

NELSON MANDELA

UNIVERSITY



Coastal and Marine Research

Quarter 4 Newsletter 2020

The Institute for Coastal and Marine Research (CMR) greets all its members in the midst of continued COVID-19 challenges.

The last quarter for 2020 is well underway. The past term has been a very busy one for the CMR, and we are excited about sharing a few updates on events, project news, and some celebrations with our members!

We wish all of you all the best as we move into Term 3 teaching, and as we prepare for this year to come to an end.

Celebrations

Congratulations to Professor Rose Boswell

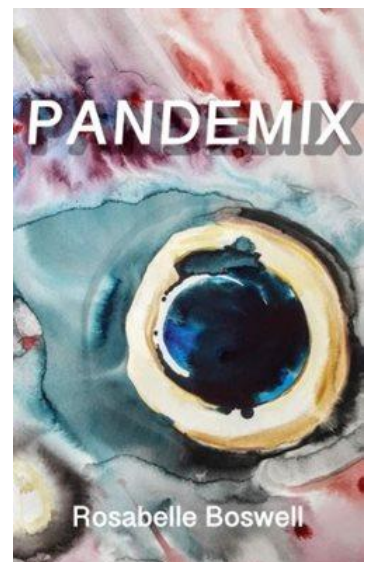


It is with much excitement that we share the news of Professor Boswell being awarded a top level one, Tier 1 **SARCh Research Chair in Ocean Cultures and Heritage!** This is a 15-year commitment by the DSI-NRF, to be reviewed every five years. This Research Chair falls under the Faculty of Humanities – a first for the field Humanities at the Nelson Mandela University. Professor Boswell and her Research Chair will be hosted at the Ocean Sciences Campus, where transdisciplinary research that bridges the sciences and arts, will be carried out. Professor Boswell is hopeful that this this Research Chair will expand research opportunities on the African continent. The CMR will play a supporting role for this Research Chair at the Ocean Sciences Campus. We congratulate all who were involved in this process, and we look forward to successful collaborations. Please see this link for the news article shared on the University's website:

<https://news.mandela.ac.za/News/SARCh-Research-Chair-in-Ocean-Cultures-and-Herita>



Between March and July this year, Professor Boswell composed over 45 poems which were published in a book called **Pandemix**. Five of these poems relate to the ocean, and counted as outputs for the CMR's One Ocean Hub (OOH) Project. *Pandemix* considers the psyche of individuals as they live their lives under Lockdown and as their minds are made fragile by COVID-19. It is hoped that these poems will help struggling individuals to heal by giving insight into the emotions experienced during Lockdown. This collection of poems is published by RPCIG, Cameroon. It is available through *Amazon* and on the *African Books Collective* website. All proceeds go towards the advancement of publishing and research in Africa.



S2A3 Medal

Mr Michael Hart-Davis is an ex-CMR student who completed his Masters degree in Physical Oceanography in 2019 (co-supervised by CMR Honorary Professor Juliet Hermes). In recognition of his outstanding research, he was awarded the **Southern African Association for the Advancement of Science (S2A3) Medal** at the Nelson Mandela University. This Association was founded in 1902 and is the oldest scientific organisation in South Africa. Since 1981, the S2A3 has been awarding these Masters Medals (bronze) annually to the most outstanding Masters research student in a specific scientific subject at each South African university. Michael's thesis was based on the development of a particle trajectory model for the use in several scientific applications in the Agulhas Current System. He is currently working towards a Doctoral degree at the Technical University of Munich. He continues to work closely with Professor Hermes.



