Testimonials by RGNO Students

Class of 2014

Class of 2015

Part of Class of 2016

Class of 2017

Testimonials RGNO 2017

RGNO class of 2017, May 5th

back row, left to right: Nancy Odour, Kenya; Greg Limbo Mbaimbai, Namibia; Barbara Lesniak, Poland; Anastasiia Ignatova, Russia; Amidou Sonko, Senegal; Volker Mohrholz (Instructor), Germany; Natalie Hicks, UK; Marwa Baloza, Egypt;
middle row: Nicola Krake, Germany; Chibo Chikwililwa (Instructor) Namibia; Bartholomeus Tjandja, Namibia; Ibrahima Diack, Senegal
front row: Kurt Hanselmann (Instructor), Switzerland; Eugenia Kwahanangadu Paulus, Namibia; Essam Khamis Adel Moniem El-Shorbagi, Egypt; Lauren Gillies, USA.

Natalie Hicks, UK

I am a benthic biogeochemist, and I'm interested in what happens in the sediments. I applied to the RGNO course to expand my knowledge and experience on upwelling systems, particularly the anoxia and hypoxia that occurs in and above the sediment, and to learn about the microbial communities, and species, that inhabit these systems. During the duration of the course, I've learnt much more than I ever hoped; I've connected with fellow researchers from diverse backgrounds and interests; and I've already started to plan how to build on the foundations provided by this unique RGNO opportunity. I am already discussing collaboration ideas for the future, and this course has been directly relevant to my own research interests and ideas, and I've started to incorporate this into my own scientific thinking. The course itself is challenging and hard work, but if you put in the commitment it deserves, the rewards are astounding. Huge thanks to RGNO, Kurt and Chibo for this opportunity. I can't wait to see what the future brings from these foundations.

Anastasiia Ignatova, Russia

I am a 2nd year PhD student and my project is focused on the organic carbon burial in continental margin sediments and underlying biogeochemical processes. I have heard about the RGNO course from my supervisor T. I. Eglinton. When I went through the detailed description of the course on the web-site I realized that it would be a great opportunity to

expand my knowledge about upwelling regions with oxygen minimum zone and Benguela Upwelling System in particular.
During the course I have learnt a lot from completely different fields (microbiology, ocean physics, isotope geochemistry) which certainly broadens my mind and allows to view from another perspective on my own research. The experience and knowledge, obtained during the course, will be very helpful for my further research activity in studying complicated types of dependence between various parameters of the physical and chemical processes in marine sediments.
Another aspect of the course was the research cruise on RV Mirabilis. I should say that the organization and team spirit of the cruise was amazing! I have managed to take all the necessary sediment samples and even some additional beneficial analyses which were not planned at the beginning. It is impossible to overestimate the role of the instructors, cruise leaders and crew who have done everything to help each student.
Many thanks to Kurt Hanselmann and Chibo Chikwililwa. I felt their support before and during the course and they made this challenging research camp fascinating and rewarding for large number of scientists from various scientific areas, thereby promoting sharing the knowledge and ideas. I am looking forward to starting analyzing my samples and I am excited about the future results.

Bartholomeus N.S Tjandja, Namibia

I am a MSc. Student at SANUMARC researching on phytoplankton and shellfish toxicity in the Northern Benguela. I heard about the course through our in house mailing list. I applied for the course to expand my knowledge on microbial and geochemical oceanography. I also managed to collect some phytoplankton and water samples that I am still using for my research. This course was a great mind opener because most of the content we covered I only had miniature knowledge off. The course itself is very demanding and therefore anyone who wishes to apply should have some background in microbial and geochemical oceanography. I was fortunate enough as my undergraduate studies in Fisheries and Aquatic Sciences covered courses in Biological and Physical Oceanography. The course was well organized and run. I therefore extend my sincere gratitude to Kurt, Chibo and all the lectures that were part of making RGNO 2017 a success. Personally I established friendship with the fellow participants, and I look forward to working with most of them in the future again. I would definitely recommend students under the department of Fisheries and Aquatic Sciences (DFAS) at Sam Nujoma Campus to apply for this course in the future. It is also my belief that this course can potentially be made into a Master's program for the DFAS. However before that can be done the undergraduate framework should incorporate more microbial and geochemical oceanography related fields. As that would be helpful to achieve knowledge and skills level that the RGNO course demands.

Lauren Gillies, USA

My dissertation work is on the Gulf of Mexico hypoxic zone so to have the opportunity to learn about and sample the Benguela oxygen minimum zone was a once in a lifetime experience. I heard about the course from my advisor Olivia Mason and from Jake Bailey through Twitter. The OLAT web site and course description was excellent. Everything I needed to prepare myself for the cruise, the course and travel was there. Communication with Kurt and Chibo before the course was also excellent, and all my travels from the states to Namibia and back went well.
This was only the fourth year of this course and with the location being in the small, and slightly isolated town of Henties Bay it was understandable that sometimes the course seemed unorganized with some wasted time figuring out meals and transportation. It often felt like we were spending too much time waiting for meals or running errands (tshirts) when

