

INSTITUTE FOR COASTAL  
AND MARINE RESEARCH  
(CMR)

QUARTER I NEWSLETTER  
2024

JOLLY

# NOTE FROM THE NEWLY APPOINTED DIRECTOR



Greetings CMR members, I am thrilled to have joined the Institute of Coastal and Marine Research team as the newly appointed Director (as of 1 March). It is an honour to step into this role and I feel a profound sense of gratitude and responsibility. I would like to take a moment to express my heartfelt appreciation to Dr Nomtha Hadi and Adj Prof Lorien Pichegru who have given of themselves and their time to lead CMR over the last few years aided by Deputy Directors Profs Janine Adams, Pierre Pistorius and Patrick Vranken.

I have had the privilege to be involved with CMR in many of its iterations and have seen its evolution from a faculty-based entity to the institute that it has become. There have been many people who have led and built the entity over the years. I would specifically acknowledge the efforts of Prof Anton McLachlan, and later, Adj Prof Berny Snow for their dedication, vision and tireless efforts to propel CMR as an important institutional entity and globally recognised coastal and marine research group. I am truly excited about the possibilities that lie ahead for CMR at the Ocean Sciences Campus. Together, we have the power to make a significant impact on the conservation and sustainable management of our coastal and marine environments. With your expertise and commitment to excellence, I am confident that we will achieve great things. As we embark on this journey together, I am eager to hear your ideas, collaborate on innovative research projects, and foster a supportive and inclusive community where everyone's contributions are valued. Together, let us chart a course towards a brighter, more resilient future for our oceans and coasts.

# FAREWELL FROM THE ACTING DIRECTOR



Thank you to the CMR Management, the Team and to all our members, researchers, partners, and stakeholders for advancing the research and the work needed in promoting sustainable marine and coastal ecosystems. Allow me to also to take this opportunity to commend the entity on the achievements and progress made within CMR and the broader Nelson Mandela University community and for the partnerships built and sustained throughout the past year.

As we continue to advance and promote the research and engagement needed to tackle the ocean decade challenges and other urgent challenges that our oceans and coast face, may we not forget the importance of collaborating and sharing the knowledge and information needed for promoting inclusive and leading ocean and coastal sciences institute advancing our understanding of the coastal and marine environment to serve the needs of South Africa, the continent and beyond in a sustainable manner.



