, alternative fuel labs, and safety training equipment.
- i. Provide continuous learning and reskilling opportunities for existing maritime workers to prevent job displacement due to technological advancements.
- j. Establish train-the-trainer programs to ensure that maritime instructors are equipped to teach new competencies in green shipping technologies.
- k. Establish national and regional databases on maritime employment trends, skills shortages, and training needs in the green shipping sector.
- l. Launch public awareness campaigns on green maritime careers, targeting students, policymakers, and industry stakeholders.

6.4. Breakout session regarding the Recognition of Skills and Recruitment Opportunities

The breakout Session on Recognition of Skills and Recruitment Opportunities focused on barriers to seafarer employment, certification recognition, and strategies to align

African training standards with international maritime requirements. The discussions aimed to explore how Africa can increase its representation in the global seafarer workforce by addressing skills recognition, fair recruitment practices, and leveraging opportunities in the maritime energy transition. Participants proposed strategies to enhance global mobility for African seafarers and align local training standards with international requirements.

The session was framed around four key questions, each addressing critical employment challenges and potential solutions.

The session discussed and highlighted the challenges African seafarers face when seeking employment in international shipping and observed that;

- a. African seafarers often receive lower wages than their counterparts from other regions, limiting their attractiveness to international employers.
- b. Cases of seafarers being abandoned in foreign ports without legal protection or financial support were highlighted as a persistent issue.
- c. Some African seafarers fall into bonded labour arrangements due to unfair contracts and fraudulent employment practices by crewing agencies.
- d. Many seafarers lack access to pensions, insurance, and other benefits, leaving them vulnerable upon retirement or in cases of injury.
- e. Some recruitment agencies charge high fees to seafarers in exchange for employment, which contributes to financial insecurity and debt bondage.

The session also discussed how African nations can push for greater acceptance of their maritime qualifications in the global shipping industry and observed as follows;

- a. Lack of Recognition of African Seafarers' Certifications despite meeting STCW training requirements.
- b. Many African countries face challenges in ensuring mutual recognition of their certificates under regulation I/10 of the STCW Convention.
- c. African training institutions must undergo a continuous evaluation to maintain compliance with IMO standards.
- d. Many African governments fail to provide adequate funding for maritime academies, leading to poor training quality and a lack of global accreditation.

The session further discussed how Africa can leverage the energy transition to increase its representation in the global seafarer community. Key highlights as discussed include;

- a. The transition to alternative fuels and decarbonisation presents a unique opportunity for Africa to expand its seafarer workforce, but strategic interventions are needed to maximize participation.
- b. Go-to-sea campaigns should be developed to attract young Africans to maritime careers, highlighting the demand for green shipping jobs.
- c. Governments and private stakeholders must work together to develop training programs in low-carbon fuel handling and emissions reduction.
- d. Mentorship Programs which introduce maritime careers to students early during their studies.
- e. African countries must form partnerships with leading international maritime nations to expand access to advanced training and employment.
- f. Accreditation of Non-Maritime Institutions such as higher education institutions (tertiary colleges) to offer maritime-related courses to broaden career pathways.
- g. Partnerships with Ship Management Companies to provide seafarers with direct employment opportunities.

The session also discussed how recruitment agencies and maritime institutions could collaborate to streamline hiring and ensure fair wages and social security, and observed that;

- a. African seafarers are unaware of their rights under the MLC (2006), making them vulnerable to exploitation and unfair wages.
- b. Employment contracts must be standardised and regulated to prevent recruitment fraud and unethical hiring practices.
- c. In some cases, government intervention in recruitment processes has led to inefficiencies and unfair hiring practices.
- d. The importance of a unified portal and verification systems would enhance transparency and ensure that only licensed recruitment agencies operate.

Key recommendations from the session;

- a. Establish Regional Maritime Institutions within every region.
- b. Establishment of National Maritime Acquisition Skills Advisory Council.
- c. Strengthen fair employment conditions by enforcing MLC standards, fair wage structures, and anti-exploitation mechanisms for African seafarers.
- d. Improve global recognition of African maritime certifications by ensuring compliance with STCW Regulation I/10 and EMSA audits.
- e. Leverage the maritime energy transition by creating training programs in alternative fuels, green ship operations, and emissions reduction.

