

**NELSON MANDELA**  
UNIVERSITY

**INSTITUTE FOR COASTAL AND MARINE RESEARCH  
(CMR)**

**INFORMATION BOOKLET  
FOR CMR MEMBERS**



**May 2018**

## CONTENTS

Introduction	3
Vision	3
Mission	3
Values	4
Objectives	4
Institute Activities	4
CMR Strategies	5
Thematic Areas	5
Membership	6
Staff	7
Governance	7
Organogram	8
External linkages	8
Infrastructure	8
Finance/Budget	8
APPENDICES	
Appendix I – CMR consulting and Contract Policy 2018	9
Appendix II – Members participating in Consulting	11
Appendix III – Constitution of the CMR Advisory Board	15
Appendix IV – Constitution of the CMR Management Committee	17
Appendix V – Research Diving Unit and CMR Policy for Research Diving	18
Contact Details	22

## **INTRODUCTION**

The tradition of coastal and marine research at the Nelson Mandela University goes back a long way to UPE in the early 1970s. This grew from a few postgraduate students to staff from several disciplines by the early 1980s. First initiated as the Institute for Coastal Research (ICR) at UPE in 1983, collaborative interdisciplinary work on the coast and ocean is therefore already three decades old at the University. Starting as a forum to promote collaboration among three academic departments, Botany, Zoology and Earth Sciences, the ICR expanded its suite of activities in the 1980s to draw in the Department of Oceanography and to take on environmental consulting work. The initial funder was the Department of Environmental Affairs (DEA), followed by a variety of sources, most notably a major grant from South African Breweries (SAB), which underwrote ICR activities into the 1990s.

The Institute underwent a series of transformations up to 2007, changing name to the SAB Institute for Coastal Resource Management (ICRM) in 1997 and then to the SAB Institute for Environmental and Coastal Management (IECM) in 2002 and focusing mainly on commercial contracts for environmental consulting. It then operated as a unit in the Science Faculty until the University's strategic decision in 2013 to develop a strong marine and maritime institutional theme. This was expounded as the University's signature theme in the Nelson Mandela University Maritime and Marine Sciences Strategy for 2016-2020. It resulted in the establishment by the Faculty of Science of the Institute for Coastal and Marine Research (CMR), which was approved by Senate and Council in 2014. This emerged from recognition that marine and coastal ecosystems are threatened and the University must play a role in addressing this problem. However, the Institute remained dormant, pending the appointment of a director.

Initially defined as an entity within the Faculty of Science, the CMR was elevated to a University-wide entity that reports directly to the Deputy Vice-Chancellor: Research and Engagement in 2016. The appointment of a part-time director at the start of 2016 has also contributed to starting the activities of the Institute, including reaching out to other University faculties and entities in addition to Science. January 2016 thus marked the initiation of the full range of activities of CMR. The Institute now spans across all seven University faculties (Arts; Business and Economic Sciences; Education; Engineering, the Built Environment, and Information Technology; Health Sciences; Law; Science), four SARChI Chairs (Shallow Water Ecosystems; Marine Spatial Planning; Law of the Sea and Development in Africa; Ocean Sciences and Marine Food Security), and includes members from over ten entities external to the University. With its position at the Ocean Sciences Campus, it will play a vital role in supporting the University's drive for excellence in maritime and marine sciences.

## **VISION**

CMR aims to be a leading marine sciences institute, conducting cutting-edge research, building capacity and advancing our understanding of the coastal and marine environment, to serve the needs of South Africa, the continent and beyond in a sustainable manner.

## **MISSION**

CMR strives for excellence in interdisciplinary research and training related to coastal and marine environments. This will advance scientific knowledge and the Nelson Mandela University's institutional research themes; provide a scientific basis for management strategies that optimise maintenance of biodiversity and sustainable use of resources; and contribute to the education of the community at large in matters pertaining to the coast and ocean.

## VALUES

The activities of the Institute will promote the six values of the Nelson Mandela University, with special emphasis on the following three:

- **respect for the natural environment** and adherence to the principle of sustainability;
- inclusion of staff and students from previously disadvantaged backgrounds to promote **respect for diversity**;
- emphasis on **excellence** in all aspects of research, training and outreach.

## OBJECTIVES

CMR is a key element in the University's vision of providing leadership in generating knowledge, innovation, education and skills development relating to coastal and marine environments. In addressing this, CMR's objectives are to:

- **provide a forum** to enhance collaboration among academics, researchers and professionals, and build interdisciplinary teams of critical mass to address complex issues;
- **create a strong brand** and market this collective expertise to develop partnerships and source funding in key areas;
- **build capacity** as knowledge and skills through research-based postgraduate training and short courses;
- **provide community service** through professional consulting, service on external boards and committees, and broader outreach;
- **provide infrastructure support** for research, especially relating to diving, boating and specialised marine equipment;
- **host meetings**, regional, national and international, and other activities of wide interest to showcase expertise and achievements;
- **be the first point of contact** for marine issues at the University and communicate, on behalf of the membership, with the external community and top management.

## INSTITUTE ACTIVITIES

A wide range of activities fall under the ambit of the Institute. These may be broadly classified as research, training, and consulting, which may overlap. The definition of, and CMR policies relating to research and consulting contracts, are provided in Appendix I.