## CMR BY NUMBERS - 2023

### Members:

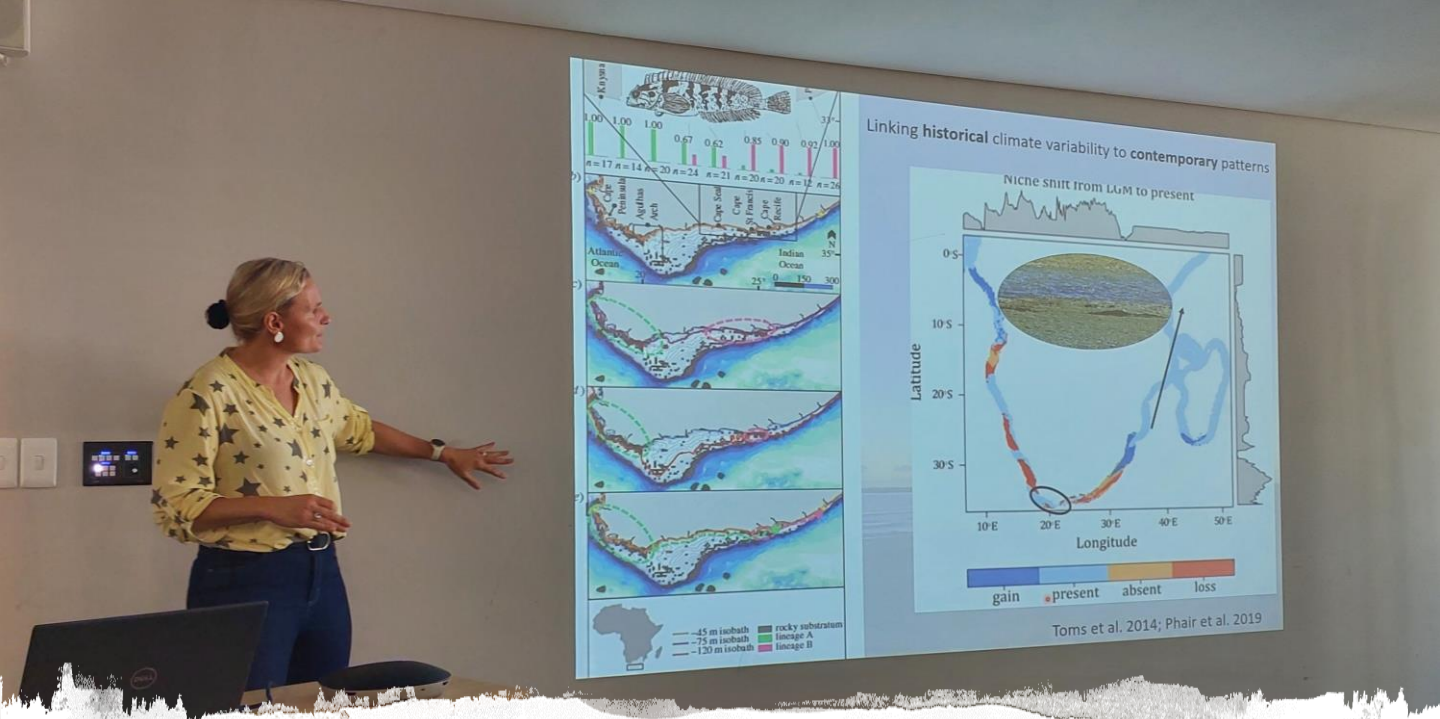
Staff Members: 57  
RA's & H/A Professors: 71  
Associate Members: 47  
Students: 76 (18 graduated)  
Support Members: 14  
News Members: 68  
Total Members: 333

### Member Outputs:

Publications: 172  
Conference Presentations: 52

### Admin Duties Conducted by the CMR Staff:

Contracts Initiated: 124  
Payment Requisition  
Submitted: 748



## CMR QUARTER 1 SEMINAR

The Quarter 1 seminar was presented by Prof Sophie von der Heyden on the topic ***Evolving Molecular Approaches for Conserving Southern Africa's (Marine) Biodiversity: From Data Generation to Supporting Conservation and Management.*** Prof von der Heyden provided an overview of our state of knowledge of marine genetics and genomics in the region, including recent development in community genetics and the first attempts of biodiversity monitoring using environmental DNA. She also provided examples of how seascape analyses can support the management of cross-boundary fisheries and how genomic data can contribute to coastal spatial planning that could enhance the resilience of populations to ongoing climate and anthropogenically driven changes. This took place at the Ocean Sciences Campus on 12 March (~60 attendees). The recording of the talk and presentation are posted on the CMR website: <https://cmr.mandela.ac.za/News-and-Events/Quarterly-Seminars>



# ONE OCEAN HUB WORKSHOP

CMR hosted a weeklong writing workshop organised by One Ocean Hub at the Ocean Campus in Gqeberha on 5-9 February 2024. The workshop brought together 31 Hub researchers from the Universities of Cape Coast, Namibia, Nelson Mandela University, South Pacific, Strathclyde, West Indies and Cefas. The overall purpose was to integrate work across the Hub through high impact papers and proposals focussing on themes like transdisciplinarity; culture and art; socio-legal aspects of small-scale fisheries; climate vulnerability and national Blue Economy policies. The key aim was for participants to think about how their papers integrate lessons and knowledge from other disciplines, work packages and Hub countries. Four draft papers were compiled during the week and will hopefully be published this year. As the initial 5-year contract for the Hub draws to a close in June this year, the last two days focussed on legacy themes that have potential to be developed further into funding proposals. As Hub researchers are widely spread, this workshop provided a great opportunity to work together in person. Many found this time together invaluable. Researchers also got to enjoy an afternoon cruising the Bay on a Raggy Charters excursion and some had great sitings at Addo Elephant Park.