- f. Enhance recruitment agency accountability by implementing standardised licensing, digital verification, and job-matching platforms.
- g. Expand partnerships with international shipping companies to increase employment placements and career mobility for African seafarers.
- h. Secure more government funding for regional maritime institutions to improve training quality and accreditation.

7. CLOSING REMARKS

The closing remarks were given by Mr. Abdalla Hatimy, the Chief Executive Officer (CEO) of Kenya National Shipping Line, who commended all participants for their active engagement and valuable contributions. It was noted that the discussions held over the past two days had provided critical insights into the challenges and opportunities of Africa's maritime energy transition, setting a foundation for collaborative action moving forward.

He emphasised the importance of translating the conference deliberations into concrete actions, urging African governments, regional organisations, and industry stakeholders to move forward with implementing policies and investments in green shipping. It was stressed that the momentum gained during the conference should not be lost. Africa has a unique opportunity to position itself as a leader in the global maritime decarbonisation agenda.

As a representative of the host government, he acknowledged the collective commitment demonstrated by participants in addressing key issues, including maritime emissions reduction, the adoption of alternative fuels, workforce development, and sustainable infrastructure investment. It was highlighted that regional cooperation and strong partnerships would be essential in overcoming the barriers identified during the sessions.

Furthermore, he emphasized that the success of the green transition hinges on sustained stakeholder engagement, capacity building, and financial mobilisation, urging governments, the private sector, and development partners to collaborate in achieving a decarbonized maritime industry and a Just Transition for the maritime workforce.

Finally, he thanked all those who had contributed to the conference's success, including participants from various countries, speakers, moderators, facilitators, rapporteurs, translators, and hotel management.

8. CONCLUSION FOR THE CONFERENCE REPORT

This Conference Outcome Report consolidates the key discussions, recommendations, and action points that emerged from the Regional Conference on the Implementation of the 2023 IMO GHG Strategy and the Green Transition of Shipping in Africa.

The conference underscored that Africa has a unique opportunity to lead in maritime decarbonisation, given its vast renewable energy potential, growing shipping sector, and strategic geographic position. However, the transition will require strong policies, investment in sustainable port and fleet infrastructure, workforce capacity building, and regional collaboration to overcome existing barriers.

9. ANNEXURES

10. ANNEX 1: IMPLEMENTATION MATRIX FOR MARITIME DECARBONIZATION AND JUST TRANSITION IN AFRICA

Actionable Step	Responsible Entities (Lead & Partners)	Timeline	Key Performance Indicators (KPIs)
THEME 1: SUSTAINABLE SHIPPING GOVERNANCE <i>Sub-themes: How to step up ratification and implementation of MARPOL Annex VI, how to develop a National Action Plan</i>			
Ratify, implement and enforce MARPOL Annex VI.	Relevant national government agencies, IMO (technical support);	Short-term for ratification ongoing for implementation	- The remaining African countries ratified MARPOL Annex VI. - Several countries have transposed Annex VI into national regulations and are enforcing it.
Develop and implement National Action Plans (NAPs) for greenhouse gas (GHG) reduction.	Relevant national government agencies IMO (guidance & best practices);	Short-term (NAP development; Medium-term (implementation by 2030)	- Number of countries with approved maritime GHG NAPs % of countries implementing NAP measures. - Shipping emissions targets should be included in national climate strategies.
Strengthen African regional coordination and unified representation at the IMO.	AUC and AAMA (lead coordination); national governments; Regional Maritime Organisations (MOSENA, MOWCA); regional economic communities (ECOWAS, SADC, EAC, etc.)	Short-term (coordination framework Ongoing participation	- Establishment of an African Green Shipping Coalition or similar alliance - Number of coordinated African submissions or position papers to IMO. - AAMA thematic committee's operational
Establish regional monitoring and evaluation (M&E) frameworks for decarbonisation.	AUC/AAMA (develop framework); National governments (reporting data); Regional climate bodies;	Short-term-design framework Medium-term-monitoring and evaluation(M&E) reports	- The existence of an African maritime decarbonisation progress dashboard or annual report % of countries regularly report maritime GHG data into the regional system.