**Research:** Research, particularly interdisciplinary research, is the primary activity of the Institute and it forms the core on which other activities are based. Members address fundamental and applied problems through research. This is grouped in thematic areas which are listed below.

Coastal and marine research involves a considerable amount of field work and depends heavily on field equipment, not only vehicles and boats, but also a variety of instruments and sampling gear. Most of this is housed in academic departments at the University and at external research partner institutions. However, CMR houses the central facility for diving. A major activity of the Institute, managed through the *Research Diving Unit*, is boating and diving. The structure of the Unit and the policy on diving and boating is provided in Appendices V-VIII.

**Training:** Members provide *research-based training* through masters and doctoral programs based in participating academic departments. The Institute encourages programs that have an interdisciplinary connection.

**Consultancy:** The Institute embraces a broad and unique spectrum of expertise relevant to coastal and marine issues through its members who are drawn from varied disciplines. This pool of expertise, the broadest in the region, is used to provide community service in the form of commercial consultancies. A list of members participating in consulting is given in Appendix II.

## CMR STRATEGIES

The following strategies, derived with aid of SWOT analysis, will be used to address our mission and meet our objectives. These strategies will enhance our ability to provide decision support to coastal and marine managers through research excellence while embracing the principle of sustainability.

1. **Enhance the breadth of CMR collaboration and the range of coastal and marine expertise across the University and externally.**

**Action:** Under the banner of the Nelson Mandela University marine vision, use workshops, interdisciplinary seminars and other platforms, plus the location and facilities of the Ocean Sciences Campus, to draw in a wider pool of collaborators across faculties and other units in the University.

**Key performance indicators (KPIs):** (1) number of CMR members; (2) number of units represented; (3) number of interdisciplinary projects; (4) number of international partnerships.

2. **Increase funding for research, studentships and resources to promote research and training.**

**Actions:** (1) actively source funding from contemporary sources such as The Phakisa initiative to grow a 'blue' economy based on marine and coastal resources and sustainable tourism, and the Flagship Project for large interdisciplinary programmes; (2) engage with key stakeholders who are funders; and (3) pursue international partnerships and other sources of funding.

**KPI:** total income for research, training and infrastructure.

3. **Strengthen branding and marketing to maintain a high profile nationally and internationally.**

**Actions:** (1) upgrade the website, produce a brochure and develop other outputs such as popular articles; (2) host meetings to showcase CMR expertise and activities, raise our collective profile and connect with potential new partners, leveraging the advantage of our strategic location in terms of coastal and marine environments; (3) public lectures.

**KPIs:** (1) number of meetings hosted and number of attendees; (2) number of MoUs or equivalents; (3) number of public lectures and attendees; (4) number of popular articles.

4. **Build, grow and develop expertise and fill gaps in critical areas (such as fisheries, sedimentology, coastal engineering) to build capacity and broaden expertise.**

**Actions:** (1) use SARChI Chairs to gain expertise in key areas; (2) develop new postgraduate programmes in target areas, especially through interfaculty collaboration; and (3) explore partnerships to draw in external experts, locally and internationally, through exchange programmes and other mechanisms.

**KPIs:** (1) number of SARChI Chairs; (2) number of new joint postgraduate programmes; (3) number of visitors.

5. **Develop, maintain and expand infrastructure at the Ocean Sciences Campus and across campuses to strengthen marine research capacity.**

**Action:** Strengthen partnerships with SAEON, SAIMI and other organisations, to increase space, equipment, resources and efficiency through specialist technical expertise.

**KPIs:** (1) inventory of equipment; (2) number of technical specialists.

## THEMATIC AREAS

The wide range of coastal and marine research, consulting, public engagement and capacity building activities undertaken under the auspices of CMR can be grouped under three broad themes. These themes are not rigid compartments and some projects may span more than one

theme. Further, under each thematic area there are numerous individual researchers, students and research groups. Research under these thematic areas contributes to decision support to coastal and marine managers.

**Global Change:** This covers a range of projects aimed at monitoring and understanding change, both anthropogenic and natural, and how this impacts coastal and marine systems and human communities dependent on them. It includes monitoring climate change through physical and biological processes, its drivers and implications; pollution monitoring; biodiversity loss; building socio-ecological resilience in light of global changes; understanding risks and vulnerabilities due to environmental change. Further specific areas of research activity under this theme include: SARChI in Ocean Sciences and Marine Food Security; long term observations in coastal and offshore nodes; sea level rise; ocean acidification; harmful algae blooms; long term trends in turtle nesting success; pollution monitoring of PCBs, metals, etc; fresh water requirements; response of top predators to change; Sustainability Research Unit's work on coastal vulnerability; river and wetland management; multi-scale adaptations to climate change.

**Living Resources and Food Security:** This covers projects studying and developing coastal and marine living resources which are, or can be, utilised as food sources, with the emphasis on sustainability. It includes all aspects of sustainable utilization of living resources; fisheries and aquaculture; resource economics; legislation and policy; poverty alleviation; sustainable development; governance; common property resource management; adaptive management. Some specific areas of research activity under this theme include: the SARChI in Ocean Sciences and Marine Food Security; abalone seeding project; Bayworld fish studies; line and pelagic fish biology; mangroves; rocky shore invertebrates; studies of contamination; Sustainability Research Unit.

