

Monthly Update

March 2014

I. Overview

1. Key achievements: March 2014

- Successfully completed eight LTER and CMP maintenance field trips to Algoa Bay, St Francis Bay and the estuaries.
- SAEON Science Think Tank Meeting
- Sci-Fest Africa
- Six post-graduate students recruited
- Field trip to investigate the feasibility of establishing a Continuous Surface Current Mapping & Wave Monitoring System at Cape St Francis and Cape Recife.

2. Key activities proposed: April 2014

- Monthly LTER field trips to sample the Pelagic Ecosystem in Algoa Bay, Kromme Estuary and the Gamtoos Estuary.
- Monthly maintenance of estuarine CMP Network (3 trips) and Sentinel Site CMPs (2 trips)
- SBRUV research and LTER development in Algoa Bay

II. Achievements: March 2014

1. Management, Student and Staff Relations

- 2 March: Tommy and Shaun Deyzel held research meetings with Wayne Goschen and Charles von der Meden at Elwandle Node.
- 3 March: Tommy and Wayne attended the African Coelacanth Ecosystems Programme annual progress report meeting at SAIAB, Grahamstown.
- 4 March: Tommy, Wayne and Shaun Deyzel met to discuss red tide and pelagic ecosystem research and manuscripts, Grahamstown.
- 10 and 14 March: Interviews (2 candidates) and telephonic reviews (1 candidate) for Zooplankton PDP PhD fellowship position conducted by Tommy and Shaun Deyzel.
- 11 March: Tommy and Shaun Deyzel attended the Marine Alien Invasive Species EDRR Workshop in Port Elizabeth.
- 11 March: Shaun Deyzel went for his annual Class IV dive medical in Port Elizabeth.
- 19 March: Tommy, Ali, Sean, Shaun Deyzel and Anthony conducted their SAMSA eye tests for Port of PE pilot's exemptions.
- 24 – 26 March: Tommy, Ali and Shaun Deyzel attended the SAEON Science Think Tank meeting in Simonstown.

- 27 March: Tommy presented a talk on current and future Agulhas Current research at the launch of the “Coastal, marine and shallow water ecosystems” theme in the Faculty of Science, NMMU.
- 28 March: Tommy and Shaun submitted the following annual research progress reports to SANParks
 - West Coast National Park – diatom biogeography
 - Garden Route National Park – salt marsh and sea level rise
 - Addo National Park & MPA – Algoa Bay Pelagic Ecosystem
 - Addo National Park & MPA – Algoa Bay Sentinel Site CMPs
- 31 March: Tommy and Wayne attended a meeting and field trip with South African Weather Services (SAWS), UCT, NMMU and CODAR to discuss suitable locations for the deployment of coastal radar (Continuous Surface Current Mapping & Wave Monitoring System) at Cape Recife and Cape St Francis.

2. Monitoring Platforms

a. Algoa Bay LTMRP

- 6 March: Shaun Deyzel, Tommy, Mfundo conducted monthly PE-LTERP sampling in Algoa Bay. Assisting was Koos Smith (skipper) and Sally-Ann Sivewright (3rd yr, BSc student, NMMU).
- 11 March: UTR’s 80m Bird Island (BI), Woody Cape, Dunes and Sundays was serviced and deployed on the Super 12 dyneema and 6mm rings on the strops. UTR’s BI outer, St Croix and Cape Recife were serviced and redeployed as diver released units by Sean Bailey and Athi Mfikili.
- 12 March: Tommy participated in the monthly Stromatolite sampling field trip, attended by three SARChI scientists, i.e. Profs Bell (NMMU), Dorrington (RU) and Perissinotto (NMMU).
- 14 March: Tommy, Shaun Deyzel, Sean Bailey, Matt and Alex dived out the Cape Recife ADCP and deployed a new instrument.
- 14 March: Tommy, Shaun Deyzel, Sean Bailey, Matt and Alex dived on the slipway Gully UTR at Humewood beach to confirm it has not been removed by recreational divers. Data was retrieved successfully and sent to Wayne Goschen for maintenance.

b. St Francis Bay LTMRP

- 18 March: Sean Bailey, Athi and Mfundo Bizani serviced and deployed UTR’s on Super 12 dyneema and 6mm stop rings at St Francis 80 W, ST Francis 80 E, and St Francis Gamtoos. UTR St Francis Thys was missing but the new UTR was deployed together with St Francis BHB as diver released units.

c. Estuaries LTMRP

- 6 March: Shaun Deyzel and Mfundo Bizani conducted monthly CMP and pelagic ecosystem sampling in the Kromme Estuary.
- 26 March: Sean and Mfundo serviced Kariega CT loggers.
- 28 March: Shaun Deyzel conducted CMP and pelagic ecosystem sampling in the Kromme Estuary. Due to the influx of holiday makers in the month of April, it was decided to do the monthly sampling at this time rather than the first two weeks of April.