sustainavistas and EUGreenWeek Hackathon & UNLEASH Hacks

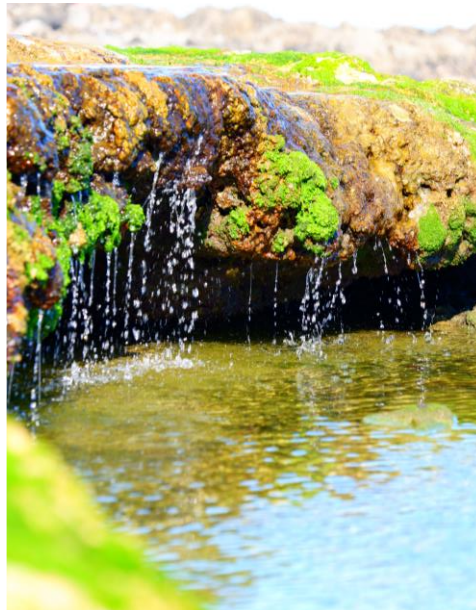
The CMR congratulates Ms Anga Mbeyiya (Department of Development Studies Masters student and CMR student member) and her Seaweed Team for emerging victorious with their **Seaweed Centre** concept, as part of the Business Unusual five-day virtual event hosted by *sustainavistas* and in collaboration with the EUGreenWeek (19-22 October 2020). This achievement gives the team the opportunity to consult with Pavan Sukhdev, the President of WWF International and Gail Klintworth Chair of Savo Project Developers and former Chief Sustainability Officer of Unilever. Furthermore, Anga was selected to take part in the **UNLEASH Hacks South Africa**. This initiative supports female-led start-ups across the country.

BCC Youth Day Presentation

Ms Chilo Nonyane is an Honours student registered under the Department of Development Studies, and is supervised by the Department of Development Studies/CMR Post-Doctoral Research Fellow Dr Nina Rivers, and Dr Bernadette Snow. Chilo presented at the UN Youth Day, which was hosted by the Benguela Current Convention via Zoom on 12 August. Although Chilo's work falls within Algoa Bay and therefore the Agulhas Current, The BCC was still interested in including Chilo in their programme to speak about her research. Her topic was **Different knowledge systems for adaptive management of the Sunday's Estuary and knowledge gaps**. Chilo's project forms part of the SAIAB-CMR SANOCEAN Project. We are proud of Chilo and her outstanding work!

UNITED NATIONS
**INTERNATIONAL
YOUTH DAY**

2020
YOUTH ENGAGEMENT
FOR GLOBAL ACTION



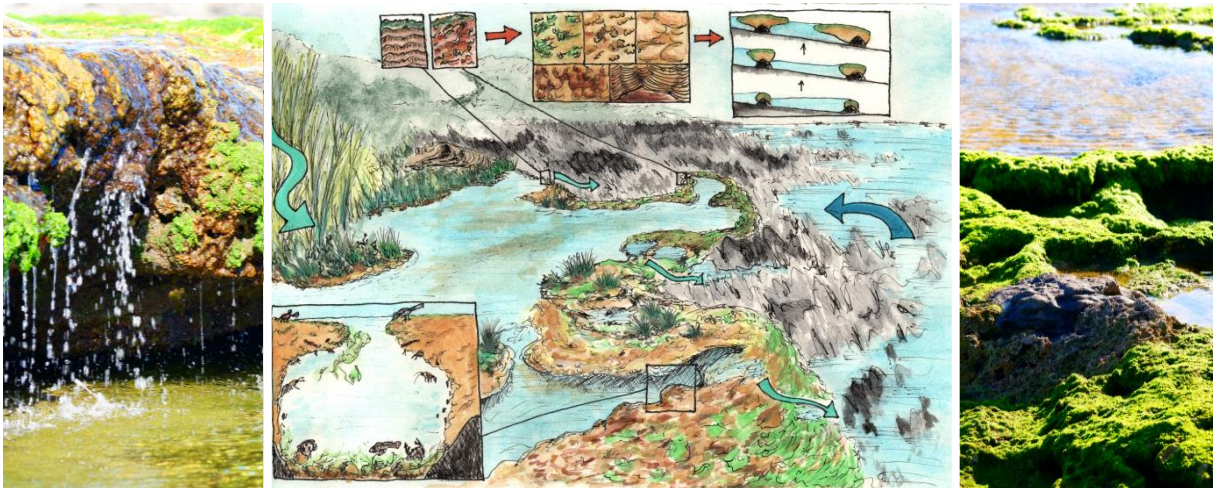
Prestigious Publications

Modern supratidal microbialites fed by groundwater: functional drivers, value and trajectories is an article recently published in the journal [Earth Science Reviews](#). The CMR congratulates Dr Gavin Rishworth and his SSLiME (Supratidal Spring-fed Living Microbialite Ecosystems) research team on publishing this summary of what is known about these ecosystems. The painting below is used in one of the figures in this publication.