**Biodiversity and Conservation:** This covers a wide range of projects broadly relating to understanding, protecting and managing coastal and marine ecosystems, both for conservation and for sustainable human use. It includes conserving environments, ecosystem processes and biodiversity; marine spatial planning; sustainable tourism; legislation and policy; coastal engineering; sand mining and use of other non-living resources and their economic implications; sustainable livelihoods. Some specific areas of activity under this theme include: the SARChI: Shallow Water Ecosystems; SARChI: Marine Spatial Planning; Marine Apex Predator Research Unit (MAPRU); sandy beach and turtle group; estuaries group; underwater cultural heritage; estuarine, beach and rocky shore biodiversity; coastal dune flora; coastal fish ecology; coastal management strategies.

## **MEMBERSHIP**

Academics, researchers, professionals and postgraduate students from all faculties at the University with interests in coastal and marine issues, will be members. This includes Research Chairs, research associates, associate members, and post-graduate students. Members of affiliated and collaborating institutions who are formally associated with the University will also be included, especially those based at the Ocean Sciences Campus. Below is a breakdown of CMR membership categories.

- *Academic Members:* University staff employed within departments.
- *Research Associates:* Researchers formally appointed in University departments as RAs through the Department of Research Capacity Development and the relevant faculty RTI committee. Such researchers were previously employed by the University, or are working at research organisations with a marine focus and link to the University, that choose to be affiliated with the University, in a formal capacity for the purposes of co-supervising

students, building research collaborations, and adding to the growing pool of expertise under the CMR. RAs do not draw a salary from the University. The RA registration policy was amended, and RAs can now be registered under the CMR directly. The applications are not approved at any Faculty RTI Boards, but are submitted to the DVC: Research and Engagement Office Directly for approval at the Institutional RTI level. These applications are particularly relevant when a researcher's expertise is too broad to fit under a specific University department. RAs registered within the CMR are not restricted to supervising students from a single University Department only.

- *Professional Associate*: This new category was implemented at the beginning of 2018. Professional Associates do not have to be academics, but can work in industry or other professional fields. PAs do not draw a salary from the University and they are not able to supervise students, but through a registration as a PA within the CMR, they are officially affiliated to the University, and they can offer professional and technical expertise. PA applications under the CMR serve at the Institutional RTI level.
- *Associate Members*: Researchers not employed by the University or registered as Research/Professional Associates, but that are involved in marine research through external entities that may have links with the University.
- *Postgraduate Students*: Masters, Doctoral and Post-Doctoral Fellows registered at the University.
- *Administrative Members*: Members assisting with the administration of CMR-associated research groups and stakeholders.
- *News Members*: Members of the public, current students not involved in marine research, and past students no longer involved with the University that wish to remain informed of CMR activities.

CMR Members from the Nelson Mandela University are requested to include their CMR affiliation/address in all publications. This is of specific relevance to Academic Members, RAs, PAs, and students. Such members can claim subsidies for publications through their respective departments. No subsidy claims are possible for Associate and News members.

## **STAFF**

<i>Director:</i>	Prof Janine Adams
<i>Acting Director:</i>	Dr Bernadette Snow
<i>Acting Deputy Director:</i>	Dr Pierre Pistorius
<i>Research Assistant:</i>	Mrs Liza Rishworth
<i>Student Assistant:</i>	Ms Oyama Mkaza
<i>Head, Research Diving Unit:</i>	Mr Anton Cloete

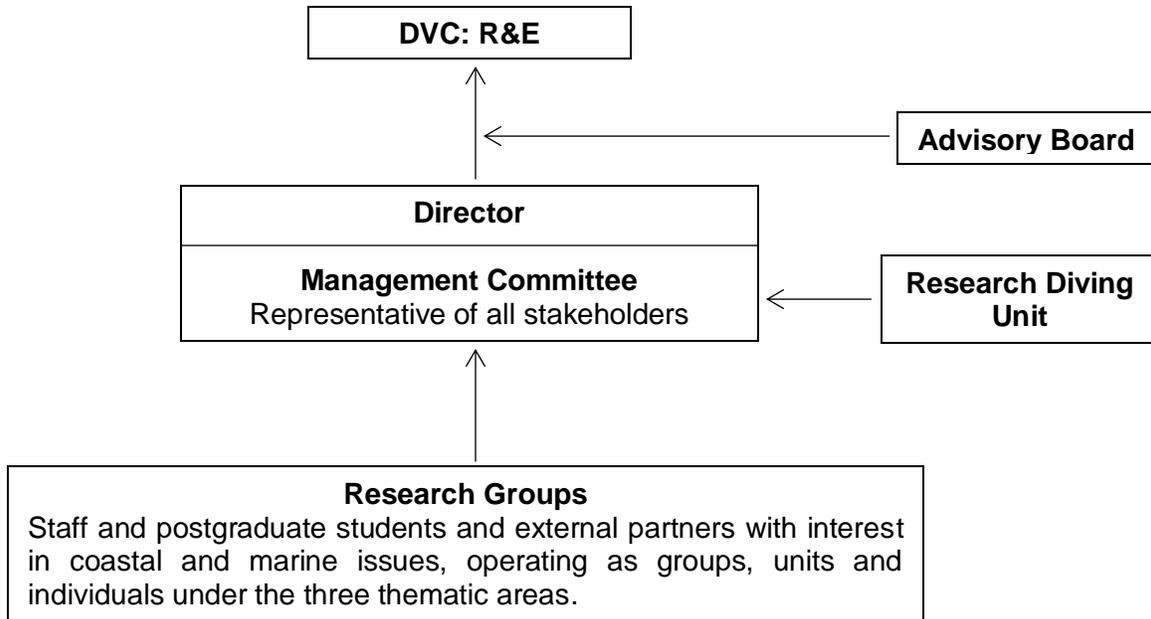
Prof Janine Adams is on research sabbatical for 2018.

