

Monthly Update

April 2013

I. Overview

1. Key achievements: April 2013

- Shaun Deyzel and Anthony Bernard received their PhD's from NMMU and RU respectively.
- Various field trips conducted successfully (PE-LTERMP, *In situ* LTERMP, Estuarine LTERMP, West Coast Diatom field trip, etc.)
- PDP Grant received from the NRF. Adverts have been sent out for suitable candidates.
- Data management – met with 4 external stakeholders
- Provided research support and platforms to 7 external stakeholders

2. Key activities proposed: May 2013

- Various field trips planned (PE-LTERMP, *In situ* LTERMP, Estuarine LTERMP, Transkei estuaries)
- Various meetings with external stakeholders
- St Lucia Conference
- Performance reviews and visit by Johan Pauw
- Eastern Cape Ports and Maritime Conference
- World Oceans Day competition

II. Achievements: April 2013

1. Management, Student and Staff Relations

- 2 – 4 April: Tommy attended the New Managers Development Programme course in Johannesburg
- 5 – 18 April: Tommy participated in a field trip up the west coast of South Africa and Namibia to collect diatoms as part of a large international research project on biogeography, taxonomy and climate change.
- 11 April: Tommy meets with Mr. Deon Louw from the National Marine Institute and Research Centre, Ministry of Fisheries and Marine Resources, Namibia, in Swakopmund to discuss collaboration.
- 19 April: Tommy and Shaun attended the graduation ceremony at NMMU. Shaun received his PhD and two of Tommy's MSc students graduated.
- 19 April: Tommy and Prof Andrzej Witkowski, Prorector for Science and International Relations, University of Szczecin, Poland and Prof Krzysztof Kurzydowski, Director of the National Centre for Research and Development, Poland met with the Dean of Science, NMMU, to discuss collaboration between Poland and South Africa (particularly NMMU).
- 29 April: Technical staff meeting to discuss logistics of upcoming field trips.

2. Monitoring Platforms

a. *Algoa Bay LTMRP*

- 12 April: Gully probes, Kenton – Woody Cape, were serviced by Sean and Nick.
- 25 April: PE-LTEMRP monthly plankton sampling was conducted successfully. Shaun, Tommy and Mfundo participated.

b. *Estuaries LTMRP*

- 4 April: Kromme Estuary sampled by Sean & Nick.
- 17 April: *In situ* instruments serviced in the Kariega Estuary.

3. Marine Protected Areas

Conference abstracts submitted:

- HEYNS, E.R., GÖTZ, A., BERNARD, A.T.F. and A.W. PATERSON. Depth related changes in the benthic invertebrate community of warm-temperate reefs in the Tsitsikamma Marine Protected Area, South Africa. Western Indian Ocean Marine Science Association Symposium, Maputo, Mozambique, 28th October - 2nd November 2013.
- HEYNS, E.R., GÖTZ, A., BERNARD, A.T.F. and A.W. PATERSON. Depth related changes in the benthic invertebrate community of warm-temperate reefs in the Tsitsikamma Marine Protected Area. Southern African Society of Aquatic Scientists Congress, Arniston, South Africa, 30th June – 4th July 2013.
- PARKER, D., GÖTZ, A., WINKER, H. and A.T.F. BERNARD. Optimizing long-term monitoring for assessing subtidal reef fish communities: introduction of the novel stereo-BRUV sampling technique. Western Indian Ocean Marine Science Association Symposium, Maputo, Mozambique, 28th October - 2nd November 2013.
- BERNARD, A.T.F., GÖTZ, A. and H. WINKER. Cost-efficient monitoring of reef fish in the Agulhas Ecoregion of South Africa. Western Indian Ocean Marine Science Association Symposium, Maputo, Mozambique, 28th October - 2nd November 2013.

Popular articles:

- Submitted: GÖTZ, A., SAMAAI, T., KERWATH, S., KIRKMAN, S. and A. BERNARD (2013) Ascending from the abyss: the shallow seamount of Walter's Shoal in the Western Indian Ocean. *SANCOR Newsletter*.
- Published: HALSE, S.J. (2013) Pioneering stereo-BRUV for long-term monitoring in Africa. *SAEON eNews*.

