IMA NEWS

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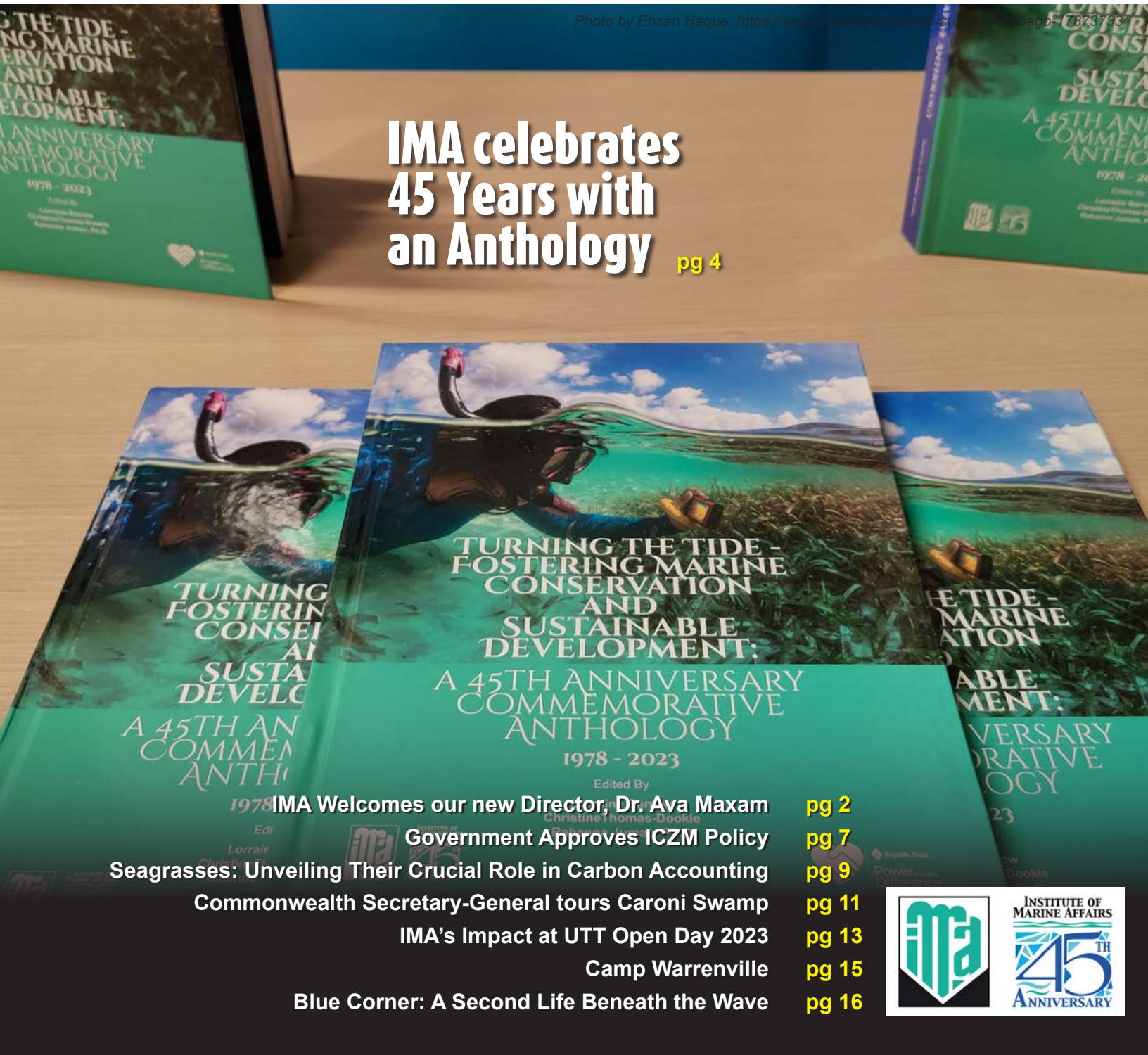

IMA celebrates 45 Years with an Anthology pg 4

IMA Welcomes our new Director, Dr. Ava Maxam pg 2
Government Approves ICZM Policy pg 7
Seagrasses: Unveiling Their Crucial Role in Carbon Accounting pg 9
Commonwealth Secretary-General tours Caroni Swamp pg 11
IMA's Impact at UTT Open Day 2023 pg 13
Camp Warrenville pg 15
Blue Corner: A Second Life Beneath the Wave pg 16

INSTITUTE OF MARINE AFFAIRS 45TH ANNIVERSARY

IMA welcomes our new Director, Dr. Ava Maxam

Dr Ava Maxam, Director, Institute of Marine Affairs

Dr Ava Maxam comes to the Institute with over twenty-years management and technical experience. An accomplished professional, she has a number of award-winning projects in the areas of coastal & environmental management, sustainable development, and spatial business solutions development. At Mona Geoinformatics Institute (MGI), an information technology company specialising in spatial solutions, where she served last, Dr Maxam performed in roles of the Deputy Director and was in 2022 appointed to act in the role of Executive Director.

She has amassed a sizeable network through corporate, government, multi-lateral funding and academic collaborations, having negotiated and executed projects both in her home country of Jamaica and regionally. A well respected professional in her area of expertise, Dr Maxam also sat on various technical committees and boards as appointed by the government of Jamaica, The University of the West Indies, and other bodies. For example, Dr Maxam has chaired and resided on several Boards related to the environment, public affairs, education and business development, including the Government of Jamaica's appointments to the: Natural Resources Conservation Authority (NRCA) Board; the National Environment and Planning Agency (NEPA) Advisory Board; Town and Country Planning Authority (TCPA) Board; Chair of the NRCA Beaches and Coastal Resources Committee; and Cannabis Licensing Authority (CLA) Board. She has also served as a member of the Energy, Environment and Climate Change Committee – Private Sector Organisation of Jamaica (PSoJ). She has also been involved in a number of non-governmental organisations, including the Violence Prevention Alliance, the Peace Management Initiative and the Farquharson Institute for Public Affairs.

