

Monthly Update
February 2014

I. Overview

1. Key achievements: February 2014

- Successfully completed six LTER and CMP maintenance field trips to Algoa Bay, St Francis Bay and the estuaries.
- Nozi and her team conducted a social study of the impact of the red tide in Algoa Bay
- Ant Bernard was a co-author on a manuscript published in Nature
- Nine new students recruited (4 MSc, 5 BSc Hons) with potential PDP PhD candidates (x 1 position) still to be interviewed.
- Annual Tsitsikamma summer field trip successfully completed
- 4 Media articles/mentions and 2 SAEON E-news articles

2. Key activities proposed: March 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 (2 trips) and Sentinel Site CMPs (2 trips)
- Tommy, Ali and Shaun to attend the SAEON “Science Think Tank” workshop in Cape Town
- MPA Unit to kick-start their Algoa Bay SBRUV LTER Programme
- Educational Outreach science camp in Port Elizabeth

II. Achievements: February 2014

1. Management, Student and Staff Relations

- 6 February: Tommy met with Prof Andrew Leitch, Dean of Science at NMMU, regarding SAEON / NMMU activities.
- 6 February: Tommy met with Prof Patrick Vrancken, SARChI Law of the Sea, regarding the Maritime Institute and went on a tour of the NMMU Bird Street Campus.
- 7 February: Tommy and Amani met with Dr Meena Lysko, SAMSA, to discuss the Maritime Institute and the possible role of SAEON in the Maritime Roadmap as well as the South African International Maritime Institute.
- 14 February: Staff meeting
- 19 February: Tommy and Shaun Deyzel met with Dr Tony Ribbink to discuss establishing Algoa Bay as a Hope Spot.
- 20 February: Tommy met with Tm Vink and Prof Eileen Campbell to discuss progress on his MSc and his workplan for 2014.
- 21 February: Tommy attended the USB Ed / NRF graduation ceremony of the MDP and NMDP course.

- 24 February: Tommy and Shaun Deyzel met with Elwandle prospective intern Kerry-Anne van der Walt to discuss her potential workplan for 2014/15.
- 25 February: Tommy attended the Development of a National Maritime Research, Innovation and Knowledge Management Road Map Steering Committee meeting at the CSIR in Pretoria. Tommy presented on SAEON's marine activities. The steering committee included representatives from SAMSA, CSIR, DHET, DST, NRF, DOT, DTI, HSRC, TETA, CPSI, DEA and SAOGA.
- 25 February: Shaun Deyzel attended the Preparatory Research Group meeting on Coastal Management Plan for the Nelson Mandela Bay Municipality at the Coastal and Marine Research Unit, NMMU.
- 26 February: Tommy, Shaun Deyzel and Wayne attended the NMMU Research Associates tour and cocktail function.
- 26 February: Tommy and Wayne met with a prospective BSc Hons oceanography student at NMMU.
- 26 February: Tommy and Athi Mfikili met with Prof Maarten de Wit to discuss a potential MSc project on the Knysna and Keurbooms Estuary. Prof de Wit will provide the bursary and running funds and Tommy will be the main supervisor.
- 27 February: Shaun Deyzel attended ACEP Phuhlisa Start-up workshop at SAIAB.
- 28 February: Tommy attended the Algoa Bay Hope Site public presentations and workshop in Port Elizabeth.
- Elwandle in the news:
 - *"Update: Dead sea creatures wash up"*. **Knysna-Plett Herald**.
<http://www.knysnaplett Herald.com/news.aspx?id=70094&h=Update:-Dead-sea-creatures-wash-up>
 - *"Rooigety sal riviermyl nie kelder"*. **Die Burger**, 11 February 2014, page 3.