## **GOVERNANCE**

The Director, assisted by the Deputy Director, provides overall vision and leadership and assumes responsibility for the activities of the Institute. The Director is assisted by a Management Committee, representative of the wider membership (including postgraduate student representation), who guide the running of the Institute. The Director, on behalf of the Management Committee, reports to the DVC: R&E who chairs an Advisory Board, including external stakeholders, which screens CMR annual reports before submission and advises on overall

direction and strategy. The constitution and role of the Advisory Board and the role of Director is given in Appendix III. The constitution and role of the Management Committee is given in Appendix IV.

## ORGANOGRAM



## EXTERNAL LINKAGES

Members of the Institute have numerous external partners outside the University. These relate to collaboration in research, both national and international. Especially close linkages, as indicated in the foregoing, the composition of the membership and the Advisory Board and Management Committee, exists with, amongst others: BCRC; CSIR; DEA; DEDEA; Rhodes University; SAEON; SAIAB; SAIMI; SANBI and SANParks

## INFRASTRUCTURE

The Institute and its Research Diving Unit are based at the Ocean Sciences Campus. Diving support and facilities will be enhanced through collaboration with SAEON, which is also based there. The Institute has one vehicle, a single cab bakkie, which is available to members when not in use by the RDU. Details of charges and booking procedure for this vehicle are given in Appendix V. The RDU has all the equipment required for operation, but beyond this, the Institute has no physical infrastructure. All laboratory instrumentation, equipment, and other infrastructure are housed in participating University departments and entities.

## FINANCE/BUDGET

Institute members procure their research funding through the usual agencies under the auspices of their home departments, and this drives research which falls under the broad ambit of the Institute. In exceptional cases of interdisciplinary projects the Institute may be the base for the team of project leaders. Income to the Institute to support the Research Diving Unit comes from the University Council and Faculty of Science. Other sources being considered through the University are overheads on contracts and a proportion of DHET publication subsidies. External sources will also be approached.

## APPENDIX I – CMR CONSULTING AND CONTRACT POLICY 2018

### 1. INTRODUCTION

There are three categories of activity to be considered:

- private consulting
- contract research
- institutional contract consulting

The decision as to whether a particular consulting (or non-research contract) job should be conducted as a CMR contract or a private consultation is left up to the individual who solicits it provided it meets the conditions for private work (see (2) below), with the exception that all work of this nature solicited by the Director must be handled as a CMR contract.

University policy on contracts is at:

<http://newmy.nmmu.ac.za/Pages/OfficialPolicies.aspx> (see item 405 Research, Internationalization and Engagement Management, 405.03 Signing of research related contracts). For all institutional activities, the Innovation Office must be involved to assist with signing an agreement between the Nelson Mandela University and the client before work commences. Any institutional agreements must also be approved by the HoD/Head of School/Dean as appropriate using the relevant contract approval form (Appendix 1, 405.03).

### 2. PRIVATE CONSULTING

This is done by an individual or group on an entirely private basis with no real nor implied connection with either the University or CMR. Fees are determined by and paid directly to the consultant. If University equipment is used, approval must be obtained and it must be hired from the Nelson Mandela University. Under no circumstances may any costs associated with the consultation be charged to CMR or Nelson Mandela University research accounts. The Nelson Mandela University policy on private work is located on the University Portal (600 Human Resources, 601.03 Management of Private Work). This is limited to a maximum of 8 hours per week outside normal working hours. However, CMR encourages its members to conduct all consulting through the Institute rather than as private consulting. This has the benefits of collective responsibility, access to the University and CMR resources, building collaboration, professional indemnity and proper protection through contracting.

### 3. CONTRACT RESEARCH

Research contracts are generally undertaken under the leadership of an academic project leader and University signs an agreement with the funding body (usually a government or NGO body, or foundation but can be a private company). The Innovation Office will provide a standard agreement or will review the funding body's agreement, and will manage the signing process as per the normal procedure outlined in (1). Such research contracts usually lead to new knowledge, publications and student training. Where it is large and interdisciplinary, a contract research project could be based in CMR rather than a participating academic department.

### 4. COMMERCIAL CONSULTING UNDER THE AUSPICES OF CMR

Institutional consulting work is done under the auspices of CMR. This may be termed research contracting, commercial contracting or consulting (See Policy – 400 Research Innovation and Engagement, 402.06 Budgeting Costs and Levies on external research-related income). Such contracts are usually done for clients who are external for-profit organisations. Here emphasis is not on new knowledge, publication or student training, but rather on providing specific deliverables for a client who may wish to own any intellectual

property generated. The Innovation Office will provide a standard agreement or will review the client's agreement, and will manage the signing process as per the normal procedure outlined in (1). Reports are edited by CMR editors and authorship is restricted to registered professionals when appropriate. (Members wishing to participate in consulting are encouraged to register through the appropriate body). Budgets and fees are prepared and disbursed according to CMR directives.

