

## **Monthly Update**

July 2013

### **I. Overview**

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#### **1. Key achievements: July 2013**

- DST Deputy Minister, DST Parliament Portfolio Committee and NRF CEO research oversight visit to SAEON and SAIAB
- Algoa Bay LTER public presentation as part of National Science Week
- Successfully completed five LTER and CMP maintenance field trips to Algoa Bay and the estuaries
- Algoa Bay Sentinel Site Pamphlet produced
- Manuscripts: 1 published; 2 submitted
- Regional Science Expo - 2 learners were selected to participate in the National Science Expo

#### **2. Key activities proposed: August 2013**

- Monthly LTER field trips to sample the Pelagic Ecosystem in Algoa Bay and Kromme Estuary.
- Monthly maintenance of estuarine CMP Network
- CMP deployment and maintenance field trips in Algoa Bay and St Francis Bay
- RSET Fieldtrip to Kromme and Knysna estuaries
- SAEON / SAIAB / NMMU MoU signing ceremony
- NRF Awards ceremony in PE
- Addo SANParks Marine Research Symposium

### **II. Achievements: July 2013**

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#### **1. Management, Student and Staff Relations**

- 2 July: Tommy met with DWA RQS and Hydrology to discuss accurate water level recordings in estuaries.
- 3 July: Tommy took DWA staff to Swartkops and Gamtoos to identify suitable locations for the gauging stations.
- 4 July: Tommy attended the DEA Coastal Management Workshop in PE.
- 8 July: Staff meeting
- 8 July: Met with scientists from the USA regarding benthic invertebrate sampling in Algoa Bay.
- 10 July: Tommy reviewed a manuscript for Neobiota.
- 12 July: Tommy met with Prof Campbell and Mr Vink at NMMU regarding phytoplankton in Algoa Bay.
- 15 July: Tommy, Shaun and Ali participated in the Elwandle – Egagasini monthly conference call via ClearSea.

- 16 July: Met with Prof Martin Hill regarding employing additional staff for the parataxonomy laboratory.
- 17 July: Tommy attended a SAMSA Workshop in PE on the suitable location of a maritime university in South Africa.
- 17 July: Tommy met with TNPA Property personnel to discuss availability of land and buildings in the port of Port Elizabeth.
- 17 July: Tommy met with Pierre de Villiers to discuss CAPE estuaries, coastal temperatures and weather stations on islands.
- 18 July: Tommy attended a public participation meeting for OK Energy East Algoa Oil and Gas Exploration Programme.
- 18 July: Tommy attended a skype meeting with Dr Louis Cillier (CSIR) regarding ocean acidification sampling and monitoring.
- 21-23 July: Tommy attended the NRF-USB-Ed NMDP course in Johannesburg.
- 24-25 July: DST Deputy Minister, Parliament Portfolio Committee and NRF CEO visited SAEON and SAIAB on a research oversight trip to the Eastern Cape. Oversight trips included talks, visits to SAIAB and SAEON infrastructure in Grahamstown, exhibits at the Algoa Bay Yacht Club and a trip on the research vessels.
- 26 July: Tommy and Wayne met with Prof Campbell and Mr Vink to discuss oceanographic data for the phytoplankton project.
- 31 July: Tommy presented a talk on LTER in Algoa Bay and the implications for management at the National Science Week public presentations in Port Elizabeth organised by SAASTA and SAIAB.
- Shaun Deyzel has been appointed as Research Associate at the Coastal and Marine Research Unit (CMR), NMMU

## **2. Monitoring Platforms**

### **a. *Algoa Bay LTMRP***

- 9 July: Monthly PE-LTERP sampling conducted successfully (R/V uKwabelana). Shaun Deyzel, Sean Bailey and DST Interns Mfundo Bizani and Athi Mfikile participated. This was Collaborator, Ms Paula Patrick's (PhD student, NMMU, Zoology Dept), final sampling session after three years of participation. Ichthyoplankton will no longer be sampled as part of the monthly PE-LTERP.
- 11 July: Cape Recife ADCP was deployed on new mooring by Sean, Tommy, Ali, Anthony and Denham.
- 31 July: Shaun submitted abstract for presentation at the 2nd Addo Marine Symposium to be held on 29 August. Title: SHP Deyzel and M Bizani – Towards a long-term ecological research strategy for monitoring zooplankton dynamics in Algoa Bay with an overview of preliminary results.
- Shaun and Tommy produced a Sentinel Site pamphlet for distribution at the 2nd International Fish Telemetry Conference and other events.

**b. St Francis Bay Estuaries LTMRP**

- 30 July: Sean Bailey and DST Interns Yolanda Qhaji and Athi Mfikile serviced Kromme CT loggers and conducted monthly sampling of nutrients and phytoplankton.

**c. Estuaries LTMRP**

- 17 July: Sean Bailey serviced Kariega Estuary CT-loggers
- 30 July: Kromme sampling by Sean, Athi and Yolanda (DST intern).