			Annual publication of progress indicators (e.g., emission reductions, number of green initiatives implemented)
- Requests for technical assistance and capacity building from Partners - Leverage IMO technical cooperation programs on MARPOL VI and GHG reduction	IMO (capacity-building and toolkits); Donors and development partners; AAMA & regional training institutions; National maritime administrations	Immediate and Continuous (2025 kickoff; ongoing)	- Number of technical workshops/trainings conducted on MARPOL VI and GHG measures - The participation rate of countries in IMO/AAMA capacity-building programs. - Number of Partnership agreements
Raise awareness at all levels (political leaders, industry, and public) about the benefits of green shipping.	National governments	Immediate and Continuous	Number of workshops/trainings conducted
THEME 2. SHIPPING AND PORT INFRASTRUCTURE DEVELOPMENT <i>Sub-themes: Sustainable Port Development; Fleet Modernisation; Alternative Fuels & Green Corridors.</i>			
Adopt and enforce Green Port Policies and Standards at the National and Port Authority level.	National governments; Port authorities; Regional port associations, e.g., PMAESA	Short-term; Medium-term enforcement	Number of African countries/ports that have adopted a Green Port Policy or strategy
Undertake regular GHG emissions assessments and report results.	Port Authorities, Maritime Administrations	Short-term	% of major African ports conducting regular GHG emissions assessments and reporting results
Upgrade port infrastructure for low-carbon operations.	Port authorities (implement projects); National governments (infrastructure & energy ministries); Private sector (port operators, energy companies)	Medium-term	- Number of ports with operational shore power facilities - Number of ports with alternative fuel bunkering capabilities (LNG, hydrogen, etc)
Implement port digitalisation and efficiency measures.	Port authorities, National single window agencies; IMO (technical advice on MSW);	Short-term (pilot MSW/JIT systems) Medium-term (expansion to major ports)	- Number of ports that have implemented a Maritime Single Window - Average waiting time of vessels at berth-reduced waiting - Reduction in vessel idling emissions at participating ports
Mobilise investment via public-private partnerships (PPPs) and regional coordination for ports.	National governments (port and finance ministries), Port authorities, Maritime Administrations	Short-term (identify priority projects and form PPP agreements)	- Value of private investment mobilised for sustainable port infrastructure (USD). - Number of port PPP projects launched focusing on green improvements

• Governments should identify and advertise key decarbonisation projects for investment.	Private investors/developers; Development banks (AfDB, etc.)	Medium-term (execute projects)	
• Harmonize port development plans at the sub-regional level. • Develop regional port infrastructure strategies under REC frameworks to create complementary “green port hubs.”	National governments (port and finance ministries), maritime administrations, and port authorities. Regional economic communities coordinate regional plans, private investors and developers, and development banks (E.g., AfDB).	Medium-term	• The existence of a regional or sub-regional port development plan
Build capacity of port personnel in sustainable practices and targeted training for port management and workers on energy-efficient operations and green technologies.	Port authorities, regional training centres; IMO (trainers, port-focused workshops); Maritime universities	Short-term; Ongoing (continuous capacity development)	• Number of port personnel trained in sustainable port operations annually • Inclusion of “green port operations” modules in port management training curricula
Align policies with continental maritime frameworks, such as operationalising the African Integrated Maritime Strategy (AIMS) 2050 and the Combined Exclusive Maritime Zone of Africa (CEMZA) provisions at the national level.	AUC (policy guidance); National governments (legislatures, maritime authorities); Regional Economic Communities (RECs) (ensure regional alignment)	Short-term-to align national laws/policies with AIMS 2050, CEMZA); Medium-term-monitor implementation	• Number of African countries that have adopted legislation reflecting AIMS 2050/CEMZA provisions on maritime issues. • Number of countries that have adopted legislation reflecting AIMS 2050/CEMZA
• Introduce incentives for an African-owned, energy-efficient fleet. • Launch fiscal and regulatory incentives to encourage fleet renewal and local ship ownership.	National governments (finance ministries, maritime authorities); AUC/RECs (policy harmonisation); Port authorities (fee incentives)	Short-term-design incentive schemes Medium-term-implementation	• A number of countries are implementing tax or fee incentives for green ships. • Increase in African-flagged or owned vessels in operation (percentage growth in tonnage under African ownership) • Average age or efficiency rating of vessels registered under African flags
• Harmonise regional shipping market (AfCFTA implementation) • Implement trade facilitation measures like single customs windows and harmonised tariffs to support coastal trade.	AfCFTA Secretariat (lead coordination); AUC; National governments (trade and transport ministries); Regional Economic Communities RECs (ECOWAS, EAC, SADC etc.)	Medium- for policy harmonisation agreements Long-term-for full continental implementation	• Adoption of an AfCFTA Protocol on Maritime Transport or equivalent • Number of regional agreements in place for mutual recognition of ship registration and standards • The volume of intra-African maritime trade (% increase, indicating reduced barriers
Streamline vessel registration and compliance processes.	National maritime administrations; AAMA (best practice sharing); Maritime registries;	Short-term-procedural reforms Medium-term-full e-registration systems by 2	• Average time and cost to register a vessel under the national flag (decrease). • The number of countries with streamlined or online ship registration systems in place.