Other:

- 25 – 28 March: Elodie Heyns attended the Quantitative Ecosystem Approach to Fisheries Management Course in Sete, France.
- April 2013: Albrecht received funding from the NRF – Professional Development Programme to the sum of ZAR 300,000.
- 5 April: Anthony Bernard received his PhD degree from Rhodes University, Grahamstown.
- 8 - 12 April: Albrecht and Anthony attended a 1st Aid Level 3 Course at St. John's Ambulance.
- 18 April: Selection Interview Meeting HR Rhodes University for a Professor post at Anthropology Department. (Dr Albrecht Götz).
- 29 – 30 April: Cape Nature Monitoring Methods and Training Workshop - Goukamma MPA.

4. Data Management

- 5 April: Shaun Deyzel met with Ms Paige Potter and Mr David Greene, both MSc students working with Dr Pierre Pistorius, Zoology Department, NMMU, for the handover of Algoa Bay CMP data and a discussion on data analysis.
- 8 April: Shaun Deyzel met with Dr Rhett Bennett, Scientist, East African Marine Transect – EAMT, to discuss their application to Elwandle Node for data housing and security options. EAMT has recently completed a four month long boat-based journey from South African waters to just south of Somalia. The aim was to gather large-scale quantitative data on diversity and abundance of fish communities associated with reef systems using stereo imaging. More than 4TB of video/photo material were collected during 234 dives. EAMT is likeminded in their philosophy on data sharing (read more: <http://marinetransect.org/>), which serves as good justification for SAEON to work towards establishing a long-term relationship with this initiative, particularly since they intend to sustain this sampling strategy in the long-term.
- Sentinel Site project registration with SANParks is being finalised and will be submitted early May.
- Data sharing agreement between the White Shark Research Group and SAEON Elwandle Node is on-going. Specifics around agreements are being discussed and closely mediated between SAEON Elwandle Node (Shaun and Tommy) and DEA Oceans and Coasts (Mr Herman Oosthuizen and Dr Alan Boyd).
- Shaun together with Mfundo Bizani, Yolanda Qhaji and Bomikazi Tshingana (DST Interns) designed and populated the Algoa Bay PE-LTEMRP Zooplankton database.

5. Education

- Weather stations were serviced and data is downloading well and is currently being used for schools projects especially by grade 12's.
- 21 April: Expo workshop held with Dr Ngcoza, Mrs Khuhlane of Ntaba Maria and learners
- Continuous support is given to all those entering the expo.

6. Parataxonomy Laboratory

- 10 April: Vleesbaai sample analysis completed and couriered to CSIR (Durban) for further analysis.
- 10 April: Shaun Deyzel met with Dr Quanitah Odayar from WIRSAM Scientific to discuss maintenance options and imagery solutions for Elwandle Node's microscopes
- 24 April: Shaun Deyzel met with Sarah Ketting, sales consultant SMM Instruments (PTY) Ltd. to discuss maintenance options and imagery solutions for Elwandle Node's microscopes
- In total 97 Algoa Bay PE-LTEMRP zooplankton samples were processed in April.

7. Technical: CMP Maintenance/SCUBA Diving/Boating

- 12 April: Nissan Navara license renewed
- April 2013: Elwandle has been offered space in the NMMU Research Diving Unit (once revamped) for dive gear. NMMU RDU will be filling our cylinders in future at a nominal rate.

8. Research support / platform provision

- 5 April: Phytoplankton filtration equipment lent to Mr Ryan Wasserman, PhD student, Zoology and Entomology Department, RU, for use on a field trip to the Kasouga Estuary.
- 8 April: SCUBA cylinder for inflation of small inflatable boat lent to Dr Anusha Rajkaran, Botany Dept, RU, for use on a field trip to several estuaries in the former Transkei region of the Eastern Cape.
- 10 April: Shaun Deyzel met with Dr Francesca Porri, Researcher ACEP/SAIAB/RU, to finalise 2 Phuhlisa research projects. Logistics for a field trip to the Mgazana Estuary scheduled for 23-28 May was also discussed.
- 11-12 April: Shaun Deyzel hosted Dr Niall Vine, Zoology Dept, UFH and two students (1 BSc Hon, 1 MSc) at Elwandle Node for a two-day Copepoda Identification Workshop and information sharing session.
- 12 April: YSI lent to Dr Francesca Porri for use on field trip to Algoa Bay. Data was downloaded, processed and sent to Dr Francesca Porri and Dr Nico Weidberg, RU on 23 April.
- 22 April: Cone-dredge, 200 µm and 500 µm hand-held sieves as well as 2x 500 µm benthic sieve bags lent to Ms Abongile Sobekwa, MSc student, Phuhlisa Programme, ACEP, SAIAB.
- 25-26 April: Nick Ridden assisted with field work at the Kariega Estuary, related to a Phuhlisa Programme (ACEP/SAIAB) MSc project.