**3. Marine Protected Areas**

- Kudu Awards – Category: Research, Initiatives and Innovation. South African National Parks – Dr Albrecht Götz.
- 11 July: Ad-hoc field assistance (diving&supervising / >25t skippering / ROV piloting) ADCP deployment from Port Elizabeth (uKwabelana) - Dr Albrecht Götz, Dr A Bernard, Denham Parker.
- 31 July: Chaired Selection Interview Meetings for Professional Development Program PhD post at Elwandle in Cape Town -Dr Albrecht Götz.

**Papers published:**

- Watt-Pringle, P.A., P.D. Cowley and A. Götz (2013) Movement behaviour of 3 endemic sparid fishes in their rocky intertidal nursery habitat, South Africa. *African Zoology* **48**: 30-38.

**Papers submitted:**

- De Vos, L., A. Götz, H. Winker and C.G. Attwoodd (submitted) Baited remote underwater video survey of reef fish in the Stilbaai Marine Protected Area, with an assessment of monitoring requirements. *Aquatic Conservation: Marine and Freshwater Ecosystems*
- BERNARD, A.T.F., GÖTZ, A., PARKER, D., HEYNS, E., HALSE, S., RIDDIN, N.A., SMITH, M.K.S., PATERSON, A.W., WINKER, H., FULLWOOD, L., LANGLOIS, T.J. and HARVEY E.S. (submitted) A first application of baited remote underwater stereo video systems (stereo-BRUVs) to survey fish in Africa.

**Conference presentations delivered:**

- 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.

**Conference abstracts accepted:**

- WIOMSA, Poster. Bernard, Götz, Heyns and Parker. Cost-efficient monitoring of reef fish in the Agulhas Ecoregion of South Africa.

- WIOMSA, Poster. Heyns, Götz, Bernard, Paterson. Depth related changes in the benthic invertebrate community of warm-temperate reefs in the Tsitsikamma Marine Protected Area, South Africa.
- WIOMSA, Poster. Parker, Götz, Winker, Bernard. Optimizing long-term monitoring for assessing subtidal reef fish communities: introduction of the novel stereo-BRUV sampling technique.

**Referee of journals/thesis/projects:**

- July 2013 Bulletin of Marine Science (Dr Albrecht Götz)

**Media releases&coverage, education&outreach, training&workshops, public awareness**

**(co-workers/collaborators/students with SAEON MPA Unit reference/involvement):**

- DE VOS, L. (2013) 5 July - Two Oceans Aquarium youth address
- DE VOS, L. (2013) 10 & 11 July - LEAP Langa and Gugulethu Ocean Adventure
- DE VOS, L. (2013) 22 July – KZN Wildlife workshop (Durban)
- Bernard, ATF (2013) July – SAEON E-newsletter article. Title: Reef Life Survey – A global volunteer reef ecology monitoring programme.

**4. Data Management**

- 26 and 29 July: Shaun held a data management workshop with Bruce Donovan to discuss Node Website design, Sentinel Site page content, SAEON Data Portal and SAEON Observations Database.
- 29-31 July: Shaun standardised file labelling system for PE-LTERP CTD and YSI data, Estuaries LTER YSI and CT-logger data and started with backing files up onto the SAEON Data Portal.

**5. Education**

- 03 July: Science Expo - the final developmental workshop was held at Assegai trails by Nozi, Dr Ken Ngcoza of Rhodes university and Mrs Khuhlane of Ntaba Maria school.
- 18 July: Learner workshop held with grade 9's at Ntaba Maria. Workshop was also attended by Sibongile from National Office.
- 19 July: Regional Expo was held at Rhodes University, Sibongile was one of the judges for the best environmental science project. Elwandle Node sponsored an award, consisting of an environmental change book and certificate. Two learners will be representing Grahamstown at the national competition.
- 29 July -01 August: National Science Week workshops on Marine careers were held at SAIAB . Six schools booked and attended the workshops.
- Discussions with SAWS are ongoing regarding rain gauges.

## 6. Parataxonomy Laboratory

- 16 July: Tommy and Shaun held a meeting with Prof Martin Hill (Parataxonomy initiative partner, Working for Water Mass Rearing Project, Zoology and Entomology Department, RU) to discuss potential for future expansion of this very successful programme
- 26 July: Shaun met with Ms Remi Barnard from Lasec SA to discuss microscopy, imagery and other laboratory products
- 30 July: Shaun met with Mr Rick Vosloo from Zeiss SA to discuss microscopy and imagery solutions for Elwandle Node.
- PE-LTERP zooplankton biomass sample analysis up to date.

## 7. Technical: CMP Maintenance/SCUBA Diving/Boating

- 9 July: Tommy serviced two Gully probes at Noordhoek and Sardinia Bay.
- 11 July: Sean, Tommy, Ali, Anthony and Denham deploy a new ADCP at White Sands near Cape Recife.
- CT logger battery replacements in progress.

