



INSTITUTE FOR COASTAL AND MARINE RESEARCH

**INFORMATION BOOKLET
FOR CMR MEMBERS**



July 2017

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INSTITUTE FOR COASTAL AND MARINE RESEARCH (CMR)

INTRODUCTION

The tradition of coastal and marine research at NMMU goes back a long way to UPE in the early 70's. This grew from a few postgraduate students to staff from several disciplines by the early 80's. First initiated as the Institute for Coastal Research (ICR) at UPE 1983, collaborative interdisciplinary work on the coast and ocean is therefore already three decades old at NMMU. 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 80's 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 90's.

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 NMMU strategic decision in 2013 to develop a strong marine and maritime institutional theme. This was expounded as the University's signature tune in the University's 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 NMMU 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, CMR has been elevated in 2016 to a university-wide institution reporting directly to the Deputy Vice-Chancellor Research & Engagement. The appointment of a director at the start of 2016 has also contributed to starting the activities of the Institute, including reaching out to other NMMU 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 six faculties and includes members from seven entities external to the University. With its pending move to the University's new Ocean Sciences Campus, it will play a vital role in supporting the University's drive for excellence in maritime and marine sciences. The Institute has recently redefined its vision, mission and objectives.

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 relating to coastal and marine environments. This will advance scientific knowledge and the NMMU 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 NMMU, 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 **diversity**
- emphasis on **excellence** in all aspects of research, training and outreach

OBJECTIVES

CMR is a key element in the NMMU 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 NMMU 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 entities such as academic departments and SAEON. However, ICMR 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 Appendix II.

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 III.

PRELIMINARY CMR STRATEGIES

The following strategies, derived with aid of SWOT analysis, will be used to address our mission and meet our objectives. The timeframe is envisaged as 2016 – 2017. 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 NMMU marine vision, use workshops, interdisciplinary seminars and other platforms, plus the location and facilities of the Marine 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 (such as SAMSS in 2017) 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 in the new marine 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 oceanography; 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 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; top marine predators unit; cetacean group; 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 NMMU 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 (such as SAEON, Bayworld/BCRE, SAIAB, SANParks, CSIR, SANBI and the University of the Witwatersrand) who are formally associated with NMMU will also be included, especially those to be based on the new NMMU Ocean Sciences Campus. Membership lists are provided in Appendix IV. The Institute has more than 50 members drawn from the staff of NMMU and other entities and over 100 masters, doctoral and post-doctoral students.

STAFF

Director:	Prof Janine Adams
Deputy Director:	Ms Bernadette Snow
Research Assistant:	Mrs Liza Rishworth
Head, Research Diving Unit:	Mr Anton Cloete

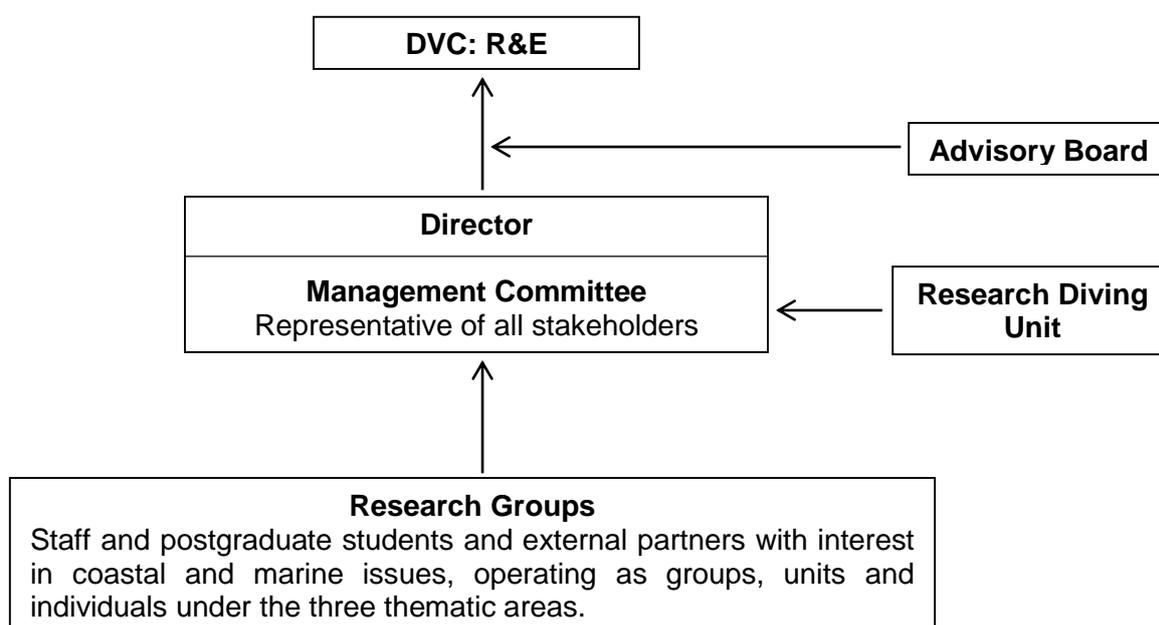
CMR members from NMMU are requested to include their CMR address in all publications. Such members can claim subsidies for publications through their respective Departments. Research Associates are also requested to include the CMR in all addresses. Associate Membership is a new category that has been created for members not associated with NMMU in any way, but who