# MOOC WORKSHOP

The Algoa Bay and MARISCO Projects at the CMR developed a Massive Open Online Course (MOOC) – 'Marine Spatial Planning: Lessons Learnt in Algoa Bay, South Africa'. The MOOC is in a draft format, and will finally be hosted online on the University's Engage Platform. As part of the finalisation of the online product aimed for end-April 2024, the team hosted a workshop with the Nelson Mandela University stakeholders to do a mock run. The took place at CMR on Ocean Sciences Campus on 7 February.

## CMR STUDENT PRESENTATIONS

CMR Student, Gustav Rautenbach, presented his PhD proposal entitled *Frontal Eddies in the KwaZulu-Natal Bight and their Impact on the Coastal Environment*, as well as shared some of his findings. His supervisors include Mike Roberts, Steven Herbette, Jennifer Veitch, Pierrick Penven & Gildas Cambon. His thesis aims to provide a robust analysis of the frontal features observed at the KwaZulu-Natal Bight and investigate their coastal circulation and impact using a high-resolution numerical simulation (~1 km), an eddy detection algorithm, and Lagrangian particle tracking.

CMR Student, Nina Faure Beaulieu, presented her PhD proposal entitled *Spatial Strategies for Shark and Ray Conservation in South Africa*. Her supervisors include Amanda Lombard and Prof Nicholas Dulvy. Her theses aims to understand the distribution of South Africa shark and ray species, as well as quantities and spatial patterns of catches across major contributing fisheries to improve the efficacy of area-based management measures.



## SWEDISH VISIT - PROFESSOR CHARLOTTE BERKSTRÖM

Professor Charlotte Berkström from the Swedish University of Agricultural Sciences (SLU) was hosted by the CMR and the SAIAB/NMU seascape ecology group from the 29th January to the 2nd February 2024. Prof Berkström, whose research focus is ecological connectivity in both temperate and tropical seascapes, is collaborating with Prof Nikki James, Dr Gavin Rishworth and Dr Carla Edworthy and co-supervising PhD student Themrani Mkhize as part of the MoU and mobility program between NMU and SLU. The week started with a meet and greet session where she was introduced to the seascape ecology team followed by a talk given by Prof Berkström titled "From Field Surveys to Maps – Spatial Analysis at SLU Aqua, Sweden". The week was intense, with much discussion and field visits to stromatolite sites, Flat Rocks n Gqeberha, the Kromme Estuary and Cape St Francis. The week ended with an NMU-SLU research mingle, where Prof Berkström and Prof James presented on their research and ongoing collaboration, and representatives from the two institutions discussed and reflected on collaborations and opportunities for researchers and students.





## OCEAN INNOVATION AFRICA SUMMIT

Dr Nomtha Hadi, Mr Brishan Kalyan, Mrs Tara Bonnesse, Dr Estee Miltz, Ms Nina Faure Beaulieu and Mr Tshepo Ramonyaluoe attended the Ocean Innovation Africa summit in Cape Town from 20 to 22 February. The above-mentioned participants hosted a workshop on 21 February on Blue Economy Opportunities for Universities. The workshop topic looked at how developing solutions to ocean challenges requires a thorough understanding of those challenges and the factors that affect them. It also explored the role of academia in the innovation pipeline, noting that generation of commercial applications from research is a complicated process not necessarily suited to all researchers, but that sufficient opportunity and incentive should be provided to motivate and support blue economy opportunities within universities where possible. The CMR also manned a stand during the summit, signing up 17 new members and connecting with several participants, including members from Oceanhub Africa, City of Cape Town, Peace Boat US, OceanLabs Seychelles, OLSPS, Olrac Marine Observer, Impact Tank, Collecte Localisation Satellites (CLS), as well as the University of Cape Town (UCT), University of Western Cape (UWC) and Cape Peninsula University of Technology (CPUT).



## CMR STUDENT MEET & GREET

CMR hosted a student meet and greet session which showcased what CMR does and can do to assist its students, introduced students to associate institutions and provided students with information regarding opportunities such as internships and bursaries. Dr Denise Schael, Dr Nomtha Hadi, Prof Tommy Bornman and Mr Anele Matiwane all presented at this session. This took place at the Ocean Sciences Campus on 11 March (~35 attendees).



