

Monthly Update
May 2014

I. Overview

1. Key achievements: May 2014

- Successfully completed six LTER and CMP maintenance field trips to Algoa Bay, St Francis Bay and the estuaries.
- Ali, Ant and students have departed on the month-long Walters Shoal cruise on board the R/V Algoa. They will also deploy a UTR on the seamount for long term hourly observations.
- WIO5-DBCP Workshop in Port Elizabeth

2. Key activities proposed: June 2014

- Monthly LTER field trips to sample the Pelagic Ecosystem in Algoa Bay, Kariega Estuary, Kromme Estuary and the Gamtoos Estuary.
- Monthly maintenance of estuarine CMP Network (3 trips) and Sentinel Site CMPs (1 trip)
- SANAP Symposium in Grahamstown
- Grade 10 science camp

II. Achievements: May 2014

1. Management, Student and Staff Relations

- 5 May: Elwandle Technical meeting attended by: Tommy, Sean Bailey, Shaun Deyzel and Albrecht Gotz.
- 6 May: Elwandle staff meeting attended by: Tommy, Albrecht, Shaun Deyzel, Sean Bailey, Anthony Bernard, Nozipiwo Hambaze, REanetsi Pohlo and Kerry-Ann Van der Walt.
- 6 May: Tommy and Shaun Deyzel held a meeting in Grahamstown with Neil Malan (PhD, PDP Fellow, Egagasini Node) regarding research on the Agulhas Current.
- 6 May: Tommy attended the first planning meeting for AfriCOG partnership at SAIAB in Grahamstown.
- 9 May: Annual Work Plans were finalised for new DST Interns Kerry-Ann van der Walt and Reanetsie Pohlo.
- 12 May: Sean Bailey renewed his Pilot Exemption certificate for Port of Port Elizabeth.
- 12-14 May: Tommy attended the WIO-5 Data Buoy Cooperation Panel Regional Workshop in Port Elizabeth and presented a talk on the Algoa Bay Sentinel Site.
- 13 May: WIO-5 DBCP Field excursion with trainees from the region, Kenya, Mauritius, Sri-Lanka and South Africa, to Algoa Bay and to the Nelson Mandela Bay joint operations command centre.



**Fifth In-Region Western Indian Ocean (WIO-5)
Capacity Building Workshop
FIELD TRIP
14 May 2014**

- 13 May: Tommy met with Prof AJ Smit from UWC regarding plans for the National Coastal Temperature Network.
- 16 May: Tommy adjudicated on a SANCOR/NRF review panel for the 2014 Marine and Coastal Communicator Award.
- 16 May: Shaun Deyzel and Ali Gotz renewed their Pilot Exemption certificate.
- 20 May: Shaun Deyzel held a research meeting with Dr Nikki James (SAIAB) to discuss zooplankton sampling in several Dweza/Cwebe estuaries
- 20,26 May: Shaun Deyzel held research meetings with Dr Ryan Wasserman (Post-doctoral fellow, RU) to discuss forthcoming publications and experimental design involving estuarine mysids.
- 20 May: Tommy attended a meeting to discuss SAIMI space requirements and location at the CSIR Regional Offices in PE. Present: Mr Andy Radford – CSIR (Representing the Mandela Bay Composites Cluster), Mr Odwa Mtati – SAIMI, Dr Meena Lysko – SAMSA, Dr Tommy Bornman – SAEON, Prof Patrick Vrancken – NMMU, Brig-Gen Malcolm Kinghorn – King Cole Maritime, Mr Larry Hobson – Learning Strategies. Tommy will serve on two task teams, i.e. 1) SAIMI premises in the port of PE + co-location possibilities and 2) development of a business plan for the SA Agulhas.
- 21 May: Tommy, Nicky, Sue, Johan and James Blygnaut attended a meeting to discuss the DEA-NRM project at SAEON National Office, Pretoria.
- 22 May: Tommy's performance review at SAEON National Office, Pretoria.
- 27 May: Tommy met with Dr Stephanie Plon and Dr Renee Koper (Australia) to discuss the deployment of listening stations in the Algoa Bay Sentinel Site.
- 30 May: Professor Jonah Seleti (Chief Director, DST) and Dr Gilbert Siko visited SAIAB and SAEON Elwandle Coastal Node in Grahamstown.