An advocate for using data to inform decisions, Dr Maxam combines environmental, physical, social and economic data with geographic information systems (GIS) to create models, tools and policies necessary for bringing countries into more modern and efficient ways of managing vital resources. She specialises in developing GIS-based analytical and decision-support systems that empower governments, civil society, and the private sector which in turn strengthen their resilience to the impacts of natural and man-made hazards including the effects of climate change. Through her technical and management expertise, she expanded GIS solutions throughout the Caribbean, leading the development of over twenty-seven (27) customised software applications and sixty-eight (68) major projects for the public and private sectors.

Dr Maxam has built her experience and skills into programmes for knowledge transfer for the development of hundreds of trainees. As such, as a PhD graduate in Oceanography from The University of the West Indies, she has delivered lectures and developed training programmes in GIS, coastal management and the environment to graduates, undergraduates and

professionals alike. Her academic research has also led to publications on the effect of ocean circulation on Jamaica's coral reefs and coastlines - highlighting their importance in ecological nurseries, creating unique circulation systems, and influencing water quality.

She is an avid photographer, enjoys cycling, and tai chi chuan, and is a certified SCUBA diver with a love for water activities.

Some of Dr Maxam's awards include:

- Principal's Research Award, The University of the West Indies Mona, for COVID-19 Impact: Research Project with the Greatest Impact on Policy for the project: 'GIS Support to the National Covid-19 Response in Jamaica' (2023).
- Scientific Research Council's S & T XXtrordineer Jamaica - Women in Science that have Impacted National Development (2022);
- Principal's Research Award, The University of the West Indies Mona, for Research Project with the Greatest Impact on Policy for project: Risk/ Vulnerability Assessments and Preparation of Climate Change Adaptation Strategies/Plans for Five Priority Sectors (2022).
- FIPA Award of the Century in Science & Technology from The Farquharson Institute of Public Affairs for 'empowering governments across the Caribbean in leveraging science, technology and data for climate change adaptation' (2020);
- the National RJR-Gleaner Honour Award for Science and Technology (2018);
- LICJ National Best Practices in GIS Award for the Integrated Crime and Violence Information System in use by the Government of Jamaica for crime data management and analysis (2012);
- Jamaica's 1st navigation system (JAMNAV©) – appointed as official Garmin Map Developers (2009);
- LICJ National Best Practices in GIS Award for the National Electoral Information Management System for monitoring Jamaica's elections (2007).

RBL-IMA Solidify Future Partnerships for National Development and Ocean Conservation

l-r Mr Richard Sammy, Group Vice President Republic Bank, Dr. Ava Maxam, Director of the Institute of Marine Affairs.

Beginning in 2019, the Republic Bank, Trinidad and Tobago partnered with the Institute of Marine Affairs (IMA) to sensitise the public on the role and benefits marine ecosystems in maintaining the balance of life on the earth and providing jobs and a livelihood for many coastal communities. In 2019, the bank joined sixteen other corporate sponsors to aid the IMA in staging its first ever immersive and interactive exhibition using virtual reality, life-sized models, games, sound, and lectures for a learning experience that targeted all five senses. Three hundred of the nation's students and adults and many more hundreds online benefitted from the in-person exhibits and the lectures that were staged for both in-person and online audiences.

That partnership grew with the bank's sponsorship of forty (40) radio broadcasts and a virtual Distinguished Lecture on the theme "Driving Economic Diversification: Possibilities and Challenges for Trinidad and Tobago." The virtual Distinguished Lecture and Panel discussion hosted by the IMA on 20 July 2020 via a zoom conference, Facebook live stream, and broadcast live on Gem Radio I95.5 sought to generate ideas on how Trinidad and Tobago could deepen its participation in the blue economy and leverage emerging industries as a platform to diversify away from an hydrocarbon based economy. Professor John Agard, Professor of Tropical Island Ecology of the St. Augustine Campus of The University of the West Indies (UWI) and Director of the St. Augustine Centre for Innovation and Entrepreneurship, UWI, delivered the Distinguished Lecture. He was joined by members of the business community such as: Dr. Thackwray Driver, CEO of the Energy Chamber of Trinidad and Tobago; Mr. Baldath Ramkissoon, General Manager, Treasury, Republic Bank; Mr. David Ramjohn, CEO of AlgEternal Technologies LLC (AET) and Global Head of Sustainability at KindEarth.Tech (KET) of the USA; Mr. David Simmons, Managing Director of Simmons and Associates; and Dr. Ryan Mohammed, Biologist and representative for Council of Presidents for the Environment (COPE); who presented ideas on possible enterprises, the financing projects, and the legal framework required for such activity.

In 2021, the IMA-Republic Bank partnership sought to heighten the ocean literacy of national community and share via a Distinguished Lecture on the theme "Below the Blue: Exploring the Caribbean Deep and Harnessing its Benefits." It was another excursion into the possibilities of a blue economy, this time based on organisms and resources harnessed from the deep ocean. The online Distinguished Lecture, delivered by Professor Judith Gobin, Dean of the Faculty of Science and Technology, UWI highlighted the benefits of deep-sea ecosystems to the Caribbean region. Experts from across the globe lent their insights and knowledge over the two-hour long live broadcast on radio I95.5FM, which was also streamed live on the Institute's social media accounts - YouTube and Facebook. The event garnered wide appeal with online participants joining from over twelve (12) countries (including Bahamas, Barbados, Colombia, Jamaica, Puerto Rico, United

l-r Mr Cyril Best, Legal Counsel IMA, Ms. Alicia Carter-Fisher Chief Information Officer IMA, Ms. Reena Gopaul Manager, Group Brand Management RBL, Dr. Ava Maxam Director IMA, Mr Richard Sammy, Group Vice President Republic Financial Holdings, and Mrs. Nathalie Burnette-Alfred Senior Official CSR, Management and Strategic Support, RBL.