# SUMMER GRADUATION

Well done to our CMR student members who graduated at the 2023 Summer Graduation ceremony! We congratulate you, your supervisors and mentors, families and support structures. The CMR congratulates the following student members on this fantastic achievement:

Master of Science (Research): Zoology

- Kezia Bowmaker Falconer
- Natalie Dos Santos (Cum Laude)

Master of Science (Research): Biological Oceanography

- Rudzani Silima
- Victoria Stockdale
- Jordan van Stavel

Doctor of Philosophy: Oceanography

- Athi Mfikili

Doctor of Philosophy: Botany

- Phumlile Cotiyane-Pondo

Doctor of Philosophy: Development Studies

- Mia Strand

We also congratulate our CMR member, Dr Tanya Wagenaar, on graduating with her Doctorate of Laws in Public Law!



## CMR TEAM OUTING

The CMR team, as well as a few other university staff members who the team work closely with, went on a cruise around Algoa Bay on 6 March. This cruise was for the farewell of our Acting Director, Dr Nomtha Hadi, and the welcome of our Director, Dr Denise Schael.



## SHIP TO SHIP BUNKERING

The environmental risk assessment of ship to ship bunkering in Algoa Bay was open for public comments until 22 February and several CMR members submitted their comments. Transnet National Ports Authority contracted the study to assess if the current moratorium for additional bunkering operators in the bay could be lifted in future. SAMSA issued a Marine Notice (<https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:494b67d3-04b1-339d-a4a2-5a0557915d46>) to all stakeholders, which detailed the revised procedures and requirements for obtaining permissions for offshore operations in Algoa Bay. The Marine notice provided clarity in the application process and assist with compliance with ship to ship (STS) transfers and bunkering codes. Stakeholders will be kept informed of any further developments and will be given all the necessary information required for the application process.



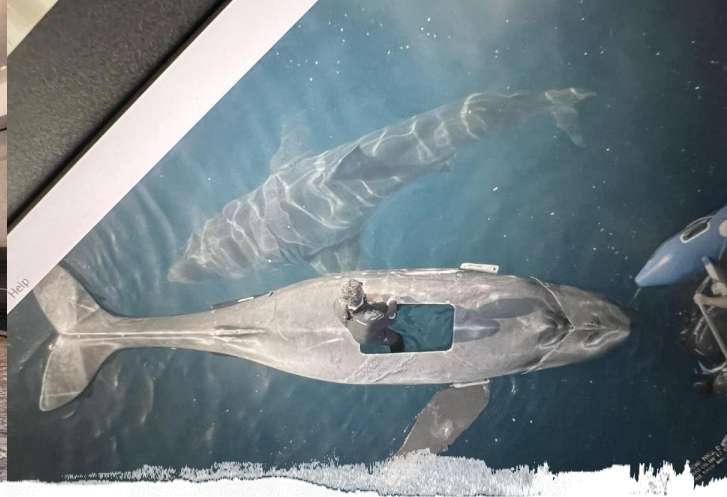
## WIO REGION EXPERT MEETING

Professor Mandy Lombard, SARChi - Marine Spatial Planning, and Professor Susan Taljaard, CMR Research Associate, attended a meeting in Mombasa, Kenya, with several other technical experts from the Western Indian Ocean (WIO) region who contributed expertise on a broad range of themes including ocean governance, marine spatial planning, marine water quality, marine conservation and information management, among others. The meeting was important for the upcoming Nairobi Convention eleventh Conference of Parties (COP 11) which shall be hosted by Madagascar in August 2024. Access the full article here <https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:dc777ea5-07d2-301b-9625-594ef3d7e74b>

## UNITED NATIONS OCEAN CONFERENCE

Professor Adams was invited as a member of the UN Ocean Decade Programme for Blue Carbon science technical working group. She was also invited as one of 17 members of the International Scientific Committee of the United Nations Special Event "One Ocean Science Congress: Science for Action" which will precede and inform the 3rd United Nations Ocean Conference in 2025.