2. Long-term Observation Platforms and related research/activities

a. Algoa Bay LTMRP

- Failed to conduct monthly PE-LTERP sampling trip. We will aim to sample at the next available weather window to keep the time lapse between sampling sessions at a minimum. R/V *uKwabelana* was not available for sampling in May thus limiting our required weather and sea conditions even further as we were planning on using R/V *Honckenii* for sampling. With the exception of 3 good weather days (all of which could not be utilised due to prior arranged commitments), swell and wind were not suitable for sampling off *Honckenii*. Missing a month of sampling is not acceptable and we have dealt with the matter internally to ensure chances are utilised more effectively.
- An effort was made, by Sean Bailey, to service the PA UTR's but trip was cut short due to a damaged boat.
- 12 May: Tommy participated in the monthly Stromatolite project field trip near Port Elizabeth.
- 16 May: Sean Bailey and Mfundo Bizani serviced the Eastern sector Gully Probes.
- 23 May: Sean Bailey and Reanetsi serviced the PA UTR's.

b. St Francis Bay LTMRP

- None to report

c. Estuaries LTMRP

- 19 May: Sean Bailey and Mfundo serviced the Kariega CT Loggers
- 23 May: Quarterly pelagic ecosystem sampling conducted in Gamtoos Estuary by Shaun Deyzel and Mfundo Bizani. Zooplankton could not be sampled due to technical difficulty experienced with the boat the previous month. Our time on the water for this trip was limited to day sampling only.
- 29 May: Tommy serviced the Swartkops CT loggers

d. Other research activities/outputs

- 5-9 May: Shaun Deyzel completed analysis of zooplankton samples for an ongoing study on habitat utilisation of a gobiid in the Sundays River Estuary (RU and SAIAB collaboration)
- 12 May: Shaun Deyzel reviewed a NRF Grant application: South Africa – Italy Joint Science and Technology Research Cooperation Call for Joint Project Proposals
- 28 May: Shaun Deyzel made contact with Dr Allan Connell (Honorary Research Associate, SAIAB) to discuss sled design and general methodology for sampling zooplankton in small, shallow water estuaries. Shaun will take over the zooplankton component from Dr Connell on the Dweza/Cwebe long-term monitoring project lead by Dr Nikki James (SAIAB).

3. Marine Protected Areas

a. Field work

- 16 May: Ali, Ant and several of their students departed on the Walters Shoal cruise and will only return to the office in the middle of June.

4. Data Management

a. *Data processing & archiving*

- 16 May: Eastern Algoa Bay GTP data was sent to Wayne Goschen, Tommy and Shaun by Sean Bailey.
- 20 May: April 2014 CTD data sent to Shaun and Tommy by Sean Bailey
- 26 May: CT data from Gamtoos processed and archived internally by Shaun Deyzel
- 28 May: Port Alfred UTR data was sent to Wayne Goschen, Tommy and Shaun by Sean Bailey.
- 29 May: Shaun received Kariega CT data from Sean Bailey. Data was archived internally on the same day.
- 30 May: Shaun Deyzel downloaded, cleaned and archived Gamtoos YSI data sampled in May.

b. *Website development & management*

- Wim and colleagues have made good progress with the migration and upgrade of the South African Estuaries Database. Functionality of several aspects of the new version has been made available to Tommy and Shaun for commenting.

c. *Projects database*

- 19-20 May: Shaun Swanepoel visited Elwandle Node to assess the ICT system and install a Seagate 4-Bay NAS backup management system. Deyzel was also shown how to install and make use of Elwandle Node's ACER C120 Projector.
- Shaun Deyzel procured WD My Book external storage backup hard drive with assistance from Cara Woolls.
- Shaun Deyzel and Cara Woolls are in the process of procuring three new desktop workstations to replace workstations that have been in use for more than 7 years. One of these will be specifically configured for GIS work.
- Shaun and Tommy have started populating stubs on the SAEON Knowledge Hub that will eventually be harvested to the Elwandle Node Website as content.

5. Education

- 24 May: Nozi attended the Science Expo workshop at Hobbiton in Grahamstown.
- 31 May: Science Expo workshop, Hobbiton, Grahamstown.