Kingdom, United States), and with participants from the United States' White House Science and Technology Policy Committee, the UNESCO International Oceanographic Commission (IOC), Caribbean government ministries, academia, the private sector and several non-governmental organisations (NGOs). Over 300 persons joined online including local and regional ministers of government, members of the Judiciary of Trinidad and Tobago, members of Diplomatic Corps; and Permanent Secretaries.

Presenters spoke specifically to how Trinidad and Tobago can become involved in any new and emerging industries such as bioprospecting for marine genetic resources, which can be utilised to create high value products as pharmaceuticals, products for use in medical biotechnology, personal care products and more. The need for conservation and mapping the deep ocean floor were also highlighted as priority areas, before any business development or monetisation of blue assets can be considered.

The 2021 collaboration also saw the production of two five-minute videos on ocean acidification and beach profiling targeted to students in the secondary school. The videos showcased the IMA's work in these areas, with our scientists, Dr. Anjani Ganase and Attish Kanhai using innovative storytelling mechanisms to share complex ideas in a bid to elevate the learning process and build the neuropathways that will ensure long-term memory.

Regarding ocean literacy, the national community was introduced to the essential concepts principles of what makes for a functioning and healthy ocean; its structure, role and the ecosystem and other benefits that humans derive from oceans as well as some of the current threats oceans are undergoing regarding their health and their continued ability to support life on this planet.

In 2022, the International Year of Artisanal Fisheries and Aquaculture (IYAFA 2022) the IMA brought the voices of local fishers and those involved in the industry to the forefront. The IMA's team traversed the length and breadth of the island to bring the perspectives of fishers, vendors, fishing association members, persons involved in small-scale processing, the regulators and researchers to the forefront for an overview of the local and regional industry, what works, what does not, and what a carefully managed future in the sector can achieve going forward.

The radio broadcasts also looked at fisheries and its contribution to food security and the Gross Domestic

Product of Trinidad and Tobago; and the challenges and opportunities for sustainable growth. It explored how the various layers of the value chain which may be leveraged to produce blue growth and discussed how the sector can be supported to make a greater contribution to the blue economy.

In this collaborative tapestry, a pivotal thread was the commemoration of the Institute of Marine Affairs' 45th anniversary. This anthology stands as a curated collection of newspaper articles authored by IMA's researchers and information officers, preserving for posterity the results of 45 years of research, conservation, and activism in a simple and easy to read format. Significantly sponsored by RBL, this anthology serves a dual purpose – celebrating IMA's journey while fostering public understanding of marine conservation. On Friday 8th September 2023, the IMA's Director Dr. Ava Maxam; Chief Information Officer, Alicia Carter-Fisher; Legal Counsel and Corporate Secretary, Mr. Cyril W Best, presented two hundred copies of the Anthology to the Republic Bank who were represented by the Group Vice President, Republic Financial Holdings, Mr. Richard Sammy; Manager, Group Brand Management, Ms. Reena Gopaul; and Senior Official, CSR Management and Strategic Support, Ms. Natalie Burnette-Alfred.

With a new Director at the helm, the partnership continues! The IMA and the Republic Bank will be moving forward to develop an initiative that sees the implementation of a project that actively materialises the concept of the blue economy, promotes sustainability and climate adaptability even as the Institute continues to ensure the national community is made aware and educated on the role of marine and coastal environments to life as we know it.

The Republic team told the IMA that in 2020, the Republic Bank Group made the ground-breaking commitment to align with the Paris Agreement, and the U.N.'s Sustainable Development Goals (SDGs). Vice President Richard Sammy noted that the bank was the only Caribbean domiciled financial signatory to the UNEP FI Principles for Responsible Banking and that it is a founding member of the UN-convened Net Zero Banking Alliance. The Group has since set an ambitious target of US$200 million climate finance goal to help mitigate against climate change and build resilience across the fourteen (14) territories in which it operates. In response, IMA's Director Dr. Ava Maxam congratulated the bank on its leadership and pledged the IMA's collaboration and support in aiding the bank in realising is climate adaptation and resilience goals through the projects that the Institute brings to the table. She noted that the IMA is also able to develop ICT mechanisms that will aid the bank in simplifying its reporting responsibility to the U.N.

As the United Nations and scientists the world over commemorate the Decade of Ocean Science for Sustainable Development, public-private sector partnerships now and in the future will continue to be the core of preserving the big blue planet that we all call home.

Government Approves Integrated Coastal Zone Management Policy

Village of Castara
Photo credit: Oceanography & Coastal Processes Team (IMA)

On August 10, 2023, Trinidad and Tobago marked a significant milestone in its journey towards sustainable development. The government of the Republic of Trinidad and Tobago approved the Integrated Coastal Zone Management (ICZM) Policy Framework and Re-appointed members of the ICZM Inter-Ministerial Committee, a monumental step towards achieving sustainable utilisation and development of coastal and marine resources. This accomplishment is the culmination of a dedicated effort that began back in 2011 when the Institute of Marine Affairs (IMA) lobbied for the development of this ground-breaking policy.

The concept of ICZM has garnered global recognition as an optimal approach to reconcile developmental aspirations with environmental conservation. It is a continuous and dynamic process aimed at ensuring sustainability across social, economic, and environmental dimensions by managing human activities within the coastal zone and addressing conflicts among the different resource users and uses.