			• Growth in number of vessels (or gross tonnage) registered under African flags.
Develop national shipping alt-fuel regulations.	National governments (maritime + energy ministries); Maritime regulators	Short-term-roadmap and regulatory framework	• Inclusion of alternative fuel provisions in national maritime regulations
Enhance financing for green shipping projects- establish dedicated funding mechanisms to support fleet renewal and infrastructure.	AUC/AfCFTA (facilitate continental fund); National governments (finance ministries, guarantee schemes); AfDB and regional development banks; Private banks	Short-term-design financing instruments Medium-term-fund operational	• Maritime Green Fund was established, and capital allocated • Value of loans or grants disbursed for green maritime projects (annual, USD). • Number of shipowners or port projects benefiting from credit guarantees or concessional loan programs
• Build financial sector capacity and literacy. • Develop a Maritime Financing Toolkit with templates and case studies to help project developers create bankable proposals.	AfDB and World Bank (lead capacity-building); Industry associations (shipowners, chambers of shipping); AUC (disseminate toolkits); National banks	Immediate Continuous	• Number of finance capacity-building workshops held and participants (banks, firms) trained • Publication of a Maritime Financing Toolkit and number of downloads/distributions • Increase in the number of African banks offering tailored loan products for shipping or port decarbonisation.
Promote public-private partnerships and innovation clusters- encourage the formation of maritime industry clusters.	National governments (facilitating JVs, incubators); Private sector (shipbuilders, shipping lines, fuel companies); Universities and research institutes; AUC/NEPAD (innovation funding programs)	Medium-term-initiate clusters and partnerships Long-term-tangible outputs	• Number of maritime cluster initiatives or centres of excellence established (by region) • Joint ventures or partnerships formed (count of agreements between African companies or with international firms). • R&D projects or pilot programs launched in Africa for green maritime tech (count, e.g., prototype vessels, new fuel trials).
Implement the Common African Maritime Transport Corridor (CAM-Corridor)	AUC/AfCFTA Secretariat (lead policy adoption); Regional blocs; National governments; African Shipowners Associations; AfDB (support financing)	Short-term political adoption; Medium-term core institutions/fund established; Long-term operational corridor.	• CAM-Corridor policy formally adopted by AU/AfCFTA. • Establishment of key CAM-Corridor institutions (Classification Society, Insurance Pool, Joint Committee – count of institutions operational) • Increase in volume of intra-African cargo carried by African-owned/flagged vessels (trend over time).