3. Marine Protected Areas

Manuscripts published

DE VOS L, GÖTZ A, WINKER H, ATTWOOD CG (2014) Optimal baited remote underwater video survey design for reef fish monitoring in the Stilbaai Marine Protected Area. *African Journal of Marine Science* DOI: 10.2989/1814232X.2013.873739.

Conference proceedings published

DE VOS L, GÖTZ A, WINKER H, ATTWOOD CG (2013) Baited remote underwater video in the Still Bay Marine Protected Area: a survey of reef fish with an assessment of monitoring requirements. **Proceedings of the 4th Line-fish Symposium**, Langebaan, South Africa, 16th - 20th Apr 2012. WWF South Africa Report Series *Mar 2014*.

WILKE CG, KERWATH SE, GÖTZ A (2013) The effect of barotraumas on five South African line caught species. **Proceedings of the 4th Line-fish Symposium**, Langebaan, South Africa, 16th - 20th Apr 2012. WWF South Africa Report Series *Mar 2014*.

PARKER D, BOOTH AJ, MANN BQ (2013) An assessment of the shorefishery for largespot pompano, *Trachinotus botla*, in KwaZulu-Natal, South Africa. **Proceedings of the 4th Line-fish Symposium**, Langebaan, South Africa, 16th - 20th Apr 2012. WWF South Africa Report Series *Mar 2014*.

Reviews

EARTHWATCH INSTITUTE: Research Proposal, *Mar 2014*

Funding granted

NATIONAL RESEARCH FOUNDATION: RIRP Grant *Mar 2014* (ZAR80,000).

Students recruited

- **MSc DEGREE:** Alexei Dyer, Rhodes University, Grahamstown, South Africa. Quantitative assessment of the ichthyofauna associated with different habitats and depth zones on Walter's Shoal, a shallow seamount in the Western Indian Ocean. **Co-Supervisor Mar 2014** - ongoing.
- **PHD DEGREE:** Rita Steyn, Rhodes University, Grahamstown, South Africa. Spatial patterns in sub-tidal reef assemblages across the continental shelf, South Africa. **Co-Supervisor Mar 2014** – ongoing.

- **PHD DEGREE:** Lauren De Vos, University of Cape Town, Cape Town, South Africa. Optimising the effectiveness of marine biodiversity monitoring and conservation planning in False Bay, South Africa **Co-Supervisor Mar 2014** – ongoing.
- **HONS DEGREE:** Sheroma Surajnarayan, University of South Africa, Johannesburg, South Africa. Diurnal changes in reef fish assemblage and size structure on Walter's Shoal, a shallow seamount in the Western Indian Ocean. **Supervisor Mar 2014** - ongoing.

Workshops & meetings attended

SAEON SCIENCE WORKSHOP: Think tank for Big Picture strategy, Cape Town, South Africa, 24th – 26th Mar 2014

ACEP OPEN CALL MEETING: Update and progress of projects, South African Institute for Aquatic Biodiversity, Grahamstown, South Africa, 3rd Mar 2014.

Fieldtrips conducted

20-24 March: Addo National Park and Algoa Bay stereo-BRUVs sampling

4. Data Management

- 6 March: Shaun Deyzel and Mfundo Bizani conducted monthly CMP and pelagic ecosystem sampling in the Kromme Estuary.
- 10 March: Shaun held a telephonic meeting with Dr Sue Jackson to discuss some of the terms of data sharing in respect with an application received from Dr Jackson's MSc student Ms Jenna Keightley.
- 18 March: Shaun Deyzel and Tommy held conference call meeting with Wim Hugo to discuss the way forward with SAEIS database. The potential of using a service provider to make desired alterations to the SAEIS resource was explored. Wim was requested to source quotations.
- A request for chlorophyll-a data was received from Dr Morgana Tagliarolo (Postdoctoral fellow, Rhodes University supervised by Prof Christopher McQuaid) on 20 February 2014. In consultation with our collaborators in the PE-LTERP, we decided not to make our data available until published within the next few months. The issue was positively dealt with telephonically between Tommy and Prof McQuaid. They expressed interest in gaining access to CTD instead, which we agreed to supply. Dr Tagliarolo will be requested to register the research project with SAEON.
- Negotiations between Elwandle Node and the White Shark Researchers Group regarding data sharing and information management platform provision progressed slowly this month. The structure of the data sharing agreement documentation will be discussed with Wim Hugo. It seems more likely that SAEON will have to secure agreements with individual scientists rather than the working group as a whole. SAEON is expected to provide feedback at the next WSRG meeting scheduled for April.
- Enquiry for acquisition of coastal in-situ data were received from 1) Ms Taryn Murray (PhD student, RU/SAIAB) and 2) Koebraa Peters (MSc student, UCT). These will be dealt with in April.