The overarching goal of the Policy is to facilitate an integrated approach to coastal zone management aimed at maintaining and where necessary, enhancing the functional integrity of the coastal resource systems while enabling sustainable economic development through rational, inclusive decision-making and planning. The inception of this transformative policy journey took root in April 2012, when the then Cabinet appointed a Multi-Sectoral Steering Committee chaired by the Institute of Marine Affairs to develop the Policy Framework. The committee comprised representatives from various government entities, including Ministries of Environment and Water Resources, Tourism, Works and Infrastructure, and Energy and Energy Affairs. The private sector, civil society, and environmental organizations were also integral participants in shaping the policy's development.

Throughout the process, key stakeholders engaged in thematic working groups and public consultations, reflecting the policy's participatory nature. By tapping into the expertise of government agencies, businesses, energy sectors, fisher folk, and the general public, the Steering Committee harnessed a diverse array of perspectives to craft a comprehensive policy framework that truly reflects the nation's collective vision.

Informed by a series of technical studies conducted between 2013 and 2016, which were funded by the Inter-American Development Bank (IDB), the policy's evolution gained invaluable insights. Studies encompassed a review of existing policies, legislative structures, and institutional frameworks for ICZM in Trinidad and Tobago. Additionally, a coastal vulnerability index was developed for Southwest Tobago and an analysis of the contribution of the ocean and coasts to the country's economy were undertaken. These activities provided a robust foundation upon which the policy's principles were anchored.

Integrated Coastal Zone Management

ICZM

Policy Framework

The commitment to a holistic and inclusive approach persisted in 2018 when an Inter-Ministerial Committee, chaired by the Ministry of Planning and Development, was entrusted with the responsibility of refining and finalizing the ICZM Policy. This committee represented a cross-section of entities including the Institute of Marine Affairs, Ministry of Energy and Energy Industries, Tobago House of Assembly, Fisheries Division, Coastal Protection Unit, and the Office of Disaster Management and Preparedness.

The ICZM Policy's objectives reflect the comprehensive nature of this venture. They encompass the establishment of an accountable and harmonized institutional mechanism for coastal zone management, ensuring that developments align with the islands' unique aesthetic, environmental, and cultural characteristics. The policy diligently tackles the imperative of minimizing exposure to risks arising from natural and human-induced impacts, notably climate change-induced phenomena like coastal flooding and salinization. The restoration and protection of coastal ecosystems and habitats stand as crucial aspirations, alongside poverty alleviation through sustainable livelihood creation.

With the approval of this Policy, Trinidad and Tobago reiterates its commitment to learning, public participation, partnerships, capacity-building, and international cooperation in coastal zone management. As the nation steps onto this transformative path, it carries the weight of global expectations and sets a precedent for responsible coastal governance. The legacy of this achievement will undoubtedly reverberate through generations, a testament to the power of collaborative vision and dedicated action in shaping a more resilient and sustainable future.

Kindly see link to ICZM Policy

http://www.iczm.gov.tt/wp-content/uploads/2020/11/Integrated-Coastal-Zone-Management-Policy-Framework_September-2020_FINAL_print-version-1.pdf

Seagrasses: Unveiling Their Crucial Role in Carbon Accounting

IMA partners with CariCAS

Thalassia (turtlegrass) bed

Seagrasses, the solitary flowering plants thriving in marine environments, are emerging as unsung heroes in the battle against climate change. Despite occupying a mere 0.2% of the ocean's surface, these underwater wonders play a disproportionately significant role in absorbing and storing carbon dioxide, the primary greenhouse gas driving climate change. They are responsible for storing an impressive 10-18% of carbon in marine ecosystems (Kennedy et al., 2010), making them a potent tool for climate change mitigation. This remarkable carbon sequestration ability has led to the term "blue carbon," highlighting their unique capacity to store organic carbon (Corg) and potentially offset CO2 emissions during habitat degradation or destruction (McLeod et al., 2011).

In the Caribbean region, which boasts some of the largest expanses of seagrass meadows in the western hemisphere (Green and Short, 2003), a paucity of information exists regarding the status, trends, and carbon density of these vital ecosystems (Waycott et al., 2009; Fourqurean et al., 2012a). Additionally, the widespread decline of seagrasses across the Caribbean (van Tussenbroek et al., 2014) raises concerns about the potential release of stored carbon, further exacerbating global warming.

Sea grass sampling Tobago

Under the auspices of The Nature Conservancy, Florida International University has embarked on the Caribbean Carbon Accounting in Seagrass (CariCAS) project. The project unites a network of marine scientists and institutions across the Caribbean to estimate the regional importance of seagrass carbon stores. The overarching goal of CariCAS includes establishing a collaborative network of Caribbean seagrass scientists, equipped with the tools to gather comprehensive data on seagrass blue carbon. These data will contribute to constructing inventories of seagrass blue carbon to a depth of one metre across the Caribbean, elucidating the range, variation, and environmental factors influencing seagrass carbon stocks.

In this context, the Institute of Marine Affairs (IMA) emerges as a formidable partner. With a legacy of seagrass research dating back to the 1990s in Trinidad and Tobago, the IMA continues its unwavering commitment to marine ecosystem conservation. Dr. Rahanna Juman and Mr. Attish Kanhai, representing IMA, have joined the CariCAS network and recently participated in a training workshop on seagrass carbon assessment methodologies.

A collaborative expedition between IMA and Florida International University scientists, Dr. Johannes Krause and Mr. Juan González Corredor, yielded fruitful results. Sampling efforts in William's Bay, Trinidad, and Bon Accord Lagoon and Nylon Pool, in Tobago, provided valuable data on seagrass density, biomass, and sediment core analysis. These samples, meticulously collected and pre-processed at IMA, were subjected to carbon analysis at Florida International University, contributing to the broader CariCAS initiative.

Thalassia fruit

The Tobago fieldwork bore unexpected fruit, uncovering noteworthy findings. The team's discovery of a fourth seagrass species, Syringodium filiforme (manatee grass), in Bon Accord Lagoon marked a significant record, adding to the region's seagrass biodiversity. Moreover, the collection of Thalassia testudinum (turtlegrass) fruits in Nylon Pool further underscored the project's contribution to advancing our understanding of marine ecosystems.