## 8. Research support / platform provision

- 17 July: Shaun downloaded, processed and sent physico-chemical data recorded in the Swartkops Estuary (Phuhlisa Programme) to Mr Ryan Palmer (ACEP/SAIAB)
- 18 July: SAEON YSI multiparameter probe lent to Prof TH Wooldridge (Zoology Dept, NMMU) from 18-24 July for field trip to two former Transkei estuaries
- 22 July: SAEON's secchi disk, pop-bottle and light meter were lent to Ryan Palmer for sampling in the Swartkops Estuary (Phuhlisa Programme).

## 9. Stakeholder Relations

### a. *Joint ACEP Marine Platform Operations*

uKwabelana was used for the following trips during July:

- SAEON Plankton Run.
- SAEON CMP servicing.
- ACEP Open call – Matt Dicken Shark Tagging.
- PPC DST Ministerial visit outing – ROV setup on-board.
- Work planned for August includes the ongoing monthly work as well as ROV trials in preparation for some SAEON Egagasini node planned for late August/early September.
- SCM procedures are complete for the work to be done on Kadouw, work will commence shortly.

### b. *SAIAB-ACEP/SAEON/UFH/WSU Collaboration*

- 3-5 July: Writing development course by CHERTL to all Phuhlisa students.
- 8 July: Garth van Heerden had a meeting with Zoology staff at Walter Sisulu University – Dr Dlaza was added as supervisor.

- 17 July: Garth had a meeting with Prof Hamandawana and Ms Tyson.
- 17 July: Attended a talk by Dr Niall Vine “feeding fish to fish” at University of Fort Hare.
- 31 July: Meeting with WSU supervisors and students.
- Library training for all interns during July

#### **10. Challenges and corrective measures**

- Three DST/NRF interns completed their internship at Elwandle on 30 June. This left the Node with a shortage of skills for the remainder of the year.  
Corrective measure: Two of the interns (GIS and data management) were offered short term contracts for 6 months to complete their work and assist the Node. Unfortunately Me Ntandokazi Mandela had to resign after one month as she was offered a full time job elsewhere. Helping hands will especially be needed if the SRIG application is successful.

#### **11. Risks description, impacts and mitigation**

- Winter always results in considerably less weather windows available in which to sample. This could result in a sampling trip being cancelled for the month. Weather risks are mitigated by sending more than one team out into the field on the suitable days.

### ***III. Proposed Activities: August 2013***

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#### **1. Scheduled appointments**

- 1 August: Tommy to be interviewed on Kingfisher FM Climate Talk show to discuss changes taking place in Algoa Bay.
- 2 August: Tommy to attend a meeting at NMMU on research groups at the newly created Institute for Coastal and Marine Research.
- 6 August: Tommy, Shaun and Sean to meet with SAIAB to discuss marine platform logistics.
- 5 – 8 August: Tommy, Shaun, Mfundo and Wayne to meet with NMMU researchers to workshop data for a manuscript on the Algoa Bay pelagic ecosystem.
- 8 August: Tommy and Wayne to meet with Dr AJ Smit in PE on the national coastal temperature network.
- 26 August: MoU signing ceremony between NMMU, SAEON and SAIAB at NMMU
- 27 August: NRF Awards Ceremony in PE
- 29 August: Tommy, Shaun and Mfundo attend the Addo SANParks Marine Research Symposium. Sentinel Site presentations will be delivered by Tommy and Shaun.
- Tommy, Juliet, Shaun and Wayne to meet with DEA regarding DEAs plans to deploy real-time moorings in Algoa Bay.
- Shaun to meet with Dr Nadine Strydom and PhD student Paula Pattrick to talk about data sharing agreement

- Shaun to meet with Dr Pierre Pistorius (NMMU) to discuss matters pertaining to the National White Shark Photo Identification Database
- Shaun to arrange meeting via Skype with Dr Rhett Bennett regarding East African Marine Transect data sharing agreement.

## **2. Monitoring Platforms and CMP Maintenance**

- 1 August: Swartkops and Gamtoos estuary CT logger maintenance trip.
- August: Field trip to Kromme and Knysna estuaries to conduct RSET monitoring.
- Complete monthly PE-LTERP sampling in Algoa Bay.
- Complete monthly sampling in Kromme Estuary and service CT-loggers in Kromme, Gamtoos, Swartkops and Kariega estuaries.
- Submit SANParks sampling permit applications for PE-LTERP and CMP.
- UTR's BI inner, outer, 80m Bay Mo, 60m Cen and St Francis (x5).
- Bird Island ADCP.

## **3. Marine Protected Areas**

- Tsitsikamma National Park MPA fieldtrip: winter sampling
- Ali leaving on his Antarctica Fieldtrip.

## **4. Data Management**

- All PE-LTERP and Estuaries LTER data backed up onto SAEON Data Portal
- Explore functionality and feasibility of the SAEON Observations Database using the test site

## **5. Education**

- Kowie River water quality test.
- Set up rain gauges in catchment areas.