An article was recently published that represents an output from the collaboration established between the CMR and the Helmholtz Institute for Functional Marine Biodiversity (HIFMB) at the University of Oldenburg (Germany). This article appears in a special theme issue of [Philosophical Transactions of the Royal Society B: Biological Sciences](#), entitled [Integrative research perspectives on marine conservation](#). This is co-edited by the CMR's lead collaborator at the HIFMB, Professor Helmut Hillebrand. Several CMR members were involved in the publication as co-authors and during discussions of its concept. This article compares the coastal biodiversity trends in long-term monitoring datasets between South African and German coastlines, to determine whether patterns of change are similar across continents. It shows that coastal biodiversity variability is driven mostly by change in the relative composition of communities, rather than increases or decreases in the absolute numbers of species. This has important implications for assessing and monitoring coastal biodiversity into the future. The citation for this article is:

- Rishworth GM, Adams JB, Bird MS, Carrasco NK, Dänhardt A, Dannheim J, Lemley DA, Pistorius PA, Scheiffarth G & Hillebrand H. 2020. Cross-continental analysis of coastal biodiversity change. *Philosophical Transactions of the Royal Society B: Biological Sciences* **375**: 20190452. doi: 10.1098/rstb.2019.0452

Professor Richard Cowling of the University's African Centre for Coastal Palaeoscience (ACCP) led international research that investigated why tropics and a handful other areas across the world have become the most biodiverse places on Earth. A paper discussing these results was published in [Proceedings of the National Academy of Sciences](#) – a distinguished and highly-ranked journal. Although this research largely terrestrial, Professor Cowling is a valued member of the CMR, and we wish to congratulate him on this achievement.



Recent Events

Celebrating Women's Month

This event took place online via Zoom on 21 August from 09:00-12:00, and was a collaboration with the Department for Research Support and Management. The theme for International Women's Day (8 March) was **#EachForEqual** and called to action the acceleration of women's equality. The CMR built on this theme for its South African Women's Month event by enabling women's importance as individuals and a collective.

We thank the following speakers for their talks:

- Dr Thandi Mgwebi (DVC: Research, Innovation and Internationalisation): Equal opportunities for African women in research
- Dr Jessica Fraser (Business School): Research is gender neutral
- Ms Danai Tembo (Faculty of Business and Economic Sciences): Equality in Education
- Dr Kaluke Mawila (George Campus): Leading with Heart
- Dr Denise Schael (Department for Research Development): Leadership by women in science in a changing society – transcending circumstances and expectations to lead effectively
- Professor Pumla Gqola (Centre for Women and Gender Studies): Gender Matters
- Professor Lorien Pichegru (CMR): Ecological grief and the burdens placed on women in science
- Dr Nikki James (SAIAB): The challenges of combining motherhood and research during the Coronavirus

A total of 48 individuals registered for this online event. A general knowledge quiz based on facts related to significant South African women, was posted. Dr Hayley Cawthra, Dr Jessica Fraser, and Ms Cloverley Lawrence obtained perfect scores, and each received a small gift. A programme booklet was designed as an output, providing professional and personal details for our speakers and organisers for this event. This booklet, the presentations and the recording of the event, are available from the CMR website through this link:

<https://cmr.mandela.ac.za/Events,-Initiatives-and-News/-EachForEqual-Online-Women-s-Month-Event>



National Marine Week

The CMR celebrated National Marine Week from 5-9 October through various online activities via our social media pages. Online activities for the week were as follows:

- **Day 1: Movie Monday** – trailers for locally produced marine documentaries and short films were shared. This included:
 - *Hluleka* by Jamila Janna (marine conservation themed documentary that aims to encourage community engagement in decision-making).
 - *Ulwandle Lushile* by Tembisa Jordaan (film that tells the story about the unheard voices of traditional marine fishers).
 - *My Octopus Teacher* by Craig Foster (documentary that details the bond between a filmmaker and an octopus).
- **Day 2: Talented Tuesday** – arts in ocean sciences were showcased:
 - Submission for the artwork category for the CMR's World Oceans Day competition.
 - *Lalela uLwandle* theatre play trailer was shared (Empatheatre Collective and One Ocean Hub).
 - Poem entitled *That Tide* by Professor Rose Boswell.
- **Day 3: What Are We Doing Wednesday** – The four CMR Research Chairs were featured through short paragraphs and photographs.
- **Day 4: Talking Thursday** – ex-CMR student Michael Hart-Davis and winner of the S2A3 Medal for his outstanding oceanographic Masters research, recorded a short talk where he detailed this award, as well as his current Doctoral research in Germany. The link to view this talk, was shared.
- **Day 5: Fun Facts Friday** – facts about CMR research were extracted from the CMR Audio Project recordings. A short video was shared.