9. Challenges and corrective measures

- Core funding has not significantly increased for 2013/14 and budgets for all core functions will be limited. No new projects will be taken on unless fully funded from external sources. External funding from DEA being applied for now to monitor the Gamtoos Estuary.

10. Risks description, impacts and mitigation

- Anchors have been received for the in situ moorings. It is becoming more difficult to source railway line tracks due to the illegal market for scrap metal (especially ex SAR products). A reliable long term source of metal for anchors is being sourced to ensure we have a constant supply.
- Over subscription of R/V *uKwabelana* remains a problem for CMP maintenance and plankton runs. R/V *Kadouw* has not been handed over yet from SANParks to SAIAB. It is expected that *Kadouw* will be operational in the next four months. In the meantime the MPA unit will rent a vessel from DIFS, RU for the July Tsitsikamma field trip.

III. Proposed Activities: April 2013

1. Scheduled appointments

- 2 May: Tommy to meet with Dr Werner Illenberger (Sedimentary geology consultant) to discuss SAEIS and the potential to load additional data on the system.
- 2 May: Tommy to meet with Dr Eckart Schumann to discuss purchasing his old SeaCat CTD.
- 3 May: General staff meeting
- 6-10 May: Shaun to assist with Phuhlisa Programme sampling in the Kowie Estuary related to two MSc studies (collaborator: Dr Niall Vine, UFH)
- 13 May: Tommy and Shaun to meet with Herman Oosthuizen (DEA, Oceans and Coast) to discuss data sharing agreements
- 13 May: Shaun to meet with Prof Eileen Campbell (Bot Department, NMMU) to discuss PE-LTEMRP phytoplankton data management options
- 13 May: Shaun to meet with Dr Isabelle Papadopoulos to discuss project design options for a potential new Sentinel Site research programme currently entitled "Barcoding of Zooplankton in Algoa Bay", a multi-disciplinary, inter-institutional programme involving researchers from UCT, NMMU, UJ and Flinders University (Adelaide, Australia)
- 15 – 17 May: Tommy to attend the St Lucia Estuary Conference
- 20-26 May: Shaun to coordinate and participate in Phuhlisa Programme field trip to the Mgazana Estuary related to two BSc Hon research studies (both WSU students)
- 21 -23 May: Tommy to attend the NMDP Course in Johannesburg.
- 24 May: Tommy to give a presentation on SAEON's coastal activities at the launch of the Coastal and Marine Research Unit, NMMU.
- 27 – 28 May: Johan Pauw to visit Elwandle Node for Performance Reviews
- 29 – 31 May: Tommy and/or Shaun to attend the Eastern Cape Ports and Maritime Conference in Port Elizabeth.

2. Monitoring Platforms and CMP Maintenance

- 1-15 May: PE-LTEMRP monthly sampling fieldtrip in Algoa Bay
- 9 – 10 May: Kromme Estuary LTERM sampling, CMP maintenance and sediment accretion sampling.
- 24 - 25 May: Knysna Estuary CMP maintenance and sediment accretion sampling.
- PA UTR's & Gully probe
- UTR's Sundays, St Croix & Cape Recife
- ADCP Cape Recife
- Dive in St Francis Bay to determine the state of the squid buoy moorings for the Cape St Francis ADCP.

3. Marine Protected Areas

- Pilots exemptions for Denham Parker, Albrecht Gotz, Anthony Bernard and Elodie Heyns.
- Mapping of habitats in Algoa Bay
- Short communication in ISI rated Journal submitted

- Papers planned to be published: WATT-PRINGLE, P.A., P.D. COWLEY and A. GÖTZ (in press) Movement behaviour of three endemic sparid fishes in their rocky intertidal nursery habitat, South Africa. *African Zoology* 48.
- Progress report for BES funding
- SANParks research permit application for Algoa Bay MPAs concluded.

4. Data Management

- Update SAEON's Project Registration database.
- Complete and submit SANParks Project Registration documents.
- Finalise internal project proposals.
- Shaun and Sean Bailey to design an Estuaries LTEMRP management database.

5. Education

- Nozi currently organising a competition to celebrate World's Oceans Day. Scholars will design posters and the winning entrants will win a fishing rod.