wish to participate in CMR activities and have their contributions count towards the CMR's outputs. No subsidy claims are possible for Associate Members.

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, 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 V. The constitution and role of the Management Committee is given in Appendix VI.

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 linkage, as indicated in the foregoing, the composition of the membership and the Advisory Board and Management Committee, exists with SAEON, Bayworld/BCRE, SAIAB, Oceans & Coasts, SANParks, SAIMI and CSIR.

STRATEGIC INITIATIVES FUND

The Institute will operate a fund designed to seed or catalyse new partnerships and collaborations across disciplines and institutions. These funds will be awarded annually on a competitive basis. CMR Management Committee will appoint a subcommittee to evaluate proposals each year and make awards. Proposals will be limited to 2 pages and will include a list of collaborators, an outline of the project, how it fits into CMR themes, budget, and expected outputs. Criteria for prioritising applications will include:

- potential to develop new partnerships
- cutting across more than one discipline
- falling within CMR thematic areas
- helping emerging researchers to establish collaboration
- including postgraduate, especially doctoral, students.

Awards will typically be in the region of R30K and legitimate expenses may include:

- travel (air tickets) for collaboration (not conferences)
- running costs

Details are given in Appendix VII.

INFRASTRUCTURE

The Institute and its Research Diving Unit will move to the new Ocean Sciences Campus before the end of 2017. In the process, diving support and facilities will be enhanced through collaboration with SAEON, which will also be based on the Marine Campus. The institute has one vehicle, a 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 VIII. Beyond this the Institute has no physical infrastructure, all laboratory, instrumentation and other infrastructure being housed in participating 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 2017

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 NMMU 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 NMMU. Under no circumstances may any costs associated with the consultation be charged to CMR or NMMU research accounts. NMMU policy on private work is located on the NMMU 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 NMMU 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 NMMU 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 NMMU 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 NMMU 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 2017 are as follows:

Title	Rate per hour (ex VAT)
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 (ICMR+NMMU)	20% (pending approval)

Note that all prices quoted should be excluding VAT.

APPENDIX II – THE RESEARCH DIVING UNIT AND CMR POLICY FOR RESEARCH DIVING

Introduction

The Research Diving Unit (RDU) housed within the Institute for Coastal and Marine Research (CMR) supports marine research and other related academic programs, including consulting projects registered at the University, by providing access to diving and boating training, equipment, logistic 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 Diving Regulations. This does not mean that other hazards and risks associated with working in the marine environment under the OH&S Act do not have to be identified and mitigated for. It is important to understand that this is a living policy document, and will require regular review and updates.

Mandate of the Research Diving Unit

The mandate of the RDU is threefold. It should:

1. Provide and develop commercial diver and skipper capacity within the University through providing training, qualifications and experience to students and researchers.
2. Provide operational support for researcher's to facilitate marine research.
3. Provide Safety, Health, Environmental and Quality Assurance in all its training, personnel, operations and equipment as legally enforced under the OH&S Act (85) 1993 and Diving Regulations 2009, amongst other legislation that may be applicable.

Structure of the Research Diving Unit

The Head of the RDU is an experienced commercial diving instructor, who reports to the CMR Director. The RDU Head is responsible for:

- diving OH&S
- overseeing diving support for research
- offering diver training courses
- maintenance and replacement of RDU diving equipment

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 for the University unless appointed as such. For OH&S Act compliance, the RDU reports directly to the University OH&S officer.

Responsibilities of Client and Contractor

The law sees the RDU as a commercial diving **contractor** and all researchers that require its support for diving and boating operations are termed **clients**. The client is responsible for booking the required time for 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. Track the RDU asset usage to meet SHEQ requirements. This is important should a claim for broken, stolen or lost equipment be submitted to our insurers.
2. Maintain a record of all operations for the scrutiny of the DoL Inspectorate for a period of 5 years.
3. Provide records of operations for personnel remuneration and client invoicing.
4. Provide an emergency backup plan for each operation should an incident occur.

