Charting a Blue Future

Trinidad and Tobago's Road to the 2025 UN Ocean Conference



Co-hosted by

The Embassy of France

8

The United Nations in Trinidad and Tobago

15-16 May 2025 Port of Spain Trinidad & Tobago

Conference Report



Fraternité







Foreword

The ocean is the lifeblood of our planet. For Small Island Developing States like Trinidad and Tobago, it is also the foundation of cultural identity, economic prosperity, food security, and climate resilience. Yet this shared, vital resource is under growing threat—from pollution and ecosystem degradation to the intensifying impacts of climate change. It is within this urgent context that the Embassy of France and United Nations Country Team in Trinidad and Tobago were honoured to co-host the national conference "Charting a Blue Future: Trinidad and Tobago's Road to the 2025 UN Ocean Conference."

This landmark gathering was not only a moment of national consultation; it was an act of leadership. It demonstrated Trinidad and Tobago's readiness to shape the global ocean agenda with bold ideas and practical solutions rooted in national realities. France and the United Nations were proud to support this effort—because our commitment to ocean sustainability, and to the people and government of Trinidad and Tobago, is both principled and enduring.

France, as the host of the 2025 United Nations Ocean Conference in Nice, has long championed ocean protection as a global priority. As a nation with vast maritime territories and strong multilateral partnerships, France recognises that the fate of the ocean is inseparable from the fate of humanity. Through its diplomatic leadership, scientific cooperation, and development assistance, France continues to support marine conservation, climate adaptation, and the transition to a sustainable blue economy—especially in vulnerable regions like the Caribbean.

Likewise, the United Nations has made the health of the ocean central to its global development agenda. Sustainable Development Goal 14—Life Below Water—reminds us that protecting marine ecosystems is essential to ending poverty, ensuring food security, and building peaceful, resilient societies. Across the UN system in Trinidad and Tobago, our agencies are actively working alongside national institutions to strengthen marine governance, accelerate climate action, and expand opportunities in the blue economy. This conference is a milestone in that collaboration.



We are deeply grateful to the more than 150 participants who gave so generously of their time, knowledge, and experience over the two days of the conference. Your contributions—whether as researchers, policymakers, entrepreneurs, youth leaders, fisherfolk, or advocates—brought passion, urgency, and clarity to the national dialogue. The insights you shared will directly inform Trinidad and Tobago's contribution to the UN Ocean Conference and, we hope, shape lasting change at home.

To the institutions that made this event possible—government ministries, local authorities, the Tobago House of Assembly, international organisations, non-governmental organisations (NGOs), academia, and the private sector—we extend our sincere thanks. Your collaboration shows what is possible when sectors unite around a common vision.

As the world turns its attention to Nice in 2025, we stand firmly with Trinidad and Tobago on its journey to ocean leadership. We will continue to support the country in turning ambition into action—through technical cooperation, policy dialogue, financing, and partnership. Together, we can chart a blue future that is just, sustainable, and inclusive—for this generation and the next.

Didier Chabert

Ambassador of France to Trinidad and Tobago

Joanna Kazana

United Nations Resident Coordinator in Trinidad and Tobago

Executive Summary

Trinidad and Tobago convened a national oceans conference on 15–16 May 2025, under the theme "Charting a Blue Future: Trinidad and Tobago's Road to the 2025 UN Ocean Conference." Co-hosted by the Embassy of France and United Nations Resident Country Team in Trinidad and Tobago, the event brought together over 150 stakeholders—including government agencies, international organisations, the private sector, academia, civil society, and youth groups. The conference served as both a national consultation and a catalyst for shaping Trinidad and Tobago's contribution to the 2025 UN Ocean Conference in Nice, with a focus on Sustainable Development Goal 14: Life Below Water.

The two-day conference was organised around three core thematic sessions:

- Session 1: Marine Pollution and Conservation Strategies
- Session 2: Climate Resilience and Coastal Adaptation
- Session 3: Blue Economy Opportunities and Governance

Each session highlighted urgent national challenges while also surfacing innovative pathways for action. Collectively, the discussions underscored a growing national recognition that ocean sustainability is not only an environmental issue—but a developmental, economic, and human security imperative. The dialogue also candidly addressed significant barriers hindering progress, including fragmented governance, lack of inter-agency cooperation, persistent challenges in moving from plans to action, and difficulties in accessing necessary funding and resources.

In **Session 1**, participants examined the pervasive threat of marine pollution and the limited effectiveness of existing regulatory and enforcement mechanisms. The session called for the centralisation of marine data, stronger enforcement of environmental legislation, greater investment in NGOs and community-led initiatives, and a focus on addressing the root causes of pollution. The critical need for data sharing across sectors and empowering communities with training for environmental monitoring was emphasised.

Session 2 focused on strengthening climate resilience and coastal adaptation. Stakeholders identified critical gaps in data availability, land-use planning, and institutional coordination, and emphasised the need for nature-based solutions,

robust community participation, and meaningful youth integration. The urgency of modernising local government frameworks and aligning conservation efforts with economic development was a key theme.

In **Session 3**, attention turned to the potential of the blue economy to drive sustainable growth. Participants flagged policy fragmentation, limited investment incentives, and the insufficient integration of Tobago as major barriers. However, the session also highlighted scalable innovations in ecotourism, marine entrepreneurship, and regional cooperation. The imperative of Tobago's full and equitable participation in national ocean governance and blue economy strategies was strongly articulated.

Across all sessions, several cross-cutting priorities emerged:

- Accelerating legislative reform and policy coherence.
- Strengthening data systems, ensuring accessibility, and fostering scientific cooperation.
- Empowering communities, youth, and non-governmental organisations (NGOs), and ensuring their voices are central to decision-making.
- Creating enabling environments for private sector engagement and innovation, including addressing barriers to accessing resources like the Green Fund.
- Elevating ocean literacy and behavioural change.
- Ensuring inclusive representation and equitable benefit-sharing, particularly for Tobago.
- Mobilising sustainable finance and regional partnerships.

This Report captures the key discussions, insights, and outcomes of the conference. It reflects both the aspirations for a sustainable blue future and a realistic assessment of the systemic challenges that must be overcome. As Trinidad and Tobago prepares for the 2025 UN Ocean Conference, the voices and priorities reflected in this dialogue present a clear roadmap for bold, inclusive, and sustainable ocean leadership.





Introduction

Trinidad and Tobago, as a Small Island Developing State (SIDS), faces both vast opportunities and urgent challenges linked to the ocean. With an Exclusive Economic Zone (EEZ) fifteen times larger than its landmass, the country's economic, environmental, and cultural future is deeply tied to the health and sustainability of its marine and coastal ecosystems. Yet, these ecosystems are under increasing pressure from pollution, overfishing, climate change, and habitat degradation—threats that undermine livelihoods, food security, and biodiversity.