2. Monitoring Platforms

a. **Algoa Bay LTMRP**

- 6 February: UTR's BI inner, BI outer, 80m Algoa Mouth and 60m Central were serviced by Sean Bailey and K. Smith. The two BI strings were missing.
- 7 February: Advertisement for the PDP PhD position at Elwandle Node was circulated via the SANCOR mailing list, along with two additional PDP PhD positions and one Postdoctoral position advertised by Egagasini Node. The Elwandle Node position involves coastal zooplankton research related to the Sentinel Site PE-LTERP. Three applications received thus far.
- 10 February: Tommy attended the February monthly Stromatolite sampling field trip in Algoa Bay.
- 11 February: Shaun Deyzel, Tommy, Mfundo and Athi conducted monthly PE-LTERP sampling in Algoa Bay. R/V uKwabelana was skippered by Mr Koos Smith. A BSc Hon student from Botany Department, NMMU assisted. 'Red tide' algal blooms are still evident over vast areas of Algoa Bay. SAEON in collaboration with researchers from NMMU are continuing to monitor the situation.

- 12 February: UTR Dune was picked up by a ski boater.

b. St Francis Bay LTMRP

- Nothing to report

c. Estuaries LTMRP

- 6 February: Shaun Deyzel and Mfundo conducted quarterly pelagic ecosystem sampling in the Gamtoos Estuary (physico-chemical profiling, nutrients, chlorophyll-a, night-time sampling of zooplankton), and also serviced CT-loggers. CT-logger situated in the lower estuary was unfortunately lost. The entire array was removed, presumably by fisherman.
- 11 February: Kariega loggers were serviced Sean Bailey and Nikki James.
- 14 February: Sean Bailey serviced CT-loggers in Kariega Estuary.
- 17 February: Shaun Deyzel met with engineers from Masakhe Enterprises and Albany Engineering to discuss designs of the stainless steel components composing the zooplankton rigging to be used for sampling in estuaries.
- 17 February: Shaun Deyzel arranged for Parataxonomy Technicians, Lulama Poni and Siyanda to meet with Catherine Letcher from the Association for the Physically Disabled, where they were given an opportunity to comment on the Disability Policy Guideline currently being drafted by the Eastern Cape Department of Health.
- 18 February: Tommy and Shaun Deyzel replaced the CT-logger in the lower Gamtoos Estuary and also serviced CT-loggers in the Swartkops Estuary.
- 20 February: Shaun Deyzel resolved technical issues experienced with downloading data from HOBO temperature and HOBO conductivity-temperature loggers with the assistance of Ms Paula Murphy (Onset). Corruption of date and time stamps associated with individual observations remains to be a problem, so is 'drifting' associated specifically with older loggers.
- Shaun Deyzel has been invited to become involved with the establishment of an Estuaries Management Plan for the Mgazana Estuary.
- Shaun Deyzel published an article in the February issue of the SAEON eNewsletter aimed at emphasising an unique temperature and zooplankton dataset covering 13 years of observation in selected estuaries in the former Transkei – the most data deprived region of the entire South African coastline as far as estuaries are concerned. www.saeon.ac.za/enewsletter/archives/2014/february2014/doc05

3. Marine Protected Areas

Manuscripts published

- Edgar GJ, Banks S, Barrett NS, Becerro MA, Bernard ATF, Berkhout J, Buxton CD, Cambell SJ, Cooper AT, Davey M, Edgar SC, Forsterra G, Galvan DE, Irigoyen AJ, Kininmonth S, Kushner

DJ, Moura R, Parnell PE, Shears NT, Soler G, Strain EMA, Thompson RJ, Willis TJ, Stuart-Smith RD (2014) *Five critical features maximize the conservation potential of marine protected areas. Nature 506, 216-220.*

Manuscripts in press

- DE VOS L, GÖTZ A, WINKER H, ATTWOOD CG (in press) *Optimal baited remote underwater video survey design for reef fish monitoring in the Stilbaai Marine Protected Area. African Journal of Marine Science XX: xx-xx.*

Research reports & science plans drafted

- **NATIONAL RESEARCH FOUNDATION:** *Incentive Funding Progress Report Feb 2014.*