It is therefore important that the researcher with signing rights on the research account signs this form before equipment is issued for each operation. These documents are issued by the ICMR Secretary upon booking a diving/boating operation and must be completed and returned before the diving operation. The secretary will provide copies of this document; one to be retained by the researcher and the other to be handed in at the University access control point.

NMMU Research Diving Projects

All diving operations in support of research projects registered at the NMMU are to be conducted under the auspices of the RDU. Should these diving operations include divers not under contract to the RDU, such as on collaborative research projects with other entities, a diving logistics MoU must be in place to ensure the rights of collaborative divers are protected and there is no risk to NMMU. These registered research projects take first priority when clients book RDU support.

NMMU projects with other entities collaborating by a Memorandum of Understanding

Each entity collaborating with NMMU on diving operations must sign a diving logistics MoU. This document becomes proof that the particular entity commits 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 and SHEQ accountability. Diving projects registered under MoU's take second priority when booking RDU support.

Process for engaging the RDU for research projects requiring diving / boating support

Any researcher wishing to include diving/boating 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 is to ensure that (i) a Diving Project Plan and Risk Assessment is completed by the RDU in conjunction with the project leader to meet legal requirements, (ii) the project leader is involved in the planning and budgeting of the diving/boating component of the project, and (iii) the RDU is aware of the additional logistical requirements of the project in relation to the Units planned scope of works for the year. Ideally the researcher will provide an annual schedule of activity/support.

Booking diving/boating support, priorities and charges

The RDU supports diving/boating operations of NMMU researchers, other CMR members, collaborators under MoU's as well as commercial contracts. Ideally, projects should submit a written schedule of activities requiring support at the start of the project. Bookings for diving/boating support must be made in writing 5 days before the event. This is done online (email to RDU Head cc Secretary until online system up and running). The following information must be logged at this time: the name of the researcher and project, the type and nature of support needed, the launch ramp and site of the research, the number of personnel involved, the date, start and end time of the research. Additional operational documents provided are the DSTI and Register, both legal documents that allow us to close the SHEQ circle and provide remuneration and compensation for our appointed personnel.

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

- First priority to NMMU researchers, postgrads, RAs on registered projects, and collaborators under MoU's; standard rates apply.
- Second priority will be training courses; rates will be based on the affiliation of the trainee to NMMU.
- Third priority applies to public sector and NGO agencies who collaborate with NMMU, as well as commercial contracts; a surcharge will apply.

Charges are levied by the entity that supplies them in the case of boats and vehicles. Charges for personnel and equipment are levied by the RDU for auditing purposes. Charges, not including VAT, are tabulated below.

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, for example in the form of abalone. 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 researcher's ability to collect data on illegal abalone harvesting to support natural resource management, reef community impacts, socio-economic and security studies. Furthermore, personnel of the RDU

are not authorised to become involved in questionable diving practices under the auspices of other entities not representing NMMU. If the operation has NOT been logged with the RDU, or 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/boating operation.

Intellectual Property

All data recorded during RDU diving/boating operations remains the property of the University or lead entity under a MoU. This includes still and video imagery. These cannot be distributed outside of the University without the necessary permission of the RDU and/or 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 University.

Standard RDU rates (excluding VAT)			
Standard NMMU S&T rates apply overnight			
Researchers to provide equipment specific to project			
Equipment Rates		Personnel Rates	
Demand Valves	R50	Supervisor daily (> 3 hr on site)	R 1 650
10/12 ltr Cylinders (with inserts)	R50	Skipper daily (> 3 hr on site)	R 900
BCD/Harness	R50	Diver daily (> 3 hr on site)	R 745
Timer/Computer/Compass	R30	Crew daily (> 3 hr on site)	R 450
Shot Line (30m), Life Line (50m)	R30	Cylinder Fills	R2.50/ltr
Plastic Reel (50m), Wooden Reel (20m)	R30	Boat rental (per day)	R 3 500
Buoy (500mm), SMB, ISMB	R30	Vehicle rental (p/km)	R 4.50
Site Marker System with .5 kg weight	R30	Medical cover and backup	R 250
Camera with Lights (Sony / GoPro)	R250		
Lift bag (100/250/500/1000)	R250		
Dry Suit, Inner (Small, Medium, Large)	R250		
Full Mask, Comms	R250		
Medical Kit, Oxygen, Tools, Spares	R250		

APPENDIX III - MEMBERS PARTICIPATING IN CONSULTING

NAME	Cowling, Richard
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	Du Preez, Derek
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	Fabricius, Christo
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	Garner, Cornelia
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	Goschen, Wayne
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	Hattingh, Daniël G
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	Hermes, Juliet
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	McLachlan, Anton
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	Pichegru, Lorien
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	Plön, Stephanie
QUALIFICATIONS	PhD Rhodes University 2005
BROAD EXPERTISE	Cetacean Ecology
SPECIALIST EXPERTISE	Cetacean ecology, life history, anthropogenic impacts
CONSULTING EXPERIENCE eg EIAs, site surveys, technical advice, monitoring, specialist reports, industry issues	Some EIA's and some commissioned reports on potential conservation issues for the Endangered Wildlife Trust

NAME	Roberts, Michael J
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	Robertson, Bruce
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	Schumann, Eckart
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	Strydom, Nadine A.
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	Wooldridge, Tris
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.