To celebrate with CMR during National Marine Week, **Raggy Charters Marine Eco Cruises** offered three cruise vouchers for within Algoa Bay as prizes for a quiz competition. A quiz was posted that featured facts from Fun Facts Friday. The first prize was two cruise vouchers, and the runner-up prize was a single cruise voucher. However, three individuals – Adelaide Karomo, Nomphele Mpati, Nkuthazo Blaaw – all obtained a perfect score on the quiz. Raggy Charters generously offered a fourth cruise voucher prize. We congratulate these winners, and thank Raggy Charters Marine Eco Cruises for their support and collaboration!



French Ambassador Visit

The VC Office, DVC: RII Office, CMR Office and Office for International Education hosted a **French delegation** on 23 October (observing all COVID-19 safety protocols). This delegation included the following individuals:

- Ambassador: Aurélien Lechevallier
- Advisor for Climate and Environment: Flora Bobour
- Science and Technology Attaché: Moncef Meddeb
- Honorary French Consul: Lorien Pichegru

This visit included a signing ceremony and a tour of iconic places on South Campus, as well as a tour of the Ocean Sciences Campus and a presentation by the CMR Director. The purpose of this visit was to sign an agreement whereby the CMR will host an International Expert for the position of **Researcher/Project Manager** under the CMR (2021-2022). The French Embassy is dedicating **€17 195** towards oceans climate change research, which will be managed by the CMR. Dr Oliver Bousquet is the appointed researcher, and he will assist with research, manage projects and will work on applications for bi- and tri-lateral agreements. The CMR looks forward to this partnership.



Professorial Inaugural Lecture

Professor Pierre Pistorius, Manager for the CMR's Marine Apex Predator Research Unit (MAPRU), presented his Professorial Inaugural Lecture on 24 August. His talk was entitled **Marine Apex Predators – Sentinels of Oceans under Siege**. This was the first Nelson Mandela University Professorial Inaugural Lecture to take place via an online platform only. The CMR regrets that an on-campus event could not take place, but we congratulate Professor Pistorius and we thank everyone who attended this via Microsoft Teams! In response to this lecture, Guy Rogers published an article on this talk in *The Herald* on 26 August: *What penguins tell us about climate change*.



Recent Courses

The Blue Economy

The University of Seychelles and the Commonwealth of Learning offered a **Massive Open Online Course** on **The Blue Economy: Creating an Enabling Environment – Learn how to make the most of our ocean while ensuring that future generations can do the same**. This course took place from 31 August – 4 October 2020 and was offered at no cost. CMR members Dr Bernadette Snow (in her capacity as Lecturer for the Department of Development Studies), Professor Rose Boswell (Faculty of Humanities), Mia Strand (Department of Development Studies Doctoral candidate), and Estee Vermeulen (Department of Oceanography Doctoral candidate) provided expert video and presentations for this course. *Empatheatre* and their *Lalela uLwandle* play were featured in this MOOC. *Empatheatre* collaborates with the One Ocean Hub (OOH) Project.

Food Security

A **Massive Open Online Course** for **Ocean Science in Action: Addressing Marine Ecosystems and Food Security in the Western Indian Ocean** was offered for a four-week period, starting on 5 October. This course introduced learners to innovative marine technologies and their applications used to tackle the challenges of the sustainable management of marine ecosystems. This course was developed by the National Oceanography Centre (NOC – United Kingdom), and was a partnership with Western Indian Ocean institutions as an output from the SOLSTICE-WIO Project. Professor Mike Roberts and his UK-SA Bilateral Research Chair in Ocean Science and Marine Food Security team contributed towards this course.

MEIS

Professor Janine Adams and the Shallow Water Ecosystems Research Chair, in collaboration with the CSIR (specifically Dr Lara van Niekerk and Professor Susan Taljaard) run a **Monday Estuary Interactive Information Session** via Zoom every Monday at 12:00. This initiative started on 24 August and will run until 16 November. Various CMR and other researchers present talks ranging between 15-20 minutes. These talks are followed by discussion. The presentations will be used as online content for the Estuarine Management Course and student training in the future. The presentations are recorded and are available on the Mandela University Estuarine Ecology's YouTube channel:

<https://www.youtube.com/channel/UCUdrskgGzLr3zxXr7wQ1lQA>

Upcoming Event

Estuary Water Quality Improvement Workshop

The Water Research Commission (WRC) and a number of organisations (including the Shallow Water Ecosystems Research Chair/CMR, SAEON, CSIR, DSI and Zwartkops Conservancy) are hosting an online workshop for **Innovative Approaches for Estuary Water Quality Improvement**.