In preparation for the 2025 United Nations Ocean Conference in Nice, France, Trinidad and Tobago convened a national conference titled "Charting a Blue Future: Trinidad and Tobago's Road to the 2025 UN Ocean Conference" on 15–16 May 2025. Co-hosted by the Embassy of France and United Nations Resident Country Team in Trinidad and Tobago, the event provided a national platform to align policy, practice, and partnerships around Sustainable Development Goal 14 (Life Below Water).

The conference brought together approximately 150 participants representing government agencies, international organisations, academia, private sector leaders, and civil society groups. It was structured across three thematic sessions: marine biodiversity and pollution, climate resilience and coastal adaptation, and the sustainable blue economy; each hosted at a distinct venue to foster dynamic and focused engagement. The event culminated in a high-level closing ceremony and networking reception hosted by the French Ambassador and the UN Resident Coordinator in Trinidad and Tobago.

This Report documents the conference's main discussions, expert insights, and stakeholder contributions. It captures the national momentum toward a sustainable and inclusive blue economy, highlights actionable outcomes, and presents recommendations for strengthening Trinidad and Tobago's leadership in ocean governance ahead of the 2025 global conference. The Report also seeks to candidly reflect the frustrations and urgencies expressed by participants, particularly regarding implementation gaps and the need for more inclusive decision-making processes.

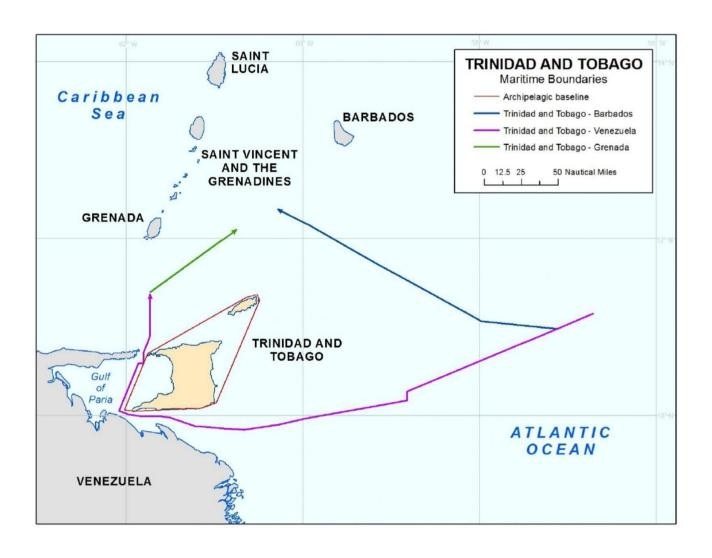


Figure 1. Illustrative map of the maritime boundaries of Trinidad and Tobago.





Session 1: Marine Pollution and Conservation Strategies

Participants

Chairperson:

Dr. Farahnaz Solomon, Researcher, Institute of Marine Affairs, and Member of the NGO Speseas

Moderator:

Frank Teelucksingh, Environmental Specialist and Director, Coastal Dynamics Limited

Panellists:

- Hayden Romano, Managing Director, Environmental Management Authority
- Keshtav Ramdial, Environmental Impact Assessment Lead, Coastal Dynamics Limited
- Adeline Raphaël, Adviser on Disaster Risk Reduction, Sustainable Tourism, Caribbean Sea & the Environment, Association of Caribbean States
- Dr. Sharda Mahabir, National Coordinator, Global Environment Facility Small Grants Programme (GEF SGP) Trinidad and Tobago
- **Dr. Anjani Ganase**, Researcher in Coral Reef Health, Institute of Marine Affairs, and Member of the NGO Speseas

Introduction

Session 1 of the Oceans Conference focused on the theme "Marine Pollution and Conservation Strategies," addressing the urgent need to protect Trinidad and Tobago's marine ecosystems from escalating threats. With the nation's marine space estimated to be 15 times its land area, ocean health is directly linked to economic development, food security, public health, and climate resilience. Despite this, marine environments face increasing degradation due to pollution from both landand sea-based sources, regulatory and institutional weaknesses, and cultural inertia.

The session opened with a strong call to action from the Chair, who noted that over 80% of marine pollution in Trinidad and Tobago originates from land-based sources, such as plastic waste, sewage, microplastics, and nutrient runoff. Ocean-based threats such as oil spills and discarded marine gear further compound the issue. The nation's most critical fishing ground, the Gulf of Paria, was highlighted as one of the most polluted marine areas, directly affecting food security and eroding public confidence in seafood safety.

The Moderator framed the discussion by challenging participants to explore why marine pollution continues to escalate despite the presence of sound regulations, technical expertise, access to funding, and institutional infrastructure. He urged a shift in focus from diagnosing the problem to identifying the underlying barriers to implementation, enforcement, and change.

The plenary discussion emphasised the disconnect between available tools and actual outcomes. Participants questioned the persistent reliance on reactive crisis management instead of predictive, systems-based planning. The session also highlighted the need to integrate social scientists, behavioural experts, and communicators into marine planning processes to help frame environmental issues in terms of human impact and lived experience.

Several interventions focused on the critical role of education and communication, urging a transformation in how data and environmental risks are presented to the public. Tools such as ecosystem service analysis were recommended to quantify the socio-economic value of marine resources and pollution control, helping decision-makers better appreciate the "cost of inaction."

Others called for the activation of citizen science, particularly among youth, and the

mobilisation of creative advocacy, including collaborations with artists and influencers to broaden public engagement. The frustration of NGOs regarding their exclusion from decision-making processes and communities' willingness but inability to access funding or training for environmental monitoring were palpable.

Pollution Prevention: Addressing the Source

A significant theme emerging from the discussion was the critical need to shift focus from solely managing the impacts of pollution (e.g., cleanups) to proactively addressing the root causes. Participants stressed that sustainable, long-term solutions require interventions at the source of pollution, including:

- Stopping the disposal of plastics into the environment by communities: This involves education, providing alternatives, and improving waste management infrastructure.
- **Ensuring preventative measures for industrial pollution:** This includes robust regulatory oversight and enforcement to prevent oil spills and other industrial discharges.
- Promoting sustainable agricultural practices: To reduce nutrient runoff into rivers and coastal waters.





Box: Reflections on the 2024 Tobago Oil Spill

As Director of the Tobago Emergency Management Agency (TEMA), the February 2024 oil spill off Tobago's Atlantic coast presented a significant environmental and operational challenge. The incident originated from an overturned, unidentified barge, subsequently found to be carrying a substantial quantity of heavy fuel oil. While the exact amount remains difficult to confirm definitively due to the vessel's condition, estimates suggested several hundred barrels were released. The spill impacted approximately 15 kilometers of Tobago's ecologically sensitive southeast coastline, including the vital Cove Ecolodustrial Park and key fishing areas like Lambeau and Scarborough. This caused considerable environmental damage to coral reefs, mangroves, and seabed habitats, severely disrupted the livelihoods of fisherfolk and tourism operators reliant on clean seas and beaches, and necessitated costly, ongoing remediation efforts impacting Tobago's economy and the national budget.