In terms of charges and payments the following CMR rules apply in all cases:

- professional fees are charged only in respect of registered professionals;
- payments to assistants will form part of the costs of the contract and will be based on standard Nelson Mandela University rates (see below);
- only actual S&T expenses (receipted) may be charged, not flat- or daily- rates;
- no personal remuneration to professional participants (excluding assistants) is permitted, i.e. professional fees are paid into contract accounts, not direct to the professionals, unless there are special circumstances;
- editor's and director's fees (when necessary) as well as a 20% indirect cost component (overhead) on total costs (provisionally split between the University and CMR), must be budgeted for at the time of preparing the contract;
- student bursaries may be included in contracts for CMR consultation services.

## 5. PROCEDURES FOR COMMERCIAL CONSULTING UNDER CMR

The CMR Director will notify all members by e-mail of any proposals for institutional consulting on marine or coastal issues and will arrange an ad hoc meeting of all interested parties. All members of the CMR who are registered professionals are eligible to participate in such contract work. This ad hoc committee, chaired by the Director or the person who solicited the contract, will decide on the composition of the team that is to undertake the contract. The team will prepare a quotation and the Innovation Office will provide a standard agreement or will review the client's agreement, and will manage the signing process as per the normal procedure outlined in (1). The project team will appoint a coordinator for the contract who will be subject to CMR Management Committee ratification. All contracts will be registered by CMR, listed in annual reports and copies of the reports will be kept in CMR files, either as open reports or as confidential reports.

## 6. RATES

Suggested rates for CMR consultations (excluding VAT) in 2018 are as follows (Note that all prices quoted should be excluding VAT):

<b>Title</b>	<b>Rate per hour (ex VAT)</b>
Professor/Director	R880
Associate Professor	R770
Senior Lecturer	R660
Lecturer	R550
Other PhD holder	R550
MSc holder	R440
Technical/admin staff	R220-R550
PhD student	R330
MSc student	R220
Hons student	R110
Undergraduate	R77.50
Overheads (CMR + Nelson Mandela University) 15% (pending approval)	

## APPENDIX II – MEMBERS PARTICIPATING IN CONSULTING

NAME	<b>Cowling, Richard</b>
QUALIFICATIONS	PhD UCT 1983
BROAD EXPERTISE	Plant ecology and evolution
SPECIALIST EXPERTISE	Vegetation ecology of coastal Cenozoic sediments
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	25 years of sporadic consulting, mostly commenting but some survey work

NAME	<b>Du Preez, Derek</b>
QUALIFICATIONS	PhD UPE 1996
BROAD EXPERTISE	Phytoplankton biology and ecology
SPECIALIST EXPERTISE	GIS and remote sensing; micro- and macroalgal physiology; algal productivity; harmful algal blooms
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	Specialist reports on coastal developments; technical advice on mariculture; marine nutrient monitoring

NAME	<b>Fabricius, Christo</b>
QUALIFICATIONS	PhD UCT (1997); MSc (cum laude) Wits (1989)
BROAD EXPERTISE	Social-ecological resilience and sustainability
SPECIALIST EXPERTISE	Resilience assessment. Adaptive co-management. Social ecology. Integrated management plans and strategies. Policy formulation. Sustainable use
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	30 years' experience in: Social process facilitation. Participatory research with communities. Monitoring and evaluation of resilience and sustainability in social-ecological systems. Technical advice. Policy development. Catchment management plans and strategies. Project management & coordination. Synthesis.

NAME	<b>Garner, Cornelia</b>
QUALIFICATIONS	PhD NMMU 2013
BROAD EXPERTISE	Coastal Ecology
SPECIALIST EXPERTISE	Marine macrofauna, macroalgae, meiofauna of rocky, sandy and mixed substratum systems.
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	8 years; identification of marine benthic macrofauna for env monitoring; terrestrial vegetation specialist reports.

NAME	<b>Goschen, Wayne</b>
QUALIFICATIONS	PhD UPE 1991
BROAD EXPERTISE	Physical oceanography
SPECIALIST EXPERTISE	Coastal and shelf dynamics, upwelling, sea temperatures, currents, waves, wind, sea-levels. Processing, storing and analysis of time series data.
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	Provided physical oceanographic input to coastal and marine multi-disciplinary projects.

NAME	<b>Hattingh, Daniël G</b>
QUALIFICATIONS	PhD (1995) University of Plymouth
BROAD EXPERTISE	Solid State Welding, Fatigue
SPECIALIST EXPERTISE	Friction Processing
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	More than 20 years' experience including specialist reports, technical reports, journal articles, conference presentations & serving as editor on international journals

NAME	<b>Hermes, Juliet</b>
QUALIFICATIONS	PhD physical oceanography
BROAD EXPERTISE	Climate variability, Agulhas, SW Indian Ocean, South East Atlantic, large scale observations, modelling
SPECIALIST EXPERTISE	Numerical modelling (large scale and shelf), statistical analysis, Agulhas variability, Indian Ocean Climate, Benguela dynamics
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	Specialist reports

NAME	<b>McLachlan, Anton</b>
QUALIFICATIONS	PhD UPE 1976, DSc Rhodes 1985
BROAD EXPERTISE	Coastal Ecology
SPECIALIST EXPERTISE	Sandy beach, dune, surf zone ecosystem processes
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	20 years sporadic consulting, including EIA's, site surveys, specialist reports