The National Biodiversity Assessment indicated that South Africa's estuaries are under severe pressure. Improving water quality will result in an overall improvement in estuary health, and in the associated benefits that society can derive from these ecosystems. During this workshop, experts will present on different water quality improvement approaches, including restoration, biomimicry, sustainable urban drainage systems, algal ponds, governance, monitoring, and improvements of catchment inputs. The Swartkops Estuary will be used as a specific study site. This workshop will provide input to the **development of a socio-ecological systems approach for estuary restoration** – which aligns with the UN Decade of Ecosystem Restoration (2021-2030).

Date

11 November 2020

Time

09:00-12:00

RSVP

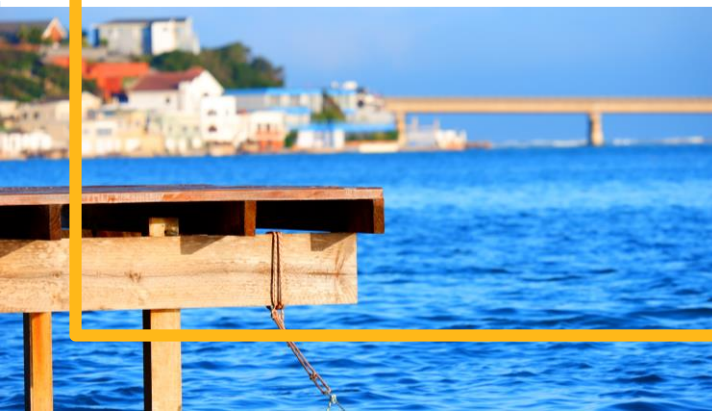
Carla.Dodd@mandela.ac.za by 10 November

Zoom Link

<https://mandela.zoom.us/j/92313607523?pwd=MnhVRm1yNm5BTnhEVFJCT0dqUm45dz09>

Link for downloading Swartkops Estuary background documents

<https://www.dropbox.com/sh/oi1jthlqghvt26s/AAAE25hwf38bKfz6TLZXhVEa?dl=0>



Projects Update

CMR Audio Project

We urge everyone to listen to these informal **CMR Audio Project** talks – they offer a wealth of information on the CMR and its associated activities, initiatives and research. The interviews can be accessed at the CMR's Youtube channel (CMR_MandelaUni). Please follow this link to access these audio recordings: <https://www.youtube.com/channel/UCf6b7ncMbf4iPSP2oQINnZg/videos>

To date, Dr David Pittaway (Department of Development Studies Post-Doctoral Research Fellow and CMR Audio Project leader) has interviewed the following individuals:

- Dr Bernadette Snow: CMR Director
- Professor Janine Adams: CMR Deputy Director
- Dr Denning Metuge: Post-Doctoral Research Fellow – Law of the Sea and Development in Africa Research Chair
- Professor Mandy Lombard: Research Chair Holder – Marine Spatial Planning
- Dr Thandi Mgwebi: DVC Research, Innovation and Internationalisation
- Dr Gavin Rishworth: Senior Lecturer – Department of Zoology
- Professor Ronney Ncwadi: Director of the School of Economics, Development Studies and Tourism
- Mrs Zanele Hartman: PhD Candidate – Department of Development Studies
- Dr Kwezi Mzilikazi: Director for the Department for Research Support and Management

EPStromNet

This new project for the **Extant Peritidal Stromatolite Network** will be administered by the CMR Office. Funded by the RCUK, this ~£100 000 project will develop a new collaboration of leading international researchers from three continents. It will address key scientific questions that underpin the fundamental nature of these microbial-geological systems. Professor Graham Underwood (University of Essex) is the Principal Investigator, and Dr Gavin Rishworth (CMR/Department of Zoology) is the Co-Investigator. Additional research partners include: Council for Geoscience; Rhodes University; University of Johannesburg; University of KwaZulu-Natal, and University of Wollongong.