Students recruited

- **MSc DEGREE:** Richard Llewellyn, Rhodes University, Grahamstown, South Africa. *Evaluation of two stereo-video techniques to assess the De Hoop marine protected area. Supervisor* Feb 2014 - ongoing.
- **MSc DEGREE:** Ameil Harikishun, Rhodes University, Grahamstown, South Africa. *Benthic community structure of the Walter's Shoal seamount. Supervisor* Feb 2014 – ongoing.
- **HONS DEGREE:** Roxanne Juby, Rhodes University, Grahamstown, South Africa. *Assessment of the effect of an electric shark repellent on reef fish behaviour, assemblage and size structure. Supervisor* Feb 2014 - ongoing.
- **HONS DEGREE:** Nicholas Schmidt, Rhodes University, Grahamstown, South Africa. *Assessment of the effect of bait on the size structure of reef fish during baited remote underwater stereo-video sampling. Co-Supervisor* Feb 2014 - ongoing.

Fieldtrips conducted

- 17 – 28 February: Tsitsikamma National Park summer fieldtrip.

Media

- February 2014: Newspaper article in *Cape Argus*.
- 3 February: Television insert on *50/50, SABC2* at 19:30.

4. Data Management

- 4 February: Shaun Deyzel participated in the inaugural Information Management Forum monthly meeting held via ClearSea.
- 14 February: Shaun Deyzel met with Ms Jenna Keightley (MSc student, Stellenbosch University) to discuss her application for CMP data.
- 20 February: A request for chlorophyll-a data was received from Dr Morgana Tagliarolo (Postdoctoral fellow, Rhodes University supervised by Prof Christopher McQuaid).
- 24 February: Negotiations between Elwandle Node and the White Shark Researchers Group regarding data sharing and information management platform provision continues. The SAEON Data Policy and Community Portal Agreement documents (provided by Wim Hugo) were sent out to members of the working group for comments. Most members are

keen to reach individual data sharing agreements with SAEON that could potentially involve the archiving of data products other than the originally agreed upon photo identification database. We are also looking at the possibility of developing a community portal for the WSRG on the SAEON Data Portal. SAEON is expected to provide feedback at the next WSRG meeting scheduled for April.

5. Education

- 18-19 February: Nozi attended the Education Team meeting in Pretoria.
- 21-22 February: Nozi facilitated a Grade 10 science camp at Assegai Trails, situated just outside Grahamstown.
- Elwandle MPA team, provided Nozi and Thomas (Egagasini) with movies, for their school outreach programmes, on stereo-BRUV projects conducted in Tsitsikamma and Pondoland.

6. Parataxonomy Laboratory

- Extraction of fauna from Vleesbaai samples is now complete. Interns have started with the process of sorting fauna into taxonomic groups. We aim to have this process completed by mid-march.
- Biomass analysis of PE-LTERP, 4 expeditions during January-February 2014, and Gamtoos zooplankton samples were completed by DST Interns Mfundo Bizani.
- Shaun Deyzel conducted stock assessment in the laboratory and is in the process of ordering a number of consumables and other equipment necessary for sample processing and other activities in the laboratory.
- 28 February: Shaun held a meeting with Ms Remi Bernard, scientific representative from Lasec SA to discuss solutions required for specific analytical protocols employed in the Parataxonomy Laboratory.

7. Technical: CMP Maintenance/SCUBA Diving/Boating

- 5 – 6 February: All SAIAB / SAEON / ACEP diving cylinders had their annual visual & hydro inspections.
- 13 February: Sean Bailey and Anthony had their annual diving medicals.
- All remaining CT loggers were checked. Battery changes were done where necessary and with the remaining batteries from the previous order. A total of 14 CT loggers are now good to go.
- 50 CT logger batteries with axial leads were ordered. These have now arrived.
- Service kits for Poseidon demand valves were ordered and arrived.
- 17 February: A sample of the February CTD data was sent to Michael Soule in an attempt to get to the cause of the inaccurate Chl readings. We await his response.
- 2mm Dyneema has been ordered for the acoustic release links and 5mm Dyneema has been ordered for the SAIAB anchor retrieval experiment.
- A new niskin bottle for the Niskin rosette has been ordered.