The response activated TEMA's National Oil Spill Contingency Plan, demonstrating commendable inter-agency coordination between TEMA, the

Tobago House of Assembly (THA), the Ministry of Energy and Energy Industries, the Institute of Marine Affairs (IMA), the Trinidad and Tobago Coast Guard, the private sector, and numerous community volunteers. The rapid deployment of booms, skimmers, and shoreline clean-up crews, alongside swift environmental impact assessments by the IMA, were critical initial steps. Public communication channels were established quickly. However, significant challenges arose. The unknown nature and quantity of the cargo initially hampered response planning. Containment was difficult due to sea conditions and the spill's spread. Resource limitations, particularly specialized equipment and sufficient trained personnel for sustained shoreline remediation, became apparent, leading to delays in fully restoring affected areas. Public coordination, while enthusiastic, could have been more structured.

This incident underscores vital lessons for Tobago and the wider Caribbean. Firstly, robust, regularly tested national and regional contingency plans are nonnegotiable. Secondly, investment in specialized response equipment, prepositioned where feasible, and continuous training for responders and volunteers is crucial. Thirdly, enhancing regional cooperation frameworks under mechanisms like the Regional Activity Centre/Regional Marine Pollution Emergency Information and Training Centre (RAC/REMPEITC-Caribe) for resource sharing, mutual aid, and technical support during major spills is essential. Finally, maintaining and regularly updating comprehensive databases of hazardous materials transiting our waters, alongside improving vessel tracking and monitoring capabilities, can significantly aid preparedness and initial response. TEMA is committed to incorporating these lessons to bolster our resilience and protect Tobago's precious environment and communities for the future.

Allan Stewart
Director, Tobago Emergency Management Agency

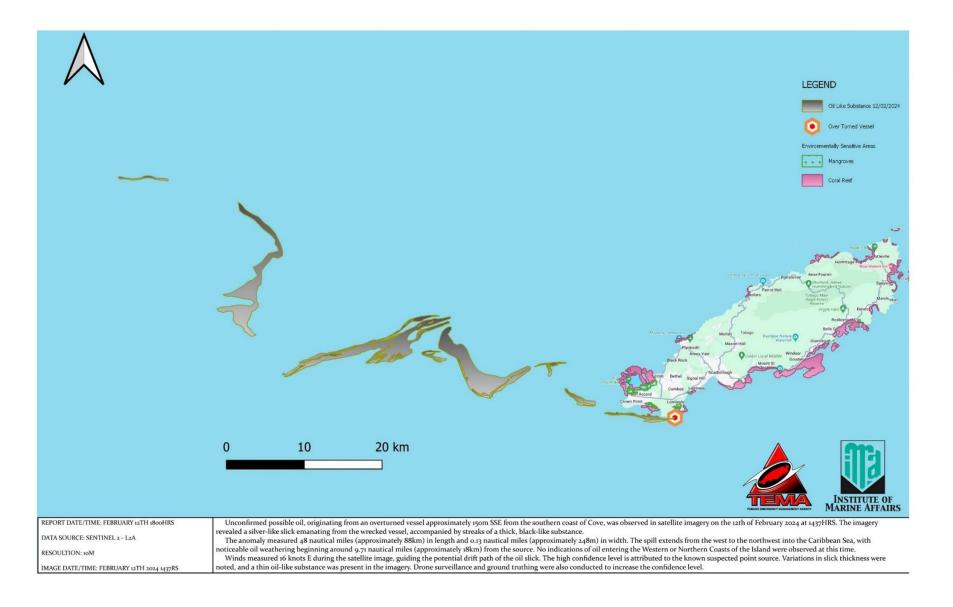


Figure 2. Map showing areas affected by overturned vessel's oil-like substance on 12 February 2024.

Key Takeaways

- Centralise and Disseminate Environmental Data: Establish a centralised repository for marine environmental data, close existing data gaps, improve data sharing across research, regulatory, and private sectors, and ensure open access for all stakeholders to enhance evidence-based decision-making and foster informed public engagement.
- Strengthen Multi-Sectoral Collaboration: Enhance coordination and collaboration among government agencies (e.g., Institute of Marine Affairs, Environmental Management Authority), non-governmental organisations, academic institutions, and the private sector to eliminate duplication, align efforts, and maximise the effectiveness of marine conservation initiatives.
- Empower Civil Society and Local Communities: Strengthen the capacity of NGOs, youth, and local communities by forging robust partnerships, providing access to funding and training (e.g., for environmental monitoring and data collection), and defining active roles for these groups in advocacy, innovation, and the co-creation of sustainable solutions. This includes recognising communities' willingness to act and addressing their inability to access resources.
- Drive Sustainable Behaviour and Cultural Transformation: Foster a national culture of sustainability by translating scientific findings into accessible, engaging content promoted through mass media, influential voices, and creative public awareness campaigns.
- Enforce Environmental Legislation and Introduce Incentives: Bolster the enforcement of existing environmental laws, strengthen penalties for polluters, and develop new, responsive policy measures to address emerging threats and systemic gaps within the marine and coastal sectors.
- Link Environmental Integrity to Social Well-being: Emphasise the intrinsic connection between marine ecosystem health and broader societal outcomes—such as public health, livelihoods, and food security—to galvanise political will and community support for conservation and pollution mitigation.
- Mobilise Sustainable Financing for Ocean Action: Unlock and scale up sustainable finance by strategically leveraging resources like the Green Fund (while addressing its current inaccessibility), promoting innovative public-private partnerships, and channelling investment toward community-led and NGO-driven marine protection and pollution reduction efforts.

- **Embrace Proactive Planning and Predictive Tools:** Shift from reactive responses to proactive, future-ready solutions by deploying data-driven tools, predictive modelling, strategic education initiatives, and visionary institutional leadership, with a focus on pollution prevention.
- Transition to a Circular and Blue Economy: Accelerate the move toward circularity and sustainability in marine industries by supporting initiatives that minimise plastic waste, promote material upcycling, and stimulate innovation and investment in environmentally sound alternatives.
- Develop and Implement a National Marine Roadmap: Formulate and adopt a comprehensive National Roadmap with clear timelines, measurable goals, institutional leads, and actionable indicators to guide all stakeholders in advancing marine conservation and pollution control.