NAME	<b>Pichegru, Lorien</b>
QUALIFICATIONS	PhD University of Strasbourg 2008, MSc University of Strasbourg 2004
BROAD EXPERTISE	Top Predator ecology
SPECIALIST EXPERTISE	Seabirds, foraging ecology, anthropogenic disturbance on marine top predators
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	scientific and technical advice to DEA and DAFF since 2007

NAME	<b>Roberts, Michael J</b>
QUALIFICATIONS	PhD 2009
BROAD EXPERTISE	Oceanography and marine ecosystem
SPECIALIST EXPERTISE	Physical oceanography
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	20 years of consulting on an adhoc basis mostly on marine renewable energy for Eskom (Agulhas Current, wave energy)

NAME	<b>Robertson, Bruce</b>
QUALIFICATIONS	PhD
BROAD EXPERTISE	Research Management
SPECIALIST EXPERTISE	Research Management
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	Director: Institute for Coastal Research (UPE) – 10 years Director: Research UPE 6 years. Macro Algal Mariculture

NAME	<b>Schumann, Eckart</b>
QUALIFICATIONS	PhD
BROAD EXPERTISE	Physical Oceanography
SPECIALIST EXPERTISE	Coastal ocean processes Weather and climate Estuarine dynamics Sedimentation
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	25 years, site surveys, specialist reports

NAME	<b>Strydom, Nadine A.</b>
QUALIFICATIONS	PhD Rhodes University 2002
BROAD EXPERTISE	Fish Ecology
SPECIALIST EXPERTISE	Marine, estuarine and riverine Ichthyology, Ichthyoplankton Ecology
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	Participated in EIAs, technical advice and specialist reports on fishes and hydrodynamics in freshwater, estuarine and marine ecosystems

NAME	<b>Wooldridge, Tris</b>
QUALIFICATIONS	PhD UPE, 1982
BROAD EXPERTISE	Coastal Ecology
SPECIALIST EXPERTISE	Estuarine structure and function, Marine/estuarine Invertebrate ecology.
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	35 years, EIA's, estuarine freshwater requirements, estuarine response to anthropogenic impacts -catchment to the sea etc.

## APPENDIX III – CONSTITUTION OF THE CMR ADVISORY BOARD

### 1. **Composition of the Advisory Board**

Deputy Vice-Chancellor (Research & Engagement) – Chair  
Dean of Science  
Director of the Institute  
Deputy Director of Institute  
DoS of Environmental Science  
Coordinators for Research Themes  
Dean of Arts Faculty  
Dean of Engineering, the Built Environment, and Information Technology Faculty  
Representative from DEA: Oceans and Coasts  
Representative from NRF  
Representative from DAFF  
Regional Director ASCLME  
Representative from SAEON  
Representative from SAIAB  
Representative from the NMB Metro  
Representative from BCRE  
Representative from National Ports Authority  
Post-Doctoral Fellows Representative  
Masters and Doctoral Students Representative

Further members may be co-opted to the Committee, at the discretion of the Chair.  
The CMR Research Assistant will act as Secretariat

### 2. **Functions of the Advisory Board**

The Advisory Board will be responsible for the following:

- Approval of the scientific direction and strategy of Institute, ensuring the research is at the forefront of research in the field;
- Monitor annual progress against the Strategic Plan;
- Approval of the annual Report of the Institute;  
Reviewing of staffing requirements and appointments;
- Evaluation of project focus and balance;
- Evaluate the recommendations of the Management Committee; and
- Recommend collaborations across institutions, both nationally and internationally.

### 3. **Acting Chairperson**

The Dean of Science will chair the Advisory Board in the absence of the DVC (R&E)

### 4. **Term of Office of Members**

Three years from the date of appointment, renewable for a further three years.

### 5. **Meetings**

The Advisory Board will have two meetings per year (one meeting in March / April and one meeting in Oct / Nov). Special meetings may be called by the Chair, if necessary.

### 6. **Meetings Procedure**

- The Director of the Institute will draw up an agenda for each Advisory Board meeting and present it to the Chairperson for approval;
- The CMR Research Assistant will act as secretary for the Advisory Board and provide minutes within two weeks after each meeting.

**7. Conflict of Interest**

Any conflict of interest will be noted at a meeting, and the committee member may be requested to recuse him/herself from that part of the meeting.

**8. Functions of Director**

The Director will:

- provide strategic and academic leadership for the Institute;
- be involved in the supervision of postgraduate students;
- take an active role in research undertaken in the Institute;
- prepare the annual report for Senate and the Advisory Board; and
- report to the DVC (R&E) on matters pertaining to the Institute.

## **APPENDIX IV – CONSTITUTION OF THE CMR MANAGEMENT COMMITTEE**

### **1. Composition of the Management Committee**

Director of the Institute – Chair  
Deputy Director of the Institute  
Dean of Science  
DOS of Environmental Sciences  
Coordinator for each Research Theme  
Representative of SAEON  
Representative from BCRE  
Head of Research Diving Unit  
Post-Doctoral Fellows Representative  
Masters and Doctoral Students Representative

Further members may be co-opted to the Committee, at the discretion of the Chair.  
The CMR Research Assistant will act as Secretariat.