The next United Nations Ocean Conference will take place in June 2025 in Nice, France, leaving less than 2 years to ensure it concludes with a transformative, positive and actionable outcome for the ocean, its ecosystems and marine biodiversity.



## SOUTHERN AFRICAN SHARK AND RAY SYMPOSIUM

Professor Matt Dicken, CMR Research Associate, recently chaired the 7th Southern African Shark and Ray Symposium between 24 and 27 October 2023. Over 140 delegates from 8 different countries attended the symposium, which brings together social and natural scientists, practitioners, non-governmental and governmental organizations as well decision makers. The central purpose of the symposium was to provide a forum for the discussion and exchange of ideas, experiences and knowledge on issues related to the biology, conservation and management of Sharks and Rays. As part of their "New Generation Programme" they were extremely proud to have identified 5 of the best up and upcoming science students at local schools in KwaZulu-Natal, as well as three MSc students from the University of Zululand who they funded to attend the event.

One of Professor Dicken's research areas of interest is better understanding the movement and residency patterns of sharks, especially species such as the white shark, which pose a risk to water users. Using a 6 m whale decoy, he was part of a team of scientists which successfully tagged the largest white shark to date with a satellite tag. Results from the satellite tracks are hoped to provide a glimpse of how these sharks utilise the waters along the South Africa coast and whether they cross the West Indian Ocean to other countries.



## ENTSA

A team from eNtsa, which includes CMR staff member Mr Andrew Young, in the Faculty of Engineering, the Built Environment and Technology designed and built a remote-controlled marine glider to provide a research platform able to gather data to a depth of 200m below the surface. The result of their work is a buoyancy-controlled autonomous underwater vehicle capable of carrying a payload of sensors. The project team hope the glider will gather information to enable various research entities to increase ocean monitoring activities and influence legislation with scientific evidence. These entities can attach the required sensors and data-gathering equipment to the glider, with information collected going towards building a database on various ocean markers. The project supports the work of the South African International Maritime Institute (SAIMI) and the South African Institute for Aquatic Biodiversity (SAIAB).





## OCEAN OF HOPE

CMR Post-doctoral fellow, Dr Alejandra Vargas Fonseca, attended a workshop from Dr. Sylvia Earle and the Mission Blue team about Plett and Knysna Hope spot. An Ocean of Hope Workshop on Monday 12th February. Over 50 attendees representing 30 organisations and entities joined the event. We talked about all the important work being done in the area, as well as discussing key threats and identifying knowledge gaps in the marine conservation space in Plettenberg Bay and for greater South African waters.

## MEMBER OUTPUTS

1. Frazão Santos C, Agardy T, Aheto D, Allison EH, Bennett NJ, Blythe JL, Calado H, Crowder LB, Day JC, de Vos A, Flannery W, Lombard AT et al. 2023. Advancing interdisciplinary knowledge for ocean sustainability. *npj Ocean Sustainability* 2(1):18.
2. Frazão Santos C, Agardy T, Crowder LB, Day JC, Pinsky ML, Himes-Cornell A, Reimer JM, García-Morales S, Bennett NJ, Lombard AT, Calado H. 2024. Key components of sustainable climate-smart ocean planning. *npj Ocean Sustainability* 3(1):10.



## GLOBAL CHALLENGES UNIVERSITY ALLIANCE

CMR Research Associate, Dr Estee Miltz, attended the Global Challenges University Alliance (GCUA) Meeting hosted by the Swedish University of Agricultural Science (SLU). This meeting took place in Haga Slott, Enköping, Sweden from 30 January - 1 February 2024. The purpose of this in-person meeting of the focal points and representatives from GCUA 2030 partner universities was to reflect on the activities and impact during the STINT funding period, and to construct a collective vision of where and how we want to go forward with the GCUA 2030 partnership in the short and near-term future.