Systemic Challenges & Barriers to Action

Participants candidly identified several systemic challenges hindering effective marine pollution control and conservation:

- Lack of Inter-agency Cooperation and Coordination: Despite various entities working on related issues, a persistent lack of coordination leads to duplicated efforts and inefficient use of resources. A unified strategy remains elusive.
- Persistent Failure to Move from Plans to Action: While sound regulations and technical expertise may exist, translating these into tangible outcomes on the ground is a significant hurdle. Reactive crisis management often overshadows proactive, systems-based planning.
- Fragmented Data Systems and Limited Data Sharing: Valuable data collected by different agencies (Institute of Marine Affairs, Environmental Management Authority, private consultancies) often remains siloed, hampering comprehensive understanding and evidence-based decision-making.
- Political and Bureaucratic Barriers to Reform and Funding: The inaccessibility of crucial funding mechanisms like the Green Fund (reportedly holding ~TTD 10 billion) due to bureaucracy was highlighted as a major impediment. Political will is often perceived as lacking, possibly due to a failure to connect environmental issues with broader socio-economic concerns like crime and the economy.

- Weak Enforcement and Insufficient Penalties: Existing environmental laws are often not robustly enforced, and penalties for polluters may not be sufficient to deter harmful activities.
- Exclusion of NGOs and Communities from Decision-Making: NGOs and community groups, despite being deeply embedded and often leading onthe-ground efforts, reported feeling excluded from key decision-making processes and lacking political access. Their potential as essential partners is not fully realised.
- Limited Capacity and Resources for Communities: While communities show willingness to engage in activities like environmental monitoring, they often lack the necessary training and financial resources.

Conclusion

In concluding the session, the Chair reiterated that marine pollution is a multidimensional issue with cross-cutting implications. She underscored the priorities listed in the Key Takeaways and urged all actors to adopt a proactive, integrated, and inclusive approach to marine conservation, guided by evidence, powered by partnerships, and driven by a clear vision for a sustainable blue future.





Session 2: Climate Resilience and Coastal Adaptation

Participants

Chairperson:

Joanna Kazana, UN Resident Coordinator in Trinidad and Tobago

Moderator:

Professor Judith Gobin, Professor of Marine Ecology and Coastal Ecosystems Management, The University of the West Indies

Panellists:

- His Worship Chinua Alleyne, Mayor of Port of Spain
- Stephanie Ledesma, Principal Executive for Trinidad and Tobago, CAF Development Bank of Latin America and the Caribbean
- **Dr. Ava Maxam**, Director, Institute of Marine Affairs
- **Kerry Sheppard**, Director, Coastal Protection Unit, Ministry of Works and Infrastructure
- Nazeer Gopaul, Applied Physical Oceanographer, Director and Co-founder, Coastal Dynamics Limited
- Ainka Granderson, Resilience Programme Manager, Caribbean Natural Resources Institute (CANARI)
- Dr. Charmaine O'Brien-Delpesh, Retired Lecturer in Coastal Engineering and Management, The University of the West Indies
- **Dr. Deborah Villarroel-Lamb**, Programme Coordinator, MSc Coastal Engineering and Management, The University of the West Indies
- Maryam Abdu, Chief of Social Policy, UNICEF Eastern Caribbean Area Office

Introduction

This session addressed the urgency of climate resilience and coastal adaptation in Trinidad and Tobago, a small island state increasingly exposed to the intensifying impacts of climate change. With over 200 nautical miles of marine territory, the country's coasts are both highly vulnerable and economically significant. The session explored solutions to safeguard ecosystems, infrastructure, and livelihoods from the rising tide of coastal erosion, extreme weather, and sea level rise.

The Chair's opening remarks emphasised the session's dual purpose: to inform Trinidad and Tobago's contribution to the 2025 UN Ocean Conference and to foster a national dialogue on adaptation strategies. She stressed that this is not just an environmental concern but a developmental priority with direct implications for national governance, economic planning, and the welfare of future generations.

The Moderator encouraged an integrated, intergenerational and interdisciplinary approach. The panellists—spanning academia, government, civil society, multilateral finance and international organisations—underscored the interconnectedness of environmental, social, and economic systems and the need to plan with foresight, inclusion, and innovation.

The plenary highlighted the critical importance of collaboration and trust-building across institutions and sectors. Multiple participants reaffirmed the need to avoid duplication and instead focus on complementarity—asking how data or projects can support rather than replicate existing initiatives. This approach fosters efficiency and improves downstream value for both science and policymaking.

The session also brought attention to the human dimension of climate change—underscoring the emotional toll on communities and especially youth, who are facing mental health challenges as they navigate the uncertainty of climate futures. Participants called for stronger integration of social services, education, and mental health care into climate response frameworks.

Crucially, it was emphasised that adaptation is already happening at the community level, often without visibility or formal support. Panellists and attendees called for a reframing of community actors as partners and innovators—not passive beneficiaries—in resilience-building. The desire for citizen science and community-driven data collection was strongly voiced.

Key Takeaways

- Embed Community Leadership in Coastal Solutions: Position communities as co-creators of coastal resilience strategies by integrating their knowledge, lived experiences, and priorities into the design of research, planning, and ecosystem-based interventions. This includes empowering grassroots innovation and ensuring communities can access funding and training.
- Consolidate and Integrate Environmental Data Systems: Break down data silos and establish a unified, accessible platform for environmental information—ensuring new datasets complement existing knowledge and support more coordinated, science-based decision-making.
- Scale Up Nature-Based Coastal Defences: Promote nature-based solutions—such as mangrove restoration (e.g., successful community-led projects in South Trinidad) and coral reef rehabilitation—as climate-resilient, self-sustaining alternatives to hard infrastructure, delivering ecological, economic, and social benefits.
- Strengthen Stakeholder Capacity for Climate Action: Expand training and support for civil society, youth, and local practitioners, ensuring that skill-building efforts are aligned with evolving climate threats and grounded in real-world applications. This includes scaling up training for local practitioners in resilience and adaptation techniques.
- Institutionalise Youth Engagement in Climate Governance: Elevate the voices of children and youth by embedding their perspectives into the policy-making process, ensuring their inclusion in the design and monitoring of climate resilience strategies, and supporting youth-led initiatives.
- Reinforce National Planning and Regulatory Frameworks: Advance integrated marine spatial planning, coastal zoning, and land-use reforms that protect critical ecosystems while guiding sustainable development across tourism, construction, and infrastructure sectors.
- Unlock Blue Economy Financing for Adaptation: Mobilise investment by tailoring financial instruments to local realities and leveraging multilateral funding streams that prioritise sustainable ocean-based projects and climate resilience initiatives.
- Modernise Local Governance for Resilience: Reform local government frameworks to enable faster, more responsive action on disaster risk reduction and climate adaptation—empowering municipalities to lead at the frontline of coastal protection.