- A new 5T pump and cable and mount kit has been ordered for the 19-03 CTD.
- 3 DV's were serviced completely. The rest will be done once they return from Tsitsikamma.
- 2 tyres have been ordered for the Land Rover.

8. Research Support / Platform provision

- 18 February: Pop bottle, secchi disk and light meter lent to SAIAB for sampling in the Swartkops Estuary.
- 26 February: YSI lent to SAIAB for sampling in the Kariega Estuary.

9. Challenges and corrective measures

- Sharing of vessels, bakkies, dive gear and scientific instruments were a challenge in February with so many field trips on the go at the same time. The Node is heavily reliant on students and interns to assist with field work and Shaun is in the process of developing policies and guidelines (indemnities and insurance risks) for the use of bakkies and vessels.

10. Risks description, impacts and mitigation

- Several thermistor strings were lost at sea and washed up on the beaches or were picked up by fisherman out at sea. The causes of the losses are being investigated and will be rectified for the next deployments.
- Lengthy Supply Chain Management procedures are increasing the risk of not spending the 2013/14 SRIG allocation by 31 March 2014.

III. Proposed Activities: March 2014

1. Scheduled appointments

- 3 – 4 March: Tommy and Ali to attend the ACEP progress meeting and report back from PI's, Grahamstown.
- 4 March: Shaun Deyzel and Tommy to hold research meeting with Wayne Goschen
- 3-14 March: Shaun Deyzel to participate in 2nd IMF ClearSea meeting.
- 11 March: Tommy and Shaun attend the SANBI Invasive Species Workshop at NMMU
- 11 March: Shaun Deyzel to PE for Dive Medical
- 24-26 Mar: Tommy, Ali and Shaun Deyzel to attend SAEON "Think Tank" workshop in Cape Town.
- 24-28 March: Shaun Deyzel and Tommy to attend 3rd Bay Bash workshop at Coastal and Marine Research Unit (date yet to be announced).

2. Monitoring Platforms and CMP Maintenance

- 3 - 7 March: PE-LTERP monthly sampling in Algoa Bay

- 3 - 7 March: Shaun Deyzel to circulate draft SAEON-SAIAB joint field operations and risk assessment report to members of the joint field operations committee.
- 12 March: Tommy to attend the monthly stromatolite field trip in Algoa Bay.
- 10 – 20 March: R/V Honckenii required for two SAEON projects: a) SAEON/NMMU long term monitoring of the rocky intertidal zone of Jahleel, St Croix and Bird Island and b) SAEON/NMMU long term monitoring of marine top predators on Bird Island.
- 7 March: Shaun Deyzel and Mfundo to sample pelagic ecosystem and service loggers in the Kromme and Gamtoos estuaries.
- The Cape Recife ADCP must be serviced.
- UTR's CR, St Cx, Sun, Dune, Woody, BI out and 80m BI will be serviced. UTR's CR, ST Croix and BI out will become diver-type moorings once again.
- The Navara is due for service when it returns from Tsitsikamma.

3. Marine Protected Areas

- 3-5 March: ACEP Meeting
- 24-26 March: SAEON SCIENCE Meeting in Cape Town
- 17-31 March: Algoa Bay field trips.

4. Data Management

- Finalize applications for data with Dr Morgana Tagliarolo (RU) and Ms Ms Jenna Keightley (SU).
- Shaun Deyzel and Wim Hugo to address comments from WSRG members on SAEON Data Policy and Community Portal Agreement documents.

5. Education

- 5 - 7 March: Athi Mfikili representing Elwandle at World Career Extravaganza held at Feather Market Hall in Port Elizabeth.
- 3 March: Nozi conducted a red tide survey in Port Elizabeth to ascertain the effect of the red tide on industry and people from all walks of life.
- 5 March: Nozi to attend careers day at Diocesan School for Girls in Grahamstown.
- 8 March: Nozi and Mfundo to conduct another survey of the red tide effects in PE.
- 12 - 18 March: Sci fest.
- End March: Nozi planning to conduct a science camp, dates & venue TBC.