CariCAS aligns seamlessly with IMA's ongoing endeavours to estimate blue carbon in mangrove forests and seagrass beds. The synergy between these initiatives reinforces the importance of safeguarding and restoring these crucial ecosystems. By collaboratively unravelling seagrasses' carbon accounting potential, we strive to provide a foundation for informed conservation strategies and underscore the pivotal role of blue carbon ecosystems in the fight against climate change.

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Acknowledgments:
We extend our gratitude to The Nature Conservancy for their funding and support, enabling this critical collaboration to thrive.

IMA Accompanies Baroness Patricia Scotland to the Caroni Swamp, Trinidad

On June 13, 2023 IMA and Forestry Staff accompanied Baroness Patricia Scotland, General Secretary of the Commonwealth Secretariat to the Caroni Swamp. Caroni Swamp, the largest mangrove forest in Trinidad and Tobago and a Wetland of International Importance (Ramsar Site), is home to a diversity of fauna species including vulnerable and endangered species. The Baroness was able to see the Scarlet Ibis, our national bird and an Environmental Sensitive Species (ESS) coming in to roost and the once visitors- now resident –Flamingoes feeding on exposed mudflats.

IMA has been conducted research and monitoring in the Caroni Swamp for many years. In recent time and with funding from the British High Commission, IMA began research to quantify the amount of carbon stored in mangrove biomass and soils. Carbon dioxide is a major greenhouse gas that have contributed to climate change and mangrove forests have the highest area rates of carbon capture and storage compared with any other ecosystem, terrestrial or marine, contributing disproportionately as a carbon sink, if left undisturbed.

In April 2018, the Commonwealth Blue Charter was adopted at the Commonwealth Heads of Government Meeting. The Blue Charter Initiative led by Baroness Scotland addresses issues of equitable ocean governance and sustainable management, impacts from climate changes, vulnerability of Small Island Developing States and the need for cooperation and knowledge sharing especially with developing nations. The Charter is assisting developing nations in achieving Sustainable Development Goal 14 – Life under water.

Front row, left, The Rt Hon Patricia Scotland KC, Secretary-General of the Commonwealth of Nations observing flora and fauna of the Caroni Swamp, Trinidad, with Dr Rahanna Juman, Director (Ag.), Instititue of Marine Affairs, Nikia Gooding and Addison Titus.

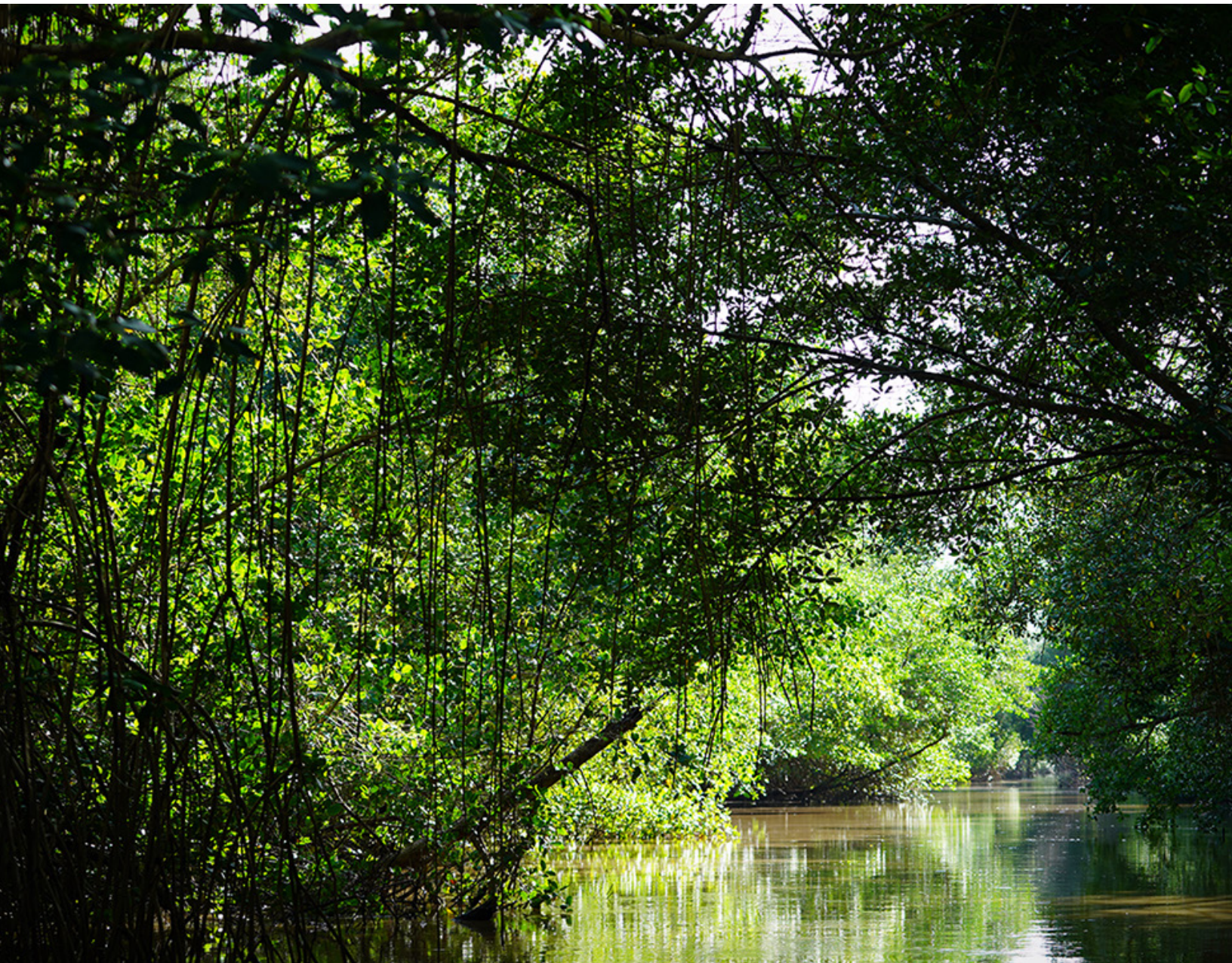
The Government of the Republic of Trinidad and Tobago endorsed the Blue Charter Initiative and Trinidad and Tobago, with representation from the IMA, has joined the following Commonwealth Blue Charter