- Align Conservation with Economic Development: Explicitly integrate conservation goals into economic planning by positioning marine research, biodiversity protection, and ecosystem restoration as core drivers of sustainable blue economy growth and resilient livelihoods.
- Foster Cross-Sectoral Collaboration and Innovation: Promote coordinated action across government, academia (e.g., The University of the West Indies), civil society, business incubators, and the private sector to overcome funding constraints and deliver impactful, scalable solutions to climate and coastal challenges.

Box: Powering the Blue Transition – Wind and Methanol Innovation

Trinidad and Tobago is advancing a dual strategy for ocean-linked decarbonisation, led by the Ministry of Energy and Energy Industries (MEEI). The focus: harnessing offshore wind energy and promoting methanol as a cleaner marine fuel.

Through the Wind Resource Assessment Programme (WRAP), MEEI is mapping national wind potential—especially offshore. This multi-phase initiative uses advanced monitoring to collect wind speed and direction data, identify high-potential sites, and inform optimal grid integration. Onshore sites are currently being evaluated, but offshore sites will be gauged in the WRAP's next phase. Onshore wind energy potential is estimated at 2.5GW, while the offshore promise exceeds 30GW. WRAP aims to attract investment, support project design, and reduce fossil fuel dependence, aligning directly with Trinidad and Tobago's National Determined Contribution (NDC) targets under the Paris Agreement, while creating green jobs and boosting energy resilience.

In parallel, Trinidad and Tobago is positioning methanol as a key clean fuel for shipping. Proman, through its joint venture with Stena Bulk, operates six dual-fuel methanol vessels, proving methanol's viability and emissions benefits—cutting sulfur oxides, nitrogen oxides, particulates, and CO₂. With significant methanol production capacity, the country is exploring bunkering infrastructure and the development of green methanol to deepen sustainability.

Together, these initiatives support a Just Energy Transition—one that diversifies the economy, creates new livelihoods, and ensures inclusive benefits from cleaner marine fuels and renewables. Wind and methanol strategies reflect a broader effort to secure energy futures while contributing meaningfully to climate goals and ocean resilience.

Craig Boodoo Head, Renewable Energy Division Ministry of Energy and Energy Industries

Systemic Challenges & Barriers to Action

Discussions in Session 2 also brought to light significant barriers impeding progress in climate resilience and coastal adaptation:

- Data Availability and Accessibility: Gaps in comprehensive, long-term data and difficulties in accessing existing data hinder effective planning, modeling, and decision-making. Data often remains in silos, preventing integrated analysis.
- Institutional Coordination Deficiencies: A lack of robust coordination among government agencies, research institutions (like the Institute of Marine Affairs and The University of the West Indies), and local government bodies leads to fragmented efforts and missed opportunities for synergy.
- Implementation Gaps in Land-Use Planning: Despite existing plans and regulations, enforcement and implementation of sound land-use planning and coastal zoning remain weak, allowing for unsustainable development in vulnerable areas.
- Funding and Resource Constraints for Local Action: While communities and local practitioners are often at the forefront of adaptation, they face significant challenges in accessing sustainable funding, technical expertise, and training.
- Bureaucratic Delays and Regulatory Stagnation: Slow-moving bureaucratic processes and outdated regulatory frameworks can stifle innovation and delay the implementation of necessary adaptation measures.

- Political Disinterest or Lack of Ocean Literacy: A perceived lack of sustained political focus on ocean and climate issues, potentially linked to lower levels of ocean literacy among decision-makers and the public, can undermine long-term commitment and investment.
- Insufficient Integration of Youth and Community Voices: Despite calls for inclusion, youth and community perspectives are not always systematically integrated into formal planning and policy-making processes, leading to strategies that may not fully reflect local needs and capacities.

Conclusion

In her concluding remarks, the Chair underscored that Trinidad and Tobago stands at a pivotal moment, where climate change and ocean-based opportunities intersect. She highlighted the core takeaways and affirmed the UN's commitment to continue the dialogue, amplify local success stories, and ensure that the messages and outcomes of this session inform Trinidad and Tobago's engagement at the upcoming UN Ocean Conference in Nice.





Session 3: Sustainable Blue Economy and The Private Sector

Participants

Chairperson:

His Excellency Peter Cavendish, Ambassador of the European Union to Trinidad and Tobago

Moderator:

Dr. Axel Kravatzky, President, European Business Chamber in Trinidad and Tobago

Panellists:

- Nicolas Dumail, Deputy Head of Mission, Embassy of France
- His Excellency Seijoong Kwon, Ambassador, Republic of Korea
- **Beth Siddons**, Howell Marine Consulting and Co-Author of "Rapid Readiness Assessment for the Transition to a Sustainable Blue Economy"
- **Stephan Nanan**, Head, Maritime Technology Cooperation Centre
- Allister Nanan, Co-Owner, Nanan's Eco Tours
- Gennike Mayers, Co-founder, Spargassum

Introduction

Session 3 of the Trinidad and Tobago Oceans Conference focused on the transformational potential of the blue economy and the governance frameworks required to unlock it. The discussion underscored the urgent need to shift from extractive marine activities to regenerative, sustainable ocean-based growth, while confronting long-standing governance and investment barriers. Trinidad and Tobago's economy, while deeply rooted in fossil fuels, is poised for a necessary and strategic transition toward a diversified blue economy that can deliver climate resilience, inclusive growth, and environmental restoration.

The Chair opened the session by noting the growing momentum toward the 2025 UN Ocean Conference in Nice and the opportunity for countries like Trinidad and Tobago to shape global conversations with local leadership. Panellists and participants represented a diverse mix of international organisations, private sector actors, NGOs, and government entities, bringing forward perspectives grounded in science, business, diplomacy, and lived experience.

Participants reflected on the need to transform "conservation conversation" into collaboration. Speakers emphasised that Trinidad and Tobago must seize its role not only as a participant but as a leader among small island developing states (SIDS) in shaping sustainable ocean governance. While global support is critical, local leadership, legislation, and education must be the foundation.

There were strong calls to prioritise behavioural change alongside legal reform, including bans on plastic bags and Styrofoam as seen in Jamaica and Barbados. Importantly, several voices urged the full inclusion of Tobago's unique needs and priorities, noting that a national strategy that excludes one island is inherently flawed.

Panellists also discussed the need for entrepreneurship and creative problem-solving to be nurtured from the school level through to policy design. Participants called for new narratives around the ocean—not only as a resource but as a lifeline and cultural cornerstone.

Tobago: A Co-Leader in the Blue Transition

A critical and recurring theme throughout Session 3, and indeed the conference, was the imperative to fully integrate Tobago into national ocean governance and blue economy strategies. Participants stressed that Tobago, with its unique ecological assets, distinct economic priorities (particularly in tourism and fisheries), and specific vulnerabilities, cannot be an afterthought in national planning. Concerns were voiced that Tobago is often sidelined, and its potential as a co-leader in the nation's transition to a sustainable blue economy is not fully realised.