Develop national alternative fuel roadmaps – formulate clear national strategies for the adoption of alternative marine fuels (e.g., LNG, green hydrogen, ammonia, biofuels)	National governments (energy and transport ministries); AUC (guidelines & sharing best practices)	Short-term-strategy development; Medium-term-implementation review	• Number of countries with a published alternative fuel roadmap for the maritime sector • Inclusion of maritime fuel targets in national energy policies
Provide fiscal incentives for alternative fuels and infrastructure- implement supportive fiscal policies to spur investment in green fuel production and supply.	National governments (finance ministries, revenue authorities); Development finance institutions; Private sector (fuel producers)	Short-term-enact incentives; Medium-term-evaluate uptake	• Tax or incentive policies enacted in support of alternative fuels • Total investment (public/private) funnelled into alternative fuel infrastructure • The number of new alternative fuel projects launched (production facilities, storage tanks, etc.).
Build alternative fuel supply infrastructure and green corridors. Establish regional fuel hubs and coordinate multi-country green shipping corridors, ensuring vessels can refuel with green fuels along major African trade routes.	Port authorities, Energy companies, National governments	Medium-term- for infrastructure in major ports Long-term-corridors fully operational	• The number of African ports with operational alternative fuel bunkering facilities (LNG, hydrogen, etc.) • Specific green corridor routes established (count of corridors and participating ports/countries) • The volume of alternative marine fuel produced in Africa and supplied to shipping (tons/year).
Harmonise regional policies and standards for alternative fuels.	AUC and RECs (lead harmonisation); National governments (regulators in energy, environment); African Standardisation bodies	Short-term-agree on regional guidelines Medium-term-national adoption	• Regional or REC-level policy document on alternative fuel standards adopted • Number of countries that have updated national laws to align with agreed standards for alternative fuels • Consistency of fuel quality and safety regulations across key fuel hubs
Foster R&D and workforce development for new fuels	National governments (research and education ministries); Universities and technical institutes; Maritime academies; Private sector (fuel tech companies)	Short-term-initiate R&D projects and training programs; Ongoing	• Number of R&D projects or pilot programs on green marine fuels underway in Africa • Specialized training courses were introduced, and a number of personnel were certified in alternative fuel handling. • Any Indigenous innovations or patents in maritime fuel technology
Mobilise climate finance and local investment in alternative fuels	National governments (climate finance focal points); AfDB and multilateral banks; Private banks;	Short-term (fund design and fund-raising; medium-term disbursement	• Funding secured from international climate finance for maritime fuel projects (USD) • Creation of an African green shipping or fuel fund and total capital mobilised

	AUC (coordinate continental fund initiatives)		• Number of local banks offering loans or investment products for green maritime projects • Number of alternative fuel projects financed
THEME 3: JOB CREATION AND TRAINING SKILLS <i>Sub-themes: Seafarer training and skill development, Energy transition and green job creation, Recognition of skills and Recruitment opportunities</i>			
Modernise maritime education curricula for decarbonisation.	Maritime training institutions and academies; National maritime authorities (MET regulators); IMO (STCW revision, model courses)	Short-term-curricula reviews starting; new courses; Medium-term (STCW updates by IMO)	• Inclusion of “green shipping” modules in the curricula of all significant African maritime academies • Number of countries that have officially updated MET syllabi to cover alternative fuels and low-carbon technology • Progress within IMO on updating STCW
• Improve training quality and certification recognition. • Implement a standardised quality assurance system across African maritime education and training (MET) institutions.	AAMA (or regional accreditation body for MET); National maritime administrations; Training institutions; EMSA/IMO (for audits and guidance)	Medium-term-establish QA framework; achieve widespread adoption	• An African MET quality standard or accreditation scheme established • Number/percentage of MET institutions audited or accredited under the scheme. • Number of African countries with digital seafarer certification systems operational • Increase in instances of African certificates being accepted globally
Expand training capacity and infrastructure – strengthen the physical and institutional capacity for maritime training in Africa	National governments (education and transport ministries); Donors (funding equipment); Maritime academies and universities	Medium-term-infrastructure upgrades and center(s) established	• Investment in training infrastructure (USD invested in simulators, labs, etc., across institutions). • Trainee capacity increased (e.g., additional enrollment slots or courses created in new skill areas). • Number of instructors trained under train-the-trainer programs
• Enhance industry-academia collaboration and on-the-job training.	Maritime academies and training institutions; Shipping companies and port operators;	Short-term (launch new academia-industry committees;	• Number of formal partnerships or MoUs between MET institutions and industry partners.