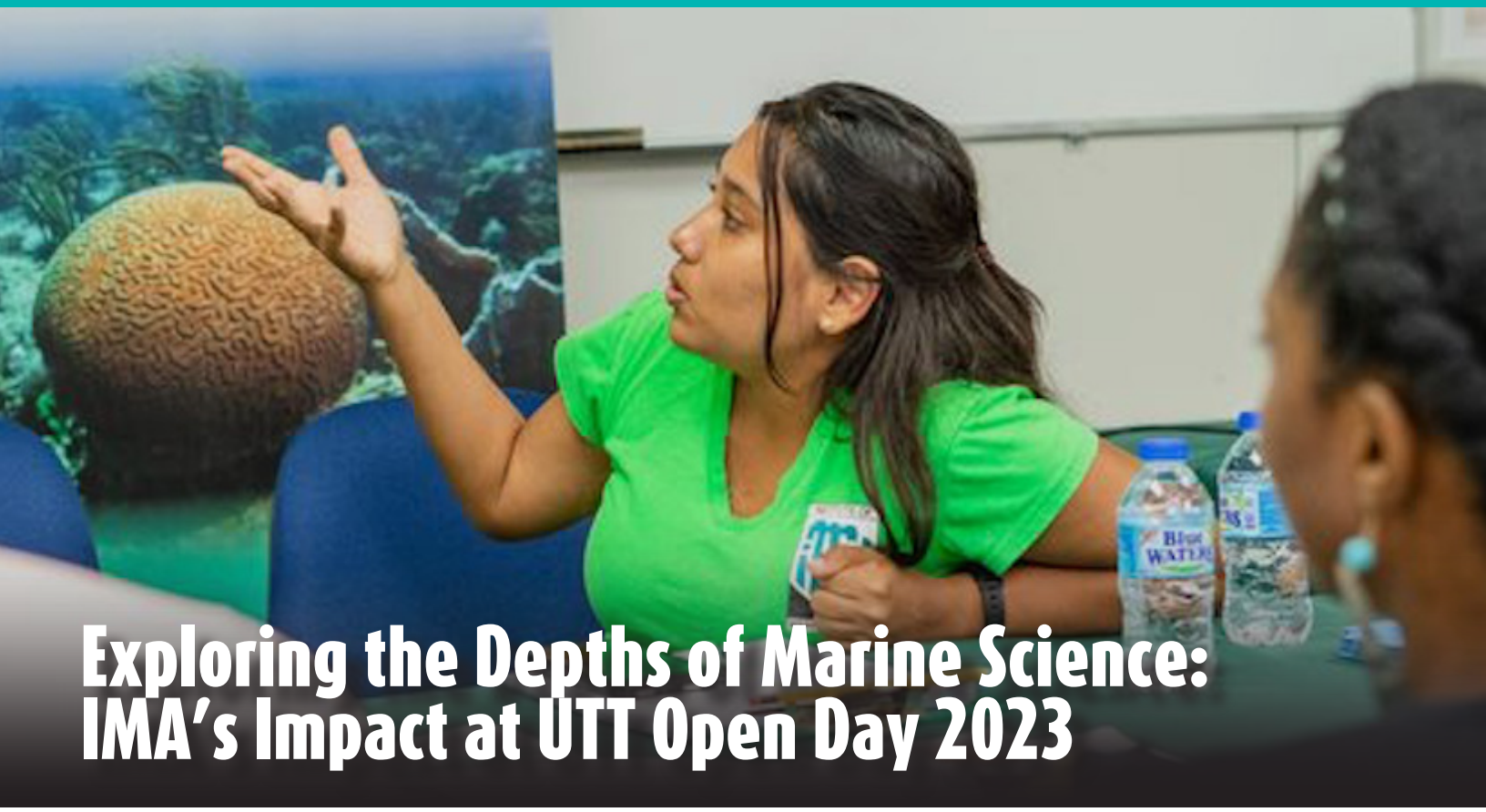
Action Groups- Clean Ocean Alliance, Sustainable Blue Economy, Coral Reef Protection and Restoration, Mangrove Ecosystems and Livelihood, Marine Protected Area, Ocean Acidification Ocean and Climate Change, Ocean Observation and Sustainable Aquaculture.

The Mangrove Ecosystem and Livelihood Action Group (MELAG) is focused on sharing best practices and promoting mutual co-operation in the conservation and sustainable utilisation of mangroves, to realise the ecosystem services and sustainable livelihood opportunities they can provide. This group is leading on behalf of the Commonwealth Blue Charter on matters relating to the conservation and restoration of mangrove ecosystems with particular reference to areas identified in the 'Commonwealth Blue Charter – Shared Values, Shared Ocean – a Commonwealth commitment to work together to protect and manage our ocean.'

The work of MELAG is very much align to the IMA strategic objective to strengthen the science-policy nexus by conducting applied research on the coastal and marine environment to assist with effective decision-making towards achieving sustainable development and produce knowledge products for public education and awareness.

Baroness Scotland was impressed by the lush, towering mangrove trees and the rich bird life that exist just minutes away from the bustling city of Port of Spain. She learned about all the efforts being made by the IMA and Forestry Division to conserved this national treasure. She enjoyed the pineapple chow served by Mr Kalpoo, tour operator while the sun set over Caroni Swamp.