5. Education

- 5-7 March: Athi represented the Node in Career Extravaganza in Port Elizabeth.
- Nozi Attended DSG careers day.
- 12-18 March: SAEON education team exhibited at Scifest and at Water World.
- 15-16 March: Grade 9 learners of Ntaba Maria School attended scifest workshops and gained valuable exposure to the many career opportunities linked to science.
- 19 March: Nozi met with Eddy Molekoa of SAMREC with regards to NSW outreach activities in Sunday's river valley.
- 20-22 March: Grade 11 learner's science camp was held in Port Elizabeth.

6. Parataxonomy Laboratory

- Vleesbaai benthic samples: sorting into taxonomic groups now complete. Those involved were notified and samples will be couriered to CSIR, Durban 1-4 April.
- Biomass analysis of March PE-LTERP samples completed by DST Intern Mfundo Bizani.
- Shaun Deyzel submitted request for order for various laboratory items.

7. Technical: CMP Maintenance/SCUBA Diving/Boating

- 4-5 March: Problems with both the profiling and moored CTD's were identified and rectified.
- 6-7 March: All CTD data was reconverted.
- 10 March: New front tyres purchased for the Land Rover.
- 10 March: Left front light for the Land Rover repaired.
- 12 March: 1 DV serviced and the starboard night light for DWA 130 repaired.
- New niskin bottle assembled and mounted to the CTD rosette.
- 28 March: New 5T pump was connected to the 19-03 CTD with the conversion cable on.

8. Research Support / Platform provision

- 7 March: Light meter lent to Botany Department, Rhodes University for sampling in Nahoon Estuary, East London.
- 10 March: Pop bottle, secchi disk and light meter lent to SAIAB for sampling in the Swartkops Estuary.

9. Challenges and corrective measures

- Data sharing agreements with various institutions and students are on hold partially because we are not aware of the current status and functionality of the projects database. We cannot conclude these negotiations unless their projects are registered. Until we

receive an update discussions will be put on hold. Shaun Deyzel will hold discussions with both Beate and Wim to gain advice for the way forward.

10. Risks description, impacts and mitigation

- The Thyspunt thermistor string could not be found and is presumed lost. The area is heavily fished for squid and it is suspected that a fishing vessel hooked the string. Mitigation will include speaking to all the squid boat owners and putting up posters at Port St Francis to try and recover the string and to inform the public in case it happens again.

III. Proposed Activities: March 2014

1. Scheduled appointments

- 1 April: Tommy to meet with the DVC Research, Dr Peter Clayton, and the Dean of Science, Prof Rick Bernard, from Rhodes University to discuss the move of SAEON Elwandle from Grahamstown to Port Elizabeth.
- 2 April: Tommy and Shaun to attend the ACEP Phuhlisa Induction workshop. SAEON will be co-supervising up to four BSc Honours and one MSc student from UFH and/or WSU as part of the programme.
- 2 April: Tommy and Wayne to meet with CODAR and NMMU regarding the coastal radar system.
- 9 April: Tommy to meet with Prof AJ Smit from UWC regarding the coastal temperature network and research activities in Algoa Bay.
- 10 April: Tommy to attend the SANCOR Forum meeting in Durban.

2. Monitoring Platforms and CMP Maintenance

- 1-4 April: Submit annual reports to SANParks for CMP and PE-LTERP
- 8 April: Tommy to attend the monthly stromatolite sampling trip in Port Elizabeth.
- 1-14 April: PE-LTERP monthly sampling in Algoa Bay

3. Marine Protected Areas

- Setting up LTER sites in Algoa Bay
- Review of MSc thesis.

4. Data Management

- Finalize applications for data with Ms Ms Jenna Keightley (SU) pending resolution of challenges experienced with projects database (carry over from February).
- Start negotiations with Koebraa Peters (UCT) over request for data received 26 March.
- Shaun Deyzel and Wim Hugo to address comments from WSRG members on SAEON Data Policy and Community Portal Agreement documents (carry over from February).
- CMP, PE-LTERP, E-LTERP monthly data management



ELWANDLE NODE

- Continue working with Wim on improving SAEIS platform
- Submit request for training on Observations Database with Wim.

5. Education

- Planning series of Expo workshops.
- Forward planning for NSW activities.