# A SOUTH AFRICAN REFLECTION – HELMUT HILLEBRAND

As part of a teaching-free term, I was able to spend almost seven weeks in South Africa, mainly working at the Institute for Coastal and Marine Research (CMR), Nelson Mandela University, Gqeberha. This trip was amazing, enlightening, stunning and impressive in many different dimensions. Now, a few months later, I consider sharing some of the insights on biodiversity, science, and hospitality. Of course, South Africa is famous for its biodiversity in a climatically benign biome (it is grey, stormy and rainy outside while I write this, so I know what not benign looks like). So I did expect to see a lot, but saw even more: Every national park I visited, but even the nature reserve next to the campus, encompassed an unbelievable richness in plants and animals. Using my primitive taxonomic skills and a plant identification app yielded several hundreds of species, and more than once "Ah, I know this species" turned into "Oh no, it is yet a different one". It made me aware of what wildlife we have already lost in Europe and how much we negate the cultural, ecological and economic value of biodiversity. Being proud of nature is something which seems extremely rare in my country in comparison. CMR does internationally recognized marine science especially on coastal and estuarine systems, held together by a vision for interdisciplinary and societally relevant research questions. I had the pleasure of interacting with scientists across all career stages and sensed a general forward-looking attitude to science. Nobody is naïve and negates the societal trenches, the economical issues, and the political tensions fuelled by South African history. Neither do I forget the privilege I have as a temporary visitor. But across discussions I felt a sense of responsibility to give something back to a greater "common" endeavour, may it be tackling an environmental issue or reaching out to people and municipalities. Most impressive of it all, though, were friendliness and hospitality. My first urge being back in Germany was to apologize to all guests for how we treat them. All interactions and encounters at Nelson Mandela University were characterized by a welcoming and open atmosphere that make me blush, being in a country, where the offering of a cookie requires paperwork. So I end this editorial with thanking all staff members and students at Gqeberha for making this such a wonderful trip. Many new ideas arose and more interactions will follow. - HIFMB News #1/2024 (<https://241806.seu2.cleverreach.com/m/15175475>)

# 2024 CALENDAR

J		J	
F		a	1 - MPA Day Event 30 - Women's Month Event
M	11 - CMR Student Event 12 - Q1 Seminar	S	5 - Q3 Seminar 26 - WMD Event 30 - Heritage Month Event
a		O	
M		N	5 - Q4 Seminar 15 - Research Symposium
J	5 - Q2 Seminar 8 - WOD Competition	D	

Q – Quarter; WOD – World Oceans Day; MPA – Marine Protected Area; WMD – World Maritime Day.

# CMR PUBLICATIONS

Scan the below QR codes to view the CMR expertise booklet and the CMR glossy report.

**CMR Expertise Booklet**



**CMR Glossy Report**



# OCEAN SCIENCES & FISHFORCE PUBLICATIONS

Scan the below QR codes to view the Ocean Sciences brochure and the FishForce newsletter.