Exploring the Depths of Marine Science: IMA's Impact at UTT Open Day 2023

Photo credit: Roger Wason

Marine education, inspiration, and innovation, were at the core the Institute of Marine Affairs' (IMA) presentation at the Chaguaramas Campus University of Trinidad and Tobago (UTT) Open Day on July 29th, 2023. Amidst the excitement and energy of the event, the IMA erected a captivating booth that beckoned curious minds to dive into the fascinating world of marine science and conservation.

Represented by a dedicated team of researchers and technicians, the IMA's display moved beyond the presentation of a static booth; it was a veritable portal that explored diverse careers in marine science. Our aim was to give students first-hand insights into the transformative projects that the Institute is now spearheading.

The booth served as a hub of knowledge, where inquisitive visitors engaged in dynamic conversations with the IMA representatives. These interactions transcended the boundaries of traditional education, offering a unique opportunity to interact directly with professionals who are at the forefront of marine research and conservation efforts.

One of the focal points of the IMA's booth was the exciting realm of Mariculture. As attendees gathered around, the researchers and technicians demonstrated the intricate balance between sustainable mariculture practices and environmental preservation. From discussions about responsible seafood production to showcasing the fascinating diversity of species being cultivated in controlled marine environments, the IMA's team brought to life a vision of a future where communities harmonise with nature to ensure the well-being and survivability of both.

The Tobago MARIN project – The Marine Resilience Initiative – was another star in the constellation of IMA's projects, capturing the imagination of those who stopped by the booth. The project's focus on coral reef research, restoration, and seagrass restoration resonated with attendees as they learned about the IMA's dedicated efforts to bolster the resilience of Tobago's marine ecosystems. The researchers passionately shared their journey, shedding light on the innovative strategies being employed to safeguard the delicate balance of marine life in the face of environmental challenges.

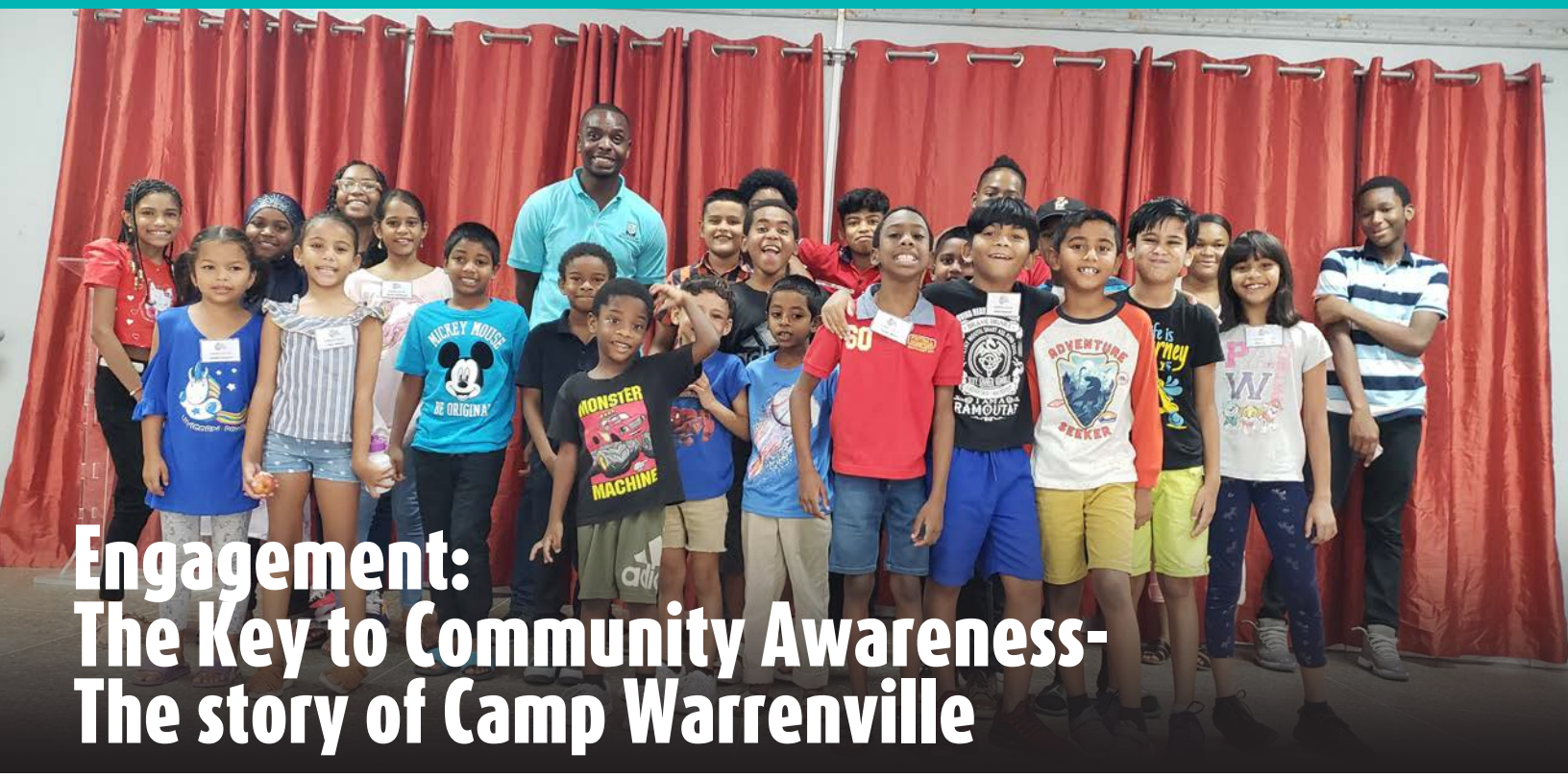
The presence of the IMA at UTT Open Day was more than just a showcase; it was an embodiment of the Institute's commitment to fostering a new generation of marine enthusiasts, scientists, and conservationists. As students explored the booth and engaged in animated discussions, seeds of curiosity were sown, igniting aspirations that may shape the future of marine science in Trinidad and Tobago.