6. Laboratory: assets, consumables, activities

- Order was placed and delivered for general laboratory equipment.
- Mfundo Bizani and Reanetsie Pohlo (new DST intern) completed chlorophyll-a analysis of water samples collected in the Gamtoos Estuary in May.
- Athi Mfikile completed particle size analysis of soil samples collected from the Orange River estuary.

7. Technical: Coastal crafts/SCUBA Dive Unit/consumables

- 5 May: DWA 130 boat taken by Sean Bailey to Arrow Inflatables for repairs.
- 8 May: 4 CT logger battery replacements done by Sean Bailey.
- 23 May: Shaun Deyzel acquired a multi-estuary boat registration license for DWA 130 for the Kouga Municipality (Gamtoos & Kromme estuaries).
- Moored Seabird CTD cleaned and serviced by Sean Bailey.

8. Research Support / Platform provision

- 1 May: R/V *Honckenii* was made available to Dr Greg Hofmeyr (Bayworld, PE) for the release of two Antarctic fur seals offshore from Algoa Bay.
- 16-19 May: Light meter was lent to Dr Anusha Rajkaran (Botany Dept. RU) for sampling near East London.
- 21 May: Cone dredge was lent to Phakama Nodo (Phuhlisa, SAIAB) for sampling in Great Fish and Kariega estuaries.
- Phakama Nodo utilised SAEON Elwandle Node laboratory and equipment to conduct moisture content and particle size analysis of soil samples from the Great Fish and Kariega estuaries.
- 20, 26 May: Shaun Deyzel identified Mysidacea specimens for Dr Ryan Wasserman (post-doctoral fellow, RU/SAIAB).

9. Challenges and corrective measures

- Winter has arrived and weather and sea conditions have deteriorated. A Pelagic Ecosystem cruise was missed in May due to a combination of available sea days, work pressure and poor planning. All efforts will be made to make up the missed sampling trip over the next few months.
- Winter also brings with it the Great White sharks that breed around Bird Island. A diving trip must still take place to service the Bird Island ADCP and this should be done at the next or second available weather window.

10. Risks description, impacts and mitigation

- The 80 m thermistor string off Port Alfred did not communicate with the interrogator and it is feared lost. The Port Alfred sites are infamous for losing moorings and a dive trip is planned to inspect all the sites where moorings on acoustic releases have been lost to verify the instruments have disappeared. Additional redundancy have been built into the moorings and sites (five) where the visibility is normally good (> 0.5 m) have been replaced with diver maintenance moorings (i.e. no acoustic releases). The increase in closed months for the chokka industry will also reduce the risk of trawlers lifting the moorings by accident.

III. Proposed Activities: June 2014

1. Scheduled appointments

- 2 June: Shaun Deyzel to meet with Prof Alan Whitfield to discuss future involvement in Micro-inlet study.
- 3–6 June: Tommy to attend and present a talk at the South African Antarctic Programme (SANAP) Symposium in Grahamstown.
- 3-6 June: Shaun Deyzel and Robert Callahan to meet with Prof Renzo Perissinotto (SARChi Chair in shallow water ecosystems, NMMU) and Dr Gideon Russouw (HoD, Zoology, NMMU) to discuss co-supervision and registration of Robert's PhD project.
- 17-20 June: Tommy, Shaun Deyzel and Mfundo to meet with Prof Rosemary Dorrington (Biochemistry, Microbiology Dept., RU) and Prof Janine Adams (Botany Dept., NMMU) to discuss Gamtoos Estuary Research Programme

2. Long-term Observation Platforms and related field work

- 2-13 June: Monthly PE-LTERP sampling in Algoa Bay
- 2-13 June: Monthly PE sampling in Kromme Estuary
- 5–7 June: Tommy to participate in the monthly Stromatolite field trip near Port Elizabeth.
- 14–15 June: Tommy and Athi to conduct RSET field work in the Knysna Estuary and visit the Keurbooms Estuary.
- 16-20 June: Monthly CT servicing in Gamtoos Estuary

3. Marine Protected Areas

- 1 – 20 June: Walters Shoal cruise

4. Data Management

- Shaun to attend second IMF meeting
- Develop first publication of SAEON Elwandle Website
- Complete testing of migrated SAED
- Schedule training on Observations Database
- Meet with NMMU scientists to discuss project registrations and data management

5. Education

- Grade 10 Science camp will be held at Assegai Trails, an establishment located ±30 minutes outside Grahamstown. Date of camp to be confirmed.