• Co-develop curriculum content with input from shipowners, ports, and technology firms • Expand internship and apprenticeship programs.	Industry associations (shipowners, port management bodies); National training authorities	internship programs scaling up	• Placement rate of graduates in internships or apprenticeships
Implement workforce reskilling and upskilling programs for national and regional capacity needs assessments to identify skill gaps in the current maritime workforce related to the green transition.	National governments (labour and transport ministries); Maritime unions (seafarers' associations); Shipping companies and port authorities	Short-term-assessments Medium-term-roll out programs	• Completion of a maritime workforce skills gap assessment • Number of existing maritime workers who have undergone retraining in new skill areas • Retention rate of workers in the industry
Increase investment in maritime training and education and more significant financial support for MET institutions and students.	National governments (finance and education ministries); Development partners (e.g., IMO's Just Transition Project, World Bank); Industry (scholarship programs)	Short-term (budget allocations starting Medium-term (significant infrastructure investments	• % Increase in national budget allocated to maritime education/training • Amount of external funding or grants received for maritime training projects. • Number of scholarships or financial aid awards given for maritime studies annually
Enact policies to promote green job creation (Just Transition)	National governments (labour and transport ministries); AUC (Just Transition policy guidance); Maritime industry employers; Labor unions	Short-term-draft Just Transition plans; Medium-term-policies implemented	• The existence of a national "Just Transition" strategy or action plan for the maritime/shipping sector • Number of green jobs created in the maritime sector (tracking employment in alternative fuels, clean shipping tech, • The number of workers transitioned from legacy roles to new green roles with government/industry support.
• Promote awareness of maritime and green shipping careers. • Outreach campaigns to improve the attractiveness and knowledge of maritime careers among youth and the public • Implement "Go-to-Sea" campaigns, school programs, and marine career fairs that highlight emerging opportunities in sustainable shipping • Establish mentorship programs linking experienced seafarers and industry	Maritime administrations; Education ministries (schools' outreach); Industry associations; Seafarer unions (mentorship networks)	Immediate and Continuous (launch campaigns; evaluate annually)	• Number of countries that have run a "Go to Sea" or similar maritime career campaign • Increase in enrollment numbers at maritime training institutions (baseline vs after campaigns). • Number of mentorship pairs or events established between industry professionals and students

professionals with students to guide them into the field			
• Ensure fair employment conditions and regulate recruitment. • Strengthen protections for seafarers and maritime workers in line with the Maritime Labour Convention (MLC 2006)	National governments (labour ministries, maritime authorities); ITF/unions (report abuses); Regional bodies (harmonise labour standards); Crewing agency associations	Short-term (enact or tighten regulations; Medium-term (digital job portal by 2026; full MLC compliance audits	• Number of African countries that have ratified and implemented MLC 2006 (or updated labour laws to equivalent standards • Reduction in reported cases of seafarer exploitation or abandonment (track incidents year-on-year) • Number of licensed crewing agencies meeting the new standards (and number penalised for non-compliance).
• Improve global recognition of African seafarers' qualifications • Pursue bilateral agreements or MoUs with significant flag states and shipping nations for mutual recognition of certifications under STCW Regulation I/10	National governments (maritime administrations); AAMA (coordinate compliance efforts); IMO (audit and white-listing support); Foreign affairs ministries (for bilateral agreements	Medium-term (strengthen compliance; Secure agreements	• Successful compliance audits of African MET institutions • Number of bilateral or multilateral agreements recognizing African certificates • Increase in the number of African seafarers hired on foreign-flag ships
Leverage the green transition for job growth	Maritime academies; National skills development agencies; Industry (identify emerging roles); IMO (guidance on new certifications	Medium-term (introduce new speciality courses; Long-term (continuous adaptation)	• Introduction of new training modules or courses focused on alternative fuel technologies and other emerging areas • Number of graduates obtaining these new certifications each • Placement of African trainees in new "green" maritime jobs (both domestically and internationally
Expand international partnerships for training and employment	National governments (foreign affairs and transport); ITF and international unions; Global shipping companies; Maritime academies (for instructor exchanges)	Medium-term (forge partnerships; Ongoing programs	• Number of international agreements/MoUs facilitating training or employment of African seafarers abroad • Slots obtained for African cadets or trainees on foreign vessels per year • Increase in African seafarers working in international fleets
• Establish maritime skills advisory councils and data systems • Create multi-stakeholder National Maritime Skills Advisory Councils to	National governments (lead in setting up councils); Industry representatives; Training	Short-term-establish councils; Medium-term (skills database	• Number of countries with an active Maritime Skills Advisory Council or similar body

assess and forecast skills continuously needs in the maritime sector	institutions; AUC (could facilitate a regional forum of such councils)		• Publication of periodic reports on maritime workforce trends (frequency) using the new data systems
Develop an African Just Transition framework for maritime	AUC (lead development, in collaboration with ITF/ILO, IMO); Member States (adopt and implement); Labor unions and industry (consultation)	Short-term (draft framework by 2025); Medium-term (endorsement by AU and implementation 2025–2030)	• Adoption of an AU-endorsed Just Transition declaration or framework for the maritime sector • Number of countries that have incorporated Just Transition measures in their maritime policies or legislation.