With every interaction, the IMA's team left an indelible mark on the minds of attendees, nurturing a profound appreciation for the oceans and the critical role they play in our planet's health. As the event concluded, the echoes of insightful conversations and shared experiences lingered in the air, leaving a trail of inspiration that will continue to guide the journeys of those who seek to make a difference.

In retrospect, the IMA at UTT Open Day was a celebration of possibilities – an exploration of the vast blue expanse that holds mysteries, challenges, and untold potential. The event exemplified the IMA's dedication to marine research, education, and outreach, offering a glimpse into the boundless horizons that await those who dare to venture beneath the surface.

As we reflect on this impactful event, we invite you to join us in celebrating the IMA's engagement at UTT Open Day and to continue supporting our shared mission of protecting and preserving the marine resources that define our beautiful nation. Together, we can ensure a future where the oceans thrive and inspire generations to come.

IMA staff inspiring students with marine science careers



Engagement: The Key to Community Awareness- The story of Camp Warrenville

Vacation Campers at the Warrenville Regional Complex

Deep within the heart of the farming community of Warrenville, the Institute of Marine Affairs (IMA) demonstrated its commitment to education, conservation, and engagement. Environmental awareness and the value of natural resources to the preservation of life and livelihoods were communicated to the participants at Camp Warrenville. Camp Warrenville was staged at the Warrenville Regional Complex in August 2023.

The IMA's collaboration with the community of Warrenville began September 2022 during our 7th Community Symposium, held under the theme Community and Ecosystem Connections – Improving Human Wellbeing, Sustaining Livelihood' in this community. This symposium served as a catalyst in the forming of lasting bonds with the residents of the farming community. During the 7th community symposium, insights from IMA's CLME+ EBM Project were shared. Back then, farmers were introduced to innovative strategies to tackle the effect of pollution from agricultural activities on mangroves and harvested resources. It was the seeds of that engagement that grew into an opportunity to work with the community's children in August 2023. The IMA was invited to participate in the community's vacation camp for its youth who are on break from the school year. Camp Warrenville is aimed at educating young minds on the marine environment among other things. Students, through the IMA, were exposed to the significance of coral reefs and marine ecosystems.

The camp served as a platform for IMA Education Officers to interact with enthusiastic campers. Engaging presentations, hands-on activities, and thoughtful discussions were utilised to instil curiosity and deepen appreciation for the intricate balance of marine ecosystems. At the end of the engagement, campers left with the tools to become stewards of their environment instead of simply being passive recipients of information.

In August, a foundation has been laid for ongoing and future activity with the community. Camp Warrenville underscored the power of outreach and engagement activities in building lasting collaboration and understanding, all with a view to eventually driving lasting change in behaviour and attitude. Change in attitude and actions is what we need to ensure our marine environment can continue to provide us the ecosystem services that preserve both life and livelihoods.

As the day drew to a close at the Warrenville Regional Complex, the echoes of laughter and newly acquired insights lingered in the air. IMA's visit to Camp Warrenville in August 2023 is poised to make an enduring impact on the young minds. This event served as a reminder that educational initiatives aid in developing a more informed, interconnected, and environmentally conscious society; all of which leads to development that fosters long term sustainability.

THE BLUE CORNER

Reviving Sunken Vessels: A Second Life Beneath the Waves

In the azure expanse of the world's oceans, a remarkable transformation is taking place - sunken vessels are finding a second life beneath the waves. While shipwrecks may conjure images of maritime tragedy, the practice of deliberately sinking decommissioned vessels has ushered in an unexpected chapter of environmental renewal and marine conservation.

One crucial aspect of ensuring the success of these sunken havens is the responsible handling of potential environmental hazards. The threat of oil and fuel leakage from sunken vessels is a real concern. To mitigate this risk, meticulous efforts are made to remove hazardous substances from the vessels before they are submerged. By safeguarding against the release of pollutants, one ensures that these sunken structures become sanctuaries for marine life rather than sources of ecological harm.

Once the vessels are prepared and safely positioned on the ocean floor, they begin a new chapter as thriving ecosystems. The metamorphosis is astounding - what was once a conduit of human transportation becomes a refuge for an astonishing variety of plants and animals. Corals, sponges, and an array of marine flora and fauna colonise the surfaces, creating vibrant and biodiverse communities.

These sunken vessels provide a multifaceted habitat for marine organisms. The nooks and crannies of the ships offer protection and shelter, while the structure itself serves as a platform for the establishment of intricate marine ecosystems. Schools of fish dart in and out of portholes, while crustaceans and mollusks cling to the hull. The vessels become underwater oases, bustling with life and activity.

In some corners of the world, sunken ships are elevated to the status of artistic marvels. As part of artificial reef initiatives, ships are intentionally sunk to create captivating underwater sculpture gardens. These submerged galleries attract not only marine life but also divers and tourists, fostering a unique synergy between art and marine conservation.

The transformation of sunken vessels into thriving marine habitats is a testament to the resilience of nature and the innovative approaches we can take to mitigate environmental impact. The practice of repurposing these structures demonstrates the potential for harmony between human activity and the natural world. As we continue to explore the possibilities of second lives for sunken vessels, we gain insights into the interconnectedness of ecosystems, the power of restoration, and the boundless wonders that lie beneath the surface of our oceans.

Sites like the iconic Curaçao Tugboat - located in just five meters (15ft) of water and wrecked just a few yards offshore in a protected bay of Caracassbaai. This site is perfect for divers as well as snorkelers.
Photo credit Frank Do, @unterwasserfrank via instagram

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