It was emphasised that:

- **Tobago's participation is non-negotiable:** Any national blue economy roadmap or ocean governance framework must be developed with the active and equitable participation of Tobagonian stakeholders from the outset.
- Distinct ecological and economic contributions: Tobago's coral reefs, fisheries, and tourism sector are vital components of the national blue economy and require tailored management and investment strategies.
- Addressing specific vulnerabilities: Tobago faces unique challenges related to coastal erosion, climate impacts on tourism infrastructure, and resource management that need to be specifically addressed in national plans.
- **Ensuring equitable benefit-sharing:** The economic benefits derived from blue economy activities in and around Tobago must accrue equitably to the island and its communities.

A dedicated focus on Tobago within national strategies is essential to affirm its crucial ecological and economic role and to ensure that the blue transition is truly national and inclusive.





Case Study: Nanan's Caroni Bird Sanctuary Tours – Eco-Tourism in Action

Nanan's Caroni Bird Sanctuary Tours, a family-run ecotourism enterprise operating for nearly three generations in the Caroni Swamp, exemplifies a community-led initiative at the heart of the blue economy. Their mission to "protect, educate, and inspire" through sustainable, nature-based experiences showcases how conservation and profitable business can align. They offer guided boat tours, highlighting the majestic Scarlet Ibis and diverse mangrove ecosystem, thereby contributing to local livelihoods and promoting environmental awareness. However, they also face challenges such as pollution

(plastics, Styrofoam, sewage runoff, industrial waste, and leaching from the nearby Beetham landfill) and have called for stronger government regulation, corporate responsibility, and investment in eco-friendly practices. Their experience underscores the potential of small and medium-sized enterprises (SMEs) in ecotourism while also highlighting the need for an enabling policy and regulatory environment.



Case Study: Spargassum and Sargassum Valorisation

Gennike Mayers, co-founder of Spargassum, highlighted her company as

Trinidad and Tobago's first enterprise transforming Sargassum seaweed into commercially viable products. This initiative directly addresses the challenge of sargassum influxes, turning a perceived nuisance into an economic opportunity. Such ventures in sargassum valorisation represent innovative, grassroots contributions to the circular blue economy, creating value from waste, potentially generating local employment, and reducing the negative impacts of sargassum on coastal ecosystems and tourism. Supporting and scaling such enterprises requires access to finance, technical support, and an encouraging entrepreneurial ecosystem.



Box: Republic of Korea's Commitment to Ocean Health and Caribbean Cooperation

The Republic of Korea recognises that we are now living in an era of climate crisis, with the ocean's role as a global climate regulator being increasingly

compromised by rising sea surface temperatures, acidification, and sea level rise. Korea believes it is essential to move beyond carbon neutrality toward carbon negativity, supported by science-based policymaking and robust international cooperation. As a maritime nation with strategic advantages in shipping, shipbuilding, and digital infrastructure, Korea is leveraging Marine Spatial Planning and four key initiatives—science-based ocean governance, sustainable marine industries, digital ocean economy, and maritime education—to drive an innovative blue economy. These efforts were showcased during the successful hosting of the 10th Our Ocean Conference in Busan in April 2025 and will continue as Korea is working to co-host the 2028 UN Ocean Conference with Chile.

Korea has been strengthening cooperation with the Caribbean, including Trinidad and Tobago, through close collaboration with the Association of Caribbean States (ACS), Caribbean Community (CARICOM), and the Inter-American Development Bank (IDB). Notably, the Sandy Shorelines Project—implemented since 2017 by the Korea International Cooperation Agency (KOICA) and the ACS—monitors and addresses coastal erosion in nine Caribbean countries, including Trinidad and Tobago. Despite the challenges of the COVID-19 pandemic, the project is regarded as a model for regional cooperation. Korea is also working with the ACS to promote the establishment of a joint marine research center in Colombia to address shared challenges such as marine environmental protection and climate-resilient ocean management.

The Korea-CARICOM Cooperation Fund, launched in 2021, was announced by Korea to be significantly increased to USD 3 million on the occasion of Prime Minister Han Duck-soo's 2023 visit to Trinidad and Tobago. The fund supports regional climate resilience, including environmental governance and health system strengthening. Through the IDB Korea Trust Fund, Korea is also supporting projects in Trinidad and Tobago, such as energy decarbonisation and the development of the Arima Smart Town. These efforts reflect Korea's commitment to fostering a sustainable, resilient Korea-Caribbean cooperation model. We look forward to continued engagement with Trinidad and Tobago and the wider Caribbean, and to sharing Korea's experience in building resilient marine ecosystems and sustainable ocean economies.

His Excellency Seijoong Kwon Ambassador, Republic of Korea

Key Takeaways

- Modernise Maritime Legislation: Revise and modernise outdated maritime laws (some dating back to 1916) to enable robust regulation, effective enforcement, and sound governance across ocean sectors—drawing on local expertise and aligning with international standards and best practices.
- Procedure Dependency on Oil and Gas: Advance economic diversification by strategically investing in marine renewable energy, sustainable fisheries, ecotourism (e.g., supporting SMEs like Nanan's Tours), and marine biotechnology—thereby reducing national reliance on fossil fuels and fostering long-term resilience.
- Catalyse Private Sector Development: Establish enabling policies, targeted incentives, and accessible financing mechanisms (e.g., improving access to the Green Fund) to attract private investment and scale exportoriented, sustainable blue economy enterprises, including those in sargassum valorisation (e.g., Spargassum).
- Strengthen Maritime Trade Infrastructure: Upgrade shipping and port facilities to enhance the efficiency, sustainability, and competitiveness of Caribbean maritime trade, which remains a cornerstone of regional economic activity.
- Fully Integrate Tobago into National Planning: Ensure that Tobago's distinct ecological assets and economic priorities are meaningfully incorporated into national blue economy strategies, infrastructure planning, and investment decisions, positioning Tobago as a co-leader.
- Prioritise Ocean Education and Workforce Development: Invest in comprehensive marine education and vocational training from early childhood through tertiary levels to cultivate a skilled, ocean-literate workforce equipped for emerging industries in the blue economy. This includes promoting entrepreneurship studies and creative problem-solving.
- Relocate Coastal Landfills and Reform Waste Management: Relocate landfills (e.g., Beetham) away from vulnerable coastal zones and transition to modern, sustainable waste management systems that safeguard marine ecosystems and enhance public health.
- Empower Grassroots Leadership and Community Innovation: Support and scale community-led initiatives in marine conservation, ecotourism, and circular economy practices—transforming grassroots innovation into impactful, nationwide solutions.