Maskbook Project

The visit by the French delegation on 23 October presented an opportunity for the CMR to collaborate on the **Maskbook Project**. This is an international artistic initiative that addresses and raises awareness for major environmental issues, such as air pollution, climate change and waste. This project mobilises the general public through creativity and by using the anti-pollution mask as a symbol. Citizens, artists and celebrities all over the world are encouraged to participate. The Paris Agreement, which is an agreement with the United Nations Framework Convention on Climate Change (UNFCCC) aims to strengthen the global response to the threat of climate change. This agreement celebrates its five year anniversary in 2020 and to mark this occasion, a special session will be arranged for 12 December, where prominent personalities from different countries will wear designer masks. A video of these personalities and their masks will be showcased at the climate summit hosted by the United Nations Secretary General. The CMR is delighted that Visual Arts student Luke Rudman, will design the mask for the South African personality. Luke has an interest in environmentalism and does great work in waste awareness through visual arts. Some of Luke's creations are featured below.



Algoa Bay Project

The dedicated website for the **Algoa Bay Project** was recently updated (<https://algoabaydata.wixsite.com/website>). This website provides details for the following CMR projects:

- NRF Community of Practice: Algoa Bay
- NRF Community of Practice: Ocean Accounts Framework
- CICALICO: Coastal Cities and Climate Change
- One Ocean Hub (OOH): Linked to the official OOH Project Website
- MARISCO: Linked to the official MARISCO website
- WIO-MSP: Development of a Regional MSP Strategy for the WIO



WIOMSP

In the CMR's previous newsletter, we detailed the **Western Indian Ocean – Marine Spatial Planning** project, which entails developing a marine spatial planning strategy and policy brief for the WIO. This SFFA-UNEP funded project is led by Professor Amanda Lombard and Dr Bernadette Snow. As a result of their work on this project and collaboration with WildOceans, the CMR was approached to provide training, capacity development in spatial layer development and social sciences, towards helping the **Union of Comoros** develop a marine spatial plan. We hope for a successful outcome for the proposal. Should this be approved, this will be a three-year transdisciplinary project and a collaboration between the CMR, NGOs, government, researchers and civil society. The CMR is becoming a central and important stakeholder on marine spatial planning and the associated governance, legal and biological perspectives in the WIO region.

IIP MoU

In September, a Memorandum of Understanding was finalised between the CMR and the **National Fisheries Research Institute** (IIP) in Mozambique. This agreement will allow the CMR to collaborate on general fisheries research with Mozambiquan IIP colleagues.

SOLSTICE

An updated agreement for the **SOLSTICE** project is being finalised. The Nelson Mandela University (through the UK-SA Bilateral Research Chair in Ocean Science and Marine Food Security, which is led by Professor Michael Roberts), the UKRI, BCRES and NOC collaborate on this transdisciplinary research project to mitigate food security threats in the WIO region.

Applications

Ocean KAN IPO

The CMR Office submitted a letter of intent to host the **Ocean Knowledge-Action-Network International Project Office**. Our expression of interest was considered for a full proposal, which is being developed.

DEFF Blue Economy

Two proposals were submitted:

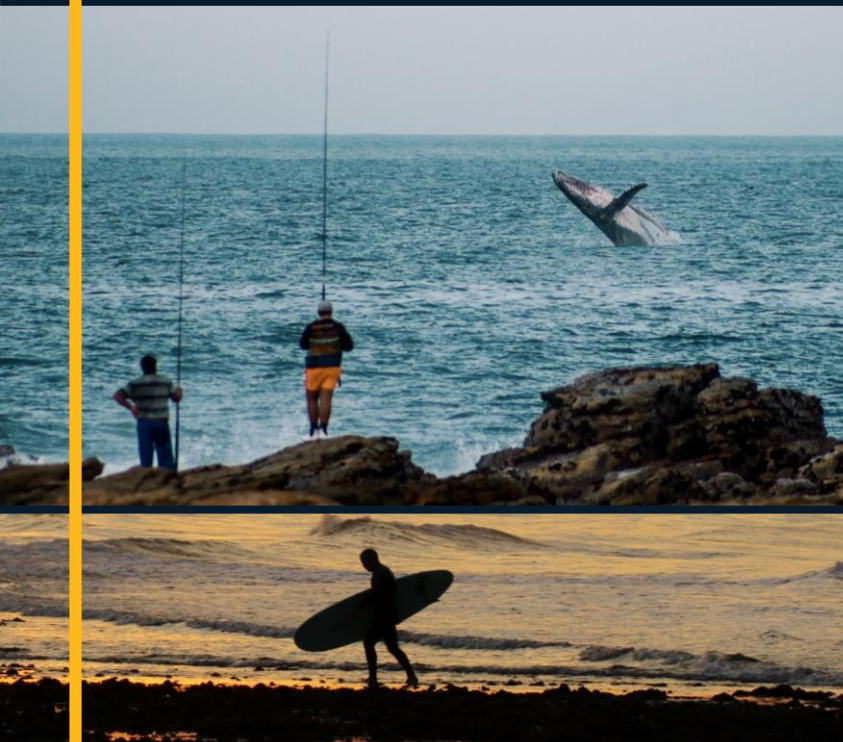
- Assessing the **benefits of marine tourism** (boat-based)
- Assessing the **economic case for law enforcement**.