**Ocean Sciences Brochure**

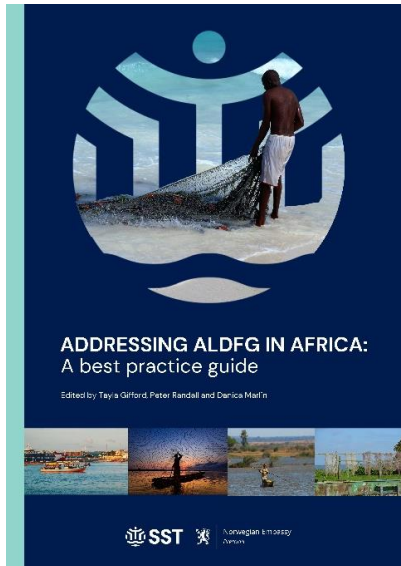


**FirshForce Newsletter**



# SUSTAINABLE SEAS TRUST (SST) PUBLICATIONS

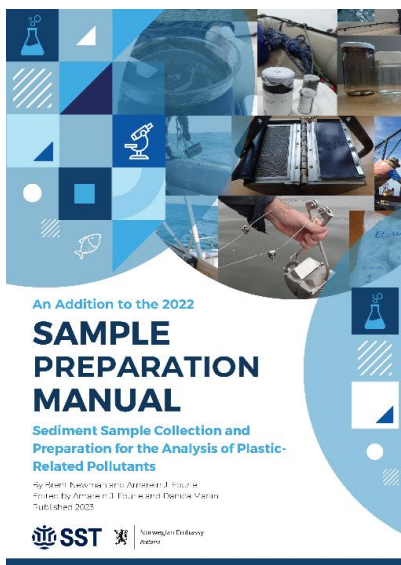
## ALDFG in Africa: Best Practice Guide



A collaborative, Africa-focused guide to implementing global best practices for the prevention, mitigation and remediation of abandoned, lost or discarded fishing gear (ALDFG) in Africa. The guide discusses what and how data on ALDFG should be collected, who is responsible for this data collection and who is responsible for the reporting of ALDFG. The marking of fishing gear and fishing gear modification are also discussed to see what measures are feasible to African fishers. Case studies are included to showcase the work already taking place in African countries towards gathering ALDFG data, raising awareness, and creating innovative solutions for end-of-life fishing gear. Link:

[https://sst.org.za/wp-content/uploads/2024/02/2024-ALDFG-in-Africa\\_Best-Practice-Guide-V2\\_Digital.pdf](https://sst.org.za/wp-content/uploads/2024/02/2024-ALDFG-in-Africa_Best-Practice-Guide-V2_Digital.pdf)

## Sample Preparation Manual: Sediment sample collection for analysis of plastic-related pollutants.



An additional chapter to the [Sample Preparation Manual](#) is now available. This chapter aims to provide guidance for researchers and scientists on the methods for sampling and processing sediment to be analysed for plastic-related pollutants. Dr Brent Newman from the Council for Scientific and Industrial Research (CSIR), South Africa, is the author of this chapter. Link: <https://sst.org.za/wp-content/uploads/2023/12/Newman-and-Fourie-2023.-Sediment-Sample-Collection-and-Preparation.pdf>



# SUSTAINABLE SEAS TRUST (SST) PUBLICATIONS

## African Litter Monitoring Manual (2<sup>nd</sup> edition)



The 2023 edition of the African Litter Monitoring Manual is a guide for harmonised litter monitoring in different environments. Accounting for Africa's limited resources, the methods are simple and feasible to empower citizen scientists, researchers and other stakeholders, with different languages and backgrounds, with the knowledge and tools needed to learn about the sources and pathways of litter. The use of harmonised methods promotes result comparisons, and data-sharing between organisations and regions, thus broadening the impact of the work done. This is especially important in light of the global plastics treaty that is currently under negotiation to tackle plastic pollution. Link: [https://sst.org.za/wp-content/uploads/2023/11/African-Litter-Monitoring-Manual\\_2nd-Edition\\_FINAL.pdf](https://sst.org.za/wp-content/uploads/2023/11/African-Litter-Monitoring-Manual_2nd-Edition_FINAL.pdf)

Norwegian Embassy  
Pretoria



AFRICAN MARINE  
NETWORK

EDITED BY: TOSWA BARNARDI, DANICA MARLIN, ANTHONY J. ZIBENK & LOREN PHEGIRU



# CMR SOCIAL MEDIA

## Social Media Statistics

**Website** (<https://cmr.mandela.ac.za/>)

Page visitors (2024) – 31 444

**Facebook** (<https://www.facebook.com/Institute-for-Coastal-and-Marine-Research-CMR-105489841088916>)

- Followers – 568
- Likes – 504
- Reach (2024) – ~13 400
- Visits (2024) – 466

**Instagram** ([https://www.instagram.com/cmr\\_mandelauni/](https://www.instagram.com/cmr_mandelauni/))

- Followers – 340
- Reach (2024) – 346

**Twitter** ([https://twitter.com/CMR\\_MandelaUni](https://twitter.com/CMR_MandelaUni))

- Followers – 256
- Tweet Impressions (2024) – 1962

**LinkedIn** (<https://www.linkedin.com>

[/company/institute-for-coastal-and-marine-research/](https://www.linkedin.com/company/institute-for-coastal-and-marine-research/))

- Followers – 83
- Views – 238
- Impressions - 10 809

# NELSON MANDELA UNIVERSITY

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