- Develop and Operationalise a National Blue Economy Roadmap: Design and implement a comprehensive, cross-sectoral National Roadmap with clear objectives, timelines, institutional leads (e.g., Ministry of Planning, Economic Affairs and Development, Institute of Marine Affairs, Environmental Management Authority, Tobago House of Assembly), and indicators to guide coordinated action, attract investment, and drive sustainable ocean-based development.
- Leverage Global Partnerships for Innovation and Resilience: Strengthen international cooperation by tapping into global science, financing, and technical expertise—from partners such as South Korea and France—to advance Caribbean leadership in ocean innovation and resilient marine resource management.

Systemic Challenges & Barriers to Action

The development of a sustainable blue economy faces several critical hurdles:

- Policy Fragmentation and Lack of Coherence: Overlapping mandates and a lack of a unified vision across government ministries and agencies hinder the development of a cohesive blue economy strategy.
- Outdated Legislative and Regulatory Frameworks: Archaic laws, particularly in the maritime sector, are ill-suited to the demands of a modern, sustainable blue economy and impede effective governance and enforcement.
- Limited Investment Incentives and Access to Finance: Potential investors and local entrepreneurs face difficulties in accessing finance and a lack of targeted incentives for sustainable blue ventures. The inaccessibility of the Green Fund remains a significant barrier.
- Insufficient Integration of Tobago: As highlighted, the failure to fully and equitably integrate Tobago's needs, priorities, and potential into national planning undermines the development of a truly national blue economy.
- **Enforcement Failures:** Even where regulations exist, a lack of consistent and robust enforcement allows unsustainable practices to continue, undermining legitimate businesses and environmental goals.
- Bureaucratic Delays: Slow administrative processes can stifle innovation and delay the approval and implementation of blue economy projects and necessary reforms.

Need for Greater Ocean Literacy and Political Will: A broader understanding of the ocean's economic and ecological value is needed across society, including among political leaders, to drive sustained commitment and investment in the blue economy transition.

Conclusion

In concluding the session, the Chair highlighted the key reflections and urged all stakeholders to view the blue economy not as an abstract policy goal but as a living agenda for development, justice, and planetary health. The outcomes of this session, he noted, will be central to shaping Trinidad and Tobago's input to the 2025 UN Ocean Conference and its broader development vision.





Cross-Cutting Priorities from All Sessions

Priorities

Across all three thematic sessions, several interconnected priorities consistently emerged as critical for Trinidad and Tobago's journey towards a sustainable blue future:

- 1. Accelerating Legislative Reform and Policy Coherence: Urgent need to review, update, and harmonise outdated marine, coastal, environmental, and maritime laws and policies to create a clear, effective, and enforceable governance framework.
- 2. Strengthening Data Systems, Accessibility, and Scientific Cooperation: Establishing centralised, open-access national data platforms for marine and coastal information, standardising collection protocols, and fostering collaboration among research institutions (e.g., Institute of Marine Affairs, The University of the West Indies), government, and international partners.
- 3. Empowering Communities, Youth, and NGOs: Recognising civil society as essential partners, providing them with resources, training, and meaningful roles in decision-making, data collection (citizen science), and project implementation. This includes creating formal avenues for their input, such as an NGO advisory body.
- 4. Creating Enabling Environments for Private Sector Engagement and Innovation: Streamlining access to finance (including reforming Green Fund accessibility), offering incentives for sustainable practices, and fostering

- an ecosystem that supports entrepreneurship (e.g., in sargassum valorisation, ecotourism) and public-private partnerships.
- 5. Elevating Ocean Literacy and Behavioural Change: Implementing comprehensive education and awareness campaigns to deepen public and political understanding of ocean issues and promote sustainable behaviours.
- 6. Ensuring Inclusive Representation, Particularly of Tobago: Guaranteeing that Tobago's unique needs, perspectives, and potential are fully integrated into all national ocean-related planning, governance, and economic development strategies, ensuring equitable benefit sharing.
- 7. Mobilising Sustainable Finance and Regional Partnerships: Actively seeking and strategically deploying national and international funding, and strengthening collaborations with regional (the Caribbean Community, CARICOM) and international partners for technical expertise, capacity building, and joint initiatives.
- 8. Addressing Implementation Gaps and Strengthening Enforcement: Moving beyond planning to effective action by tackling bureaucratic inertia, improving inter-agency cooperation, and significantly bolstering the enforcement of environmental and maritime regulations.

Recommendations for Action

Building on the rich discussions and key takeaways from the conference, the following recommendations are proposed to guide Trinidad and Tobago's efforts in charting a sustainable blue future and preparing for the 2025 UN Ocean Conference. These recommendations aim to be specific, actionable, and rooted in the national context, while also reflecting the urgency and passion conveyed by participants.

1. Strengthen Governance, Legislation, and Policy Coherence

Accelerate legislative reform: Prioritise the review and modernisation of outdated marine, coastal, environmental, and maritime laws (e.g., Fisheries Management Bill, maritime laws from 1916). Lead Agencies: Ministry of Legal Affairs, Attorney General's Office, Ministry of Agriculture, Land and Fisheries, Ministry of Works and Infrastructure, Environmental Management Authority, Institute of Marine Affairs. Timeline: Initiate comprehensive review within six months; table key updated legislation within two years.

- Pass key draft bills and regulations: Expedite the passage of existing critical draft legislation to close governance gaps and improve enforcement capabilities.
- Harmonise policy frameworks: Establish a high-level inter-ministerial task force to harmonise policies across sectors (climate, marine, energy, tourism, planning), integrating SDG 14 objectives. **Lead Agency:** Ministry of Planning, Economic Affairs and Development. **Timeline:** Task force established within 3 months; harmonisation plan within one year.
- Mandate accountability for blue economy delivery: Assign clear institutional responsibilities and performance indicators for blue economy initiatives within relevant ministries and agencies.
- Use locally grounded legal expertise: Ensure that the drafting of new laws and regulatory instruments is led by local experts familiar with Trinidad and Tobago's unique legal, cultural, and regional context.
- ► Establish an NGO Advisory Body: Create a formal mechanism for NGOs to provide input into policy development and monitoring, ensuring their voices and expertise are consistently included. Lead Agency: Ministry of Planning, Economic Affairs and Development, Environmental Management Authority. Timeline: Framework developed within nine months.