### **2. Functions of the Management Committee**

The Management Committee will be responsible for the following:

- the effective running of the Institute;
- the reviewing of finances of the Institute;
- ensuring performance against objectives set for the Institute;
- implementing recommendations of the Advisory Board; and
- reporting to the Advisory Board.

### **3. Acting Chairperson**

The Deputy Director of the Institute will chair the Management Committee in the absence of the Director of the Institute.

### **4. Term of Office of Members**

Two years from the date of appointment, renewable.

### **5. Meetings**

The Management Committee will have at least four regular meetings per year (one per quarter). Special meetings may be called by the Chair. If necessary, the Chair can establish an Exco of the Management Committee to deal with matters that require an urgent decision.

### **6. Meetings Procedure**

- The Director of the Institute will draw up an agenda for each meeting and present it to the Management Committee for approval;
- The CMR Secretary to the Director will act as secretary at each Management Committee meeting and provide minutes within two weeks after each meeting.

### **7. Conflict of Interest**

Any conflict of interest will be noted at a meeting, and the committee member may be requested to recuse him/herself from that part of the meeting.

## APPENDIX V – RESEARCH DIVING UNIT AND CMR POLICY FOR RESEARCH DIVING

### Introduction

The Research Diving Unit (RDU) is housed within the Institute for Coastal and Marine Research (CMR) on the Ocean Sciences Campus (OSC) of the Nelson Mandela University. The RDU supports marine research and related academic programs, including consulting contracts registered at the University, by providing access to diver training, equipment, logistical support and expertise.

Snorkelling is not considered diving and research projects relying on this mode for sampling do not pose a liability/risk to the University under the legislation, although the University must ensure that this activity takes place safely. Hazards and risks associated with working in the marine environment must be identified and mitigated for as required by legislation.

### Mandate of the Research Diving Unit

The mandate of the RDU is to:

1. Provide operational support to research projects and contracts.
2. Provide and develop commercial diving capacity within the Nelson Mandela University through providing training, qualifications and experience.
3. Provide Safety, Health, Environmental and Quality Assurance in all its training, personnel, operations and equipment as enforced by legislation. This includes ensuring copies of permits issued to researchers are available at the dive site as required by legislation.

### Structure of the Research Diving Unit

The Head of the RDU reports to the CMR Director. The RDU Head appoints contract personnel as required; this may include supervisor, skipper, diver and crew. This is an important legal structure, which ensures the appointees are captured within the University OH&S framework as employees for remuneration and IOD purposes. No personnel can work as part of the dive team unless appointed as such. For SHEQ compliance, the RDU reports the Nelson Mandela University OH&S officer.

The RDU Head is responsible for:

- Supervising commercial diving operations in support of research projects & contracts
- Instructing commercial diver training courses
- Managing the RDU SHEQ program, ensuring Department of Labour (DoL) Audit requirements are surpassed, including DPP & P&E maintenance, replacement and procurement.

### Responsibilities of Client and Contractor

The law sees the RDU as a commercial diving **contractor** and all researchers that require its support for diving operations are termed **clients**. The client is responsible for booking the required RDU support as well as the costs of the diving and boating operations. This is controlled by RDU legal documentation, which provides the following functions:

1. Provide & maintain records of diving operations for meta-data, personnel remuneration, client invoicing and audit compliance.
2. Track P&E asset usage to meet SHEQ & maintenance requirements.
3. Provide emergency backup for each operation should an accident/incident occur.
4. Maintain records of all operations for the scrutiny of the DoL Inspectorate for a period of 5 years.
5. Review and update safety & management plans.

It is therefore important that the researcher with signing rights on the research account signs acceptance for costs incurred before equipment is issued for each project. These documents are issued by the RDU upon planning a diving project and must be completed and returned before the diving operation commences. The RDU will retain a copy of this document for invoicing/internal funds transfers by the University Finance Department.

### **Nelson Mandela University Research Diving Projects**

All diving operations in support of research projects registered at the University are conducted under the auspices of the RDU. These registered research projects take first priority when clients book RDU support.

### **Collaborating under a Memorandum of Understanding**

Each entity collaborating with the University on diving operations must comply with the NMU diving standards. This commits the particular entity to abide by the OH&S Act and Diving Regulations and conduct its diving operations in compliance of the law with respect to CoPs, personnel appointments, operational procedures, logistic requirements, SHEQ accountability and industry acceptable good diving practices. Diving projects registered under MoU's take first priority when booking RDU support.

This is to ensure that all parties conduct collaborative diving operations according to Safe Diving Practices by assigning duties and responsibilities between the parties and addressing operational planning, logistics and execution of the Diving Operations. It follows, therefore, that each member of the dive team will be assigned to one of the parties and receives Occupational Health and Safety protection during diving operations.

The scope is to ensure that the diving operations are conducted within the legal framework of the Occupational Health & Safety Act (85) of 1993 and the Diving Regulations of 2009. Additional Codes of Practice and other accepted Guidance Documents for Safe Diving Practice in general used in the Industry must be considered in the planning and execution of diving operations. Additional documents such as the National Ports Act, Marine Living Resources Act & Merchant Shipping Act, amongst others, should be consulted.