Blue Action Fund

The uThukela MPA Blue Action Fund for **ecosystem-based adaptation** will fund this project. WildOceans is preparing the full proposal, with the CMR as a partner on the project.

Sustainable Ocean Mining Project

Together, the Council for Geoscience and the Department of Mineral Resources asked for proposals to work on the **Sustainable Ocean Mining Project**. Dr Bernadette Snow, Professor Rose Boswell and Dr Denning Metuge are involved in this research. The inception meeting will take place during November.



Ocean Sciences Campus

Construction

Construction for **Phase 2** developments at the Ocean Sciences Campus, commenced. New facilities will include the following:

- Microbe Laboratory
- Carbon Testing and Water Quality Laboratory
- Microplastic Laboratory
- Off Clean Laboratories
- Cold Room
- Dive Tank
- Various acid and sample store rooms
- General Research Laboratory spaces
- Postgraduate student offices
- CMR Home



SAEON Hyperbaric Chamber

SAEON performed their first **hyperbaric chamber dives** during October. We are pleased that all went well!

Housekeeping

Rebranding & Affiliation

CMR Members are reminded to kindly please make use of the CMR's updated and **rebranded logos**, which are now in line with the Nelson Mandela University's official colours. Various colour combinations and formats were developed to make this logo suitable for a variety of background uses. Please make use of the customised CMR **letterheads** and **PowerPoint templates**. These are all available for download from the CMR's *Members Page* on the CMR website: <https://cmr.mandela.ac.za/Members-Page>

We also kindly request that the CMR is included in all affiliations and addresses used by our members. This is particularly important with regards to academic publications and representation at formal occasions. Please use the full **Institute for Coastal and Marine Research** title.

CMR Social Media

CMR social media accounts are slowly growing.
Please find and follow us!

Facebook

Institute for Coastal and Marine Research – CMR

Twitter

@cmr_mandelauni

Instagram

@CMR_MandelaUni





CMR Team Matters

On 1 October, we welcomed **Anne Jacobs** to the CMR Office Team! Anne is the CMR's new **Finance Officer**, who is currently being trained by Zureena Bloew. At the end of November, we bid a final and sad farewell to **Zureena**. She has provided fantastic financial management support and assistance to the CMR this year, and we are thankful to her for staying in a part-time capacity until we were able to find someone who could fill her shoes. We wish Anne all the best in her new position with us!

Personal Celebrations

We congratulate **Jackie Raw** and **Christopher Nolte** on their marriage during August! Jackie is a Post-Doctoral Research Fellow with the Shallow Water Ecosystems Research Chair, and Chris is an ex-Masters student with the Department of Zoology. We wish them all the best with their relocation to Florida, where Chris has been accepted into a Doctoral programme.

We are also excited for **Estee Vermeulen** and **Victoria Stockdale**, on their recent respective engagements! Estee is a Doctoral candidate and Victoria is a Masters student under the Marine Spatial Planning Research Chair.



Thank You

We are now in the last stretch of this very challenging year. The CMR Office extends sincerest condolences to our members and their families who have been affected by the COVID-19 pandemic. We wish everyone well and great strength to overcome the emotional and physical impacts of this illness. If you are experiencing online fatigue and burnout, take solace in knowing that you are not alone.

If you have any news to share, please contact us for inclusion in the final 2020 newsletter, or for sharing on social media!
Please note that the CMR Office is still operating remotely.

Wishing everyone all the best,

Berny Snow

CMR Director

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