2. Build a Shared National Vision and Strategic Roadmaps

- Co-develop a National Blue Economy Roadmap: With measurable goals, cross-sector input (government, private sector, academia, NGOs, communities), and full inclusion of both Trinidad and Tobago. This roadmap should identify key sectors for sustainable development (e.g., ecotourism, mariculture, marine renewables, ecosystem services, sargassum valorisation). Lead Agency: Ministry of Planning, Economic Affairs and Development, with active participation from the Tobago House of Assembly. Timeline: Roadmap developed and launched within 18 months.
- Develop integrated coastal adaptation and resilience strategies: Incorporating marine spatial planning, risk assessments, nature-based solutions, and clear timelines, with specific attention to vulnerable areas identified in both Trinidad and Tobago. Lead Agencies: Ministry of Works and Infrastructure (Coastal Protection Unit), Institute of Marine Affairs, Environmental Management Authority, Tobago House of Assembly. Timeline: Strategies drafted within two years.
- Ensure Tobago's equal participation and leadership: Formalise mechanisms for the Tobago House of Assembly and Tobagonian stakeholders

- to be co-leaders in all national ocean governance and blue economy planning processes.
- Include visioning exercises with diverse stakeholders: Conduct participatory workshops with community representatives, private sector actors, youth groups, and NGOs to establish collective ownership of the blue economy transition.

3. Empower Communities, Youth, and Local Leadership

- Support grassroots initiatives: Provide dedicated funding streams and technical support for community-led conservation (e.g., mangrove restoration in Caroni and South Trinidad), sustainable tourism (e.g., Nanan's Caroni Tours), and circular economy projects (e.g., sargassum processing by Spargassum). Lead Agencies: GEF Small Grants Programme (United Nations Development Programme), Ministry of Trade, Investment and Tourism, Environmental Management Authority. Next Steps: Launch a call for proposals for community projects within six months.
- Provide technical and financial support to NGOs and youth groups: Enhance funding and capacity-building programmes for NGOs and youth organisations involved in citizen science, environmental monitoring, advocacy, and education. **Next Steps:** Increase allocation to existing grant facilities; develop specific training modules for environmental monitoring within one year.
- Engage youth in planning and governance: Formalise youth representation on relevant national committees and in consultation processes, addressing their concerns about mental health, education, and future employment in the blue/green economy. **Lead Agency:** Ministry of Sport and Youth Affairs.
- Strengthen ocean literacy at all levels: Integrate ocean literacy into formal school curricula (primary to tertiary) and support informal education programmes and digital tools to raise awareness. **Lead Agency:** Ministry of Education.



Empower innovators and entrepreneurs: Promote creative problem-solving and adaptive solutions rooted in lived experience by establishing innovation hubs or challenges focused on marine and coastal issues.

4. Improve Data, Science, and Technology for Decision-Making

- Establish a centralised national marine and coastal data platform: Ensure real-time access, interoperability, and open sharing of data across institutions (Institute of Marine Affairs, Environmental Management Authority, The University of the West Indies, private sector) and sectors. **Lead Agency:** Institute of Marine Affairs, Ministry of Public Administration and Artificial Intelligence. **Timeline:** Platform operational within three years.
- Standardise environmental data collection and sharing protocols: Develop and implement national standards for data collection, integrating scientific data, traditional ecological knowledge, and community-gathered information.
- Expand marine ecosystem monitoring: Increase monitoring of pollution (including sources), biodiversity, fisheries stocks, and climate impacts, particularly in critical areas like the Gulf of Paria and around Tobago.
- Leverage digital tools: Utilise Artificial Intelligence, remote sensing, and digital twin technologies for scenario planning, monitoring, enforcement, and sustainable infrastructure design.
- Promote regional and global scientific cooperation: Strengthen partnerships with institutions in France, South Korea, the European Union, and the Caribbean Community for research, technology transfer, and capacity building.

5. Enable Sustainable Finance, Private Sector Engagement, and Innovation

- Streamline access to the Green Fund: Urgently reform the Green Fund's governance and accessibility criteria to ensure timely disbursement for eligible environmental and blue economy projects, with clear eligibility and transparent reporting frameworks. Lead Agency: Ministry of Finance, Green Fund Executing Unit. Timeline: Review and reform proposals within six months.
- Develop blended finance models: Combine public, private, and philanthropic capital to support scalable blue economy initiatives, particularly for SMEs and community enterprises.

- Create investment incentives and fiscal tools: Design and implement targeted incentives (e.g., tax breaks, grants) for businesses adopting sustainable practices, investing in green technologies, and aligning with environmental, social, and governance (ESG) goals. Lead Agency: Ministry of Finance, Ministry of Trade, Investment and Tourism.
- **Support private sector participation:** Actively encourage and de-risk private investment in areas like marine renewable energy, eco-engineering, sustainable shipping, blue tourism, and waste valorisation.
- Foster business incubation and entrepreneurial ecosystems: Establish or support incubators and accelerators focused on ocean conservation, restoration, climate resilience, and blue technology, with links to academia and business mentors. **Lead Agency:** Ministry of Trade, Investment and Tourism, University of Trinidad and Tobago.
- Adopt and promote sustainability governance standards: Encourage the adoption of International Organization for Standardisation (ISO) standards, like ISO 37000 (Governance of organisations) and ISO 37301 (Compliance management systems), to align private sector operations with national development and sustainability goals.

6. Promote Environmental Protection and Climate Resilience through Integrated Action

- Scale nature-based solutions: Invest in and expand projects, such as mangrove restoration (e.g., Caroni Swamp, South Trinidad), coral reef, seagrass and dune protection and rehabilitation (especially around Tobago), and sargassum valorisation. Lead Agencies: Institute of Marine Affairs, Environmental Management Authority, Coastal Protection Unit, Tobago House of Assembly, NGOs. Next Steps: Identify 3 priority sites for scaled-up Nature-based Solutions within one year.
- Advance marine spatial planning and eco-engineering: Develop and implement comprehensive Marine Spatial Plan to protect biodiversity, reduce user conflicts, and guide sustainable development, incorporating eco-engineering principles in coastal infrastructure.
- Address pollution at source and rehabilitate impacted sites: Implement strategies to reduce land-based sources of pollution, including agricultural runoff and plastic waste. Prioritise the rehabilitation and, where necessary, relocation of polluting sites like the Beetham landfill away from sensitive marine ecosystems. Lead Agency: Solid Waste Management Company Limited (SWMCOL), Environmental Management Authority.

- Establish and effectively manage Marine Protected Areas (MPAs): Expand the Marine Protected Area network and ensure effective management and enforcement of no-take or restricted fishing zones, aligned with conservation targets (e.g., 30x30).
- Promote regional clean energy transition: Explore and invest in offshore renewable energy (wind, solar, Ocean Thermal Energy Conversion) as part of the blue economy shift, contributing to national energy security and decarbonisation.
- Mainstream ecosystem service valuation and climate risk modelling: Integrate these tools into all national and sectoral planning, project appraisal, and investment decision-making processes.

By embracing these recommendations, Trinidad and Tobago can transform the challenges discussed at the National Oceans Conference into tangible actions, fostering a truly sustainable, resilient, and inclusive blue future for all its citizens, and making a significant contribution to global ocean governance at the 2025 UN Ocean Conference and beyond.