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APPENDIX V - 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
DOS of Environmental Sciences
Coordinators for Research Themes
Representative from Oceans and Coasts (Department of Environmental Affairs)
Representative from National Research Foundation (NRF)
Representative from DAFF (pending)
Regional Director, ASCLME
Representative from SAEON
Representative from SAIAB
Representative from the NMB Metro
Representative from National Ports Authority
Further members may be co-opted to the Committee, at the discretion of the Chair.
The Secretary to the Director 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 Secretary to the Director 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 VI - 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
At least one representative of a Faculty outside Science
Further members may be co-opted to the Committee, at the discretion of the Chair.
The CMR Secretary to the Director 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 VII – STRATEGIC INITIATIVES FUND

PURPOSE OF THE FUND

This fund, administered by CMR from its resources, aims to provide small amounts of seed funding to initiate collaborative research projects. The specific aims are to:

- initiate new partnerships
- encourage collaboration across disciplines
- contribute to skills development
- assist linking to other institutions for resource sharing
- enable mobility for liaison with specialists and other institutions.

CRITERIA FOR APPLICATION

Applications may be submitted by any member of CMR, including doctoral students if they include the supervisor as part of the project team. The Institute is specifically looking for proposals for projects that address the following criteria:

1. The project must clearly fall under at least one CMR thematic area.
2. The project must be interdisciplinary and bring together researchers from different disciplines.
3. The project should ideally initiate a new collaboration. This could be a completely new collaboration with a new (internal or external) partner, or a new collaboration with an existing partner, with emphasis on new external partners.
4. As part of skills development, projects that include postgraduate students, especially doctoral students, will be encouraged.
5. Projects involving emerging researchers will also be encouraged.

BUDGET

This is a once-off award that will be run once each year. The maximum amount awarded for a successful project was R30 000 for 2016; this will be reviewed in 2017 when it may be raised to R40 000. Items that may be included in the application budget are travel costs and running costs. Items that may not be included and will not be funded are: conference attendance, teaching replacement and topping up student scholarships.

TIMING

The Strategic Initiatives Fund will open in January 2017 when all CMR members will be notified by email. Applications must be in by 10 April. Results of screening by a committee of 5 CMR members will be announced by the end of May after which funding will be made available to successful applicants. A report will be required one year after the award of funding.

SCORING

In addition to assessing the quality of the project and likely outcomes, the selection committee will score the applications as follows:

CRITERIA	POSSIBLE SCORE
1. Quality of the proposed project	0 - 3
2. ICMR Themes; relevant to one or more themes	0 - 2
3. Interdisciplinary; cuts across more than one discipline	0 - 2
4. Degree to which it is a new collaboration and new partnership	0 - 1
5. Postgraduate student involvement; doctoral student	0 - 1
6. Emerging researcher: an emerging researcher is leader or co-leader	0 - 1
TOTAL SCORE	0 - 10

In the event of ties the selection committee will consider the CV of the project leader and other criteria as appropriate.

APPENDIX VIII - PROCEDURES FOR USE OF CMR VEHICLE

The CMR has identified a critical need for provision of a dedicated vehicle to support diving operations, largely due to the high frequency of diving operations conducted by the Research Diving Unit and the limited availability of departmental vehicles. There is also a need to protect departmental vehicles from the excessive wear and tear which may be inflicted when a vehicle is loaded with heavy diving gear wet with seawater.

Accordingly, CMR has acquired a Nissan NP300 bakkie in normal two-wheel drive. While the RDU will have priority use of this vehicle, it will be available to CMR members when not in use for RDU activities. It will be available for local day trips only, not overnight. Bookings can be made a maximum of three working days in advance through the CMR Research Assistant, Liza..

The following priority order for use of the CMR bakkie and km rates will apply:

- CMR Diving operations (RDU cost centre @ R3.30/km)
- CMR operational, technical and/or administrative activities (CMR cost centre @ R3.30/km)
- CMR registered contract/project operational/technical/administrative activities (Contract cost centre @ R4.50/km)
- CMR registered RA's (RA's cost centre @ R4.50/km)
- Any other requests will be considered (provide a cost centre @ R4.50/km)

CONTACT DETAILS

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