The following minimum standards apply to diving operations under the MOU:

- 1. The Project Agreement shall state who is the client and contractor.**
- 2. The Project Agreement shall define the duties and responsibilities of the role-players, which shall include, amongst others:**
  - The Diving Contractor must ensure the appointed Diving Supervisor is tasked with performing his duties within the scope of the Regulations.
  - The Party responsible for the Dive Project Plan must be identified.
  - The Party responsible for the Dive Operation must be identified.
  - Appoint personnel within the legal framework of their HR department and meet the minimum requirements of the Occupational Health & Safety Act, Diving Regulations, Labour Relations Act and Compensation for Occupational Injuries and Diseases Act, and remain in-date with the Compensation Commissioner for the duration of the collaboration.
  - Provide a reliable means of activating the required paper trail to facilitate an Injury on Duty. This is particularly important when one party's personnel are engaged in another party's operations in a remote location.
  - Provide a maintenance program for all Plant & Equipment and the means of activating the required paper trail to facilitate an incident investigation.

### **3. Divers partaking in Diving Operations shall provide at the dive site:**

- Updated Divers Logbook part 2
- Valid certified copy of ID/Passport
- Letter of Appointment by employer
- Letter of good standing by Compensation Commissioner
- Proof of DMP contract
- Proof of Dive Medical Cover
- Proof of scheduled P&E maintenance

### **Contract work not related to registered research projects at the Nelson Mandela University**

Diving operations not in support of research projects registered at the University are considered contracts, and a Service Level Agreement must be in place between the Client and the RDU. These SLA's are third priority operations and attract a surcharge.

### **Process for engaging the RDU for research projects requiring diving support**

Any researcher wishing to include diving as a means of collecting, counting, observing, placing and recovering of biological, cultural and oceanographic instrumentation must approach the RDU in writing in the planning stage of the project design. This ensures that Diving Project Plan and Risk Assessment is compiled based on information supplied by the project leader. The project leader is involved in the planning and budgeting of the diving component of the project, including signing of the proposed budget. The RDU is then also aware of the additional logistical requirements of the project in relation to the planned scope of work for the year. This is amended annually.

### **Costs for diving operations**

Charges for personnel and equipment are levied by the RDU for auditing purposes. Charges are levied by the entity that supplies them in the case of boats and vehicles. Charges, not including VAT, Nelson Mandela University administration levy and surcharges are tabled as RDU Rates for the applicable year. These costs are amended as required to address changes in inflation, exchange rates etc. Ensure that updated costs are used.

Projects should submit a written schedule of activities requiring support at the start of the project. Bookings for diving support are submitted in writing five (5) days before the event.

The following information is recorded:

- Name of the researcher and project
- Type and nature of support needed
- Launch ramp and site of the research
- Number and type of personnel involved
- Date, start and end time of the research

At this stage, a budget for the diving operation is compiled for the signature of the research account holder.

In principle, the following priority ranking and rates will apply to RDU activities:

- First priority is Nelson Mandela University registered projects, and collaborators under MoUs; standard rates apply.
- Second priority will be training courses; rates will be based on the affiliation of the trainee.
- Third priority applies to public sector and NGO agencies who collaborate with the Nelson Mandela University, as well as commercial contracts; a surcharge will apply.

### **Law Enforcement and Compliance (for example abalone)**

Members of the RDU are not authorised to support law enforcement and/or compliance diving, specifically operations to detain, arrest or recover evidence, unless suitably trained and appointed. Not only are the individuals involved in illegal abalone harvesting aggressive and known to intimidate the public, but this also has a negative impact on a researcher's ability to collect data on illegal abalone harvesting to support natural resource management, reef community impacts, socio-economic and security studies.

### **Non-Authorised Diving Operations**

Personnel of the RDU are not authorised to become involved in questionable diving practices under the auspices of the Nelson Mandela University. If the operation has not been logged with the RDU, no legal documentation is presented for signature prior to the operation, or the supervisor has not been appointed by the RDU, it is not an authorised diving operation, as no emergency evacuation plan can be provided without these items first being in place.

### **Intellectual Property**

All data recorded during RDU diving operations remain the property of the University or lead entity under the MoU. This includes still and video imagery. These cannot be distributed outside of the University without the necessary permission of the entity/researcher. The public does not always agree with our research methods, although scrutinised by the ethics committee. Publication of such on social media could unnecessarily damage the image of marine science at the Nelson Mandela University.

### **Nissan NP300**

The CMR has identified a critical need for providing a vehicle for diving operations. This vehicle is used for RDU activities of an administrative, technical and operational nature. It is not a towing vehicle and is not available for extended use.

In principle, the following ranking and rates will apply to the use of the vehicle:

- RDU Diving operations (Diving cost centre @ R3.50 / km)
- CMR technical and administrative activities (CMR cost centre @ R3.50 / km)
- CMR registered projects (Project cost centre @ R5.00 / km)
- CMR registered contracts are considered and a surcharge will apply. (Contract cost centre @ R5.00 / km + surcharge)

### **Water Trailer**

The CMR has provided a self-contained water trailer for transporting seawater for research projects. The research project is responsible for providing a towing vehicle. The rates for the use of the water trailer will be announced.

For information on services, rates, infrastructure, or collaboration opportunities, please contact Mr Anton Cloete directly: [Anton.Cloete@mandela.ac.za](mailto:Anton.Cloete@mandela.ac.za) / 041 504 2747.

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