we could have had more time for lab work or cruise prep. Lectures were very interesting. I would have liked to have learned more about current research going on in the Benguela, maybe include a journal day or two in the next course where students analyze and discuss a recent scientific article that focuses on microbial research in the BUS.
The cruise was excellent and the R/V Mirabilis is a beautiful ship with very nice scientific equipment. A larger variety of professors who stayed throughout the course and assisted with lab work after the cruise would have been beneficial. In the future it would be better to organize lab work so students can learn from each other instead of working individually on their own projects, but I think with such little time to find and set up the lab equipment and then process samples it was hard to take time to visit each student and learn what they were working on. This is where I think having more instructors in the labs with the students would be beneficial. I would have also liked to have work more closely with the Namibian students in the labs. Overall, I think there were some lost opportunities to learn from each other during the lab time. More time allotted for lab work so it is less rushed may allow the students to take the time to ask each other questions and learn different methods and explore what everyone is working on.
This was a wonderful experience and I would highly recommend this course to future students. One of the highlights from my trip was being able to study with students from so many different countries, it was fascinating to hear about their research and work along side them for a month. I also enjoyed our trip to see the whale and our trips into Swakopmund because it allowed us to see a little more of Namibia other than Henties Bay. Namibia is an amazing country with the friendliest people, it would have been fun to learn a little bit about the country and the people and geology of the dunes which were so different and amazing. The Benguela Upwelling System is a fascinating ecosystem with much yet to be discovered regarding the microbial community structure and biogeochemical cycles. I can't wait to process my samples and see what the microbes will tell us and I plan to continue to collaborate with students and instructors from this course!

Nancy A. Oduor, Kenya

I am an Associate Research Scientist and a PhD candidate in Water Resource Management at Addis Ababa University, Ethiopia. I learnt about the RGNO through a friend who is an alumni from Kenya. I can say that the website from where I got all the information concerning the course was very informative initiating my interest for the course. I applied for the course to develop my knowledge about upwelling systems especially in terms of nutrient pollution and to learn how microbial communities influence the availability of nutrients in the upwelling systems. I can admit that I got more than I expected and expanded my thinking from the team from different disciplinary and have started working on the same in Kenya as well as discussing for collaborative work with UNAM.
From the detailed information on the course I was capable of doing my proposal and necessary preparations for my work during the course. Although I was sponsored for the course, I would admit that the course's cost were worth it as the experience and skills acquired through it were invaluable.
In terms of communication, I would say that OLAT played a very good role and it was efficient in interacting with the course members before, during and after the training. Through it I was capable to learn about expectations in terms of travel, clothing etc. and do adequate preparations. I was also impressed by the broad coverage of participants from different disciplines that I learnt a lot from and networked for future research. The plan was very organized in terms of airport pick up that was timely. However, I had an issue with the visa that left me 'detained' at Windhoek Airport for close to two hours but this can be improved during the next training as the root causes have been identified and discussed with the organizers. I would also recommend for a better internet source as depending on restaurants for WiFi and the mobile data (SUPER AWEH) was too costly and strenuous.

I want to admit that the instructors were very dedicated to their works and this makes the course more interesting. They were very patient and cooperative which was very necessary given our different backgrounds. I want appreciate especially Kurt who brought back the memory of the '*periodic table'* that I left in high school back to life, it was nice working with the team. The local staff were also very cooperative and thus made us have our lab works' with ease. Thanks to Dr. Chibo and local students who were always available for our rescue. However, to some point I felt that the program was overloaded as we had limited time for lab works with lectures on as well as deadlines for posters and presentations preparations, which made us sacrifice Sundays.
All in all, I can say that I enjoyed the moment, the cruise was amazing with very friendly team and nice food. All the cruise activities were organized in terms of sampling and lab work, thanks to Deon and the whole team from NatMIRC. Looking forward for such opportunity again. This is a great experience and the knowledge and skills gained will greatly impact on my work at my work place as well as PhD project for the betterment of the society in terms of water resource management.

Greg Limbo Mbaimbai, Namibia

I heard about the course from my supervisor, Dr Mafwila, who is one of the members and co-finders of the RGNO course. He encouraged me to apply and participate in the course. After applying and knowing that I was accepted, I started to prepare myself for the course. In preparation for the course, I went on the OLAT site to find out more about the course. In addition, I read some articles on ocean microbial and geochemical oceanography which the course was about.
During the course I learnt a lot from the presentations by participants and the various lectures given. The lectures were given by experts in different fields and thus I gained knowledge in different areas related to the ocean. In addition to the lectures I also learnt a lot from the different activities that we undertook as participant .I was also impressed by the organisation of the RGNO team, the instructors were always available to help and guide me where guidance was needed.
On the whole, I had a memorable experience as I learnt that there is more to Science than just collecting facts. Science also involves the process of putting the facts in order and making sense out of them. The course has also made an impact in my life, as I am now more of a scientist than I was before. Furthermore, I now have skills that will allow me to develop my own research topics in future and ways to undertake research properly. In addition to that, I now have a broader understanding of science and knowing that there is more to the ocean than fish.

Nicola Krake, Germany

I'm a Master Student at ETH Zurich and currently working on my Master's Project where I try to constrain possible reasons for discrepancies between Sea Surface Temperature proxies in the sediment. I applied to the RGNO course to gain a better understanding of the interactions within the ecosystem of an upwelling system and to gain some practical experience in sampling sediment cores and working with an international group of scientists from different fields of research. This course helped me a lot in reaching those goals. The range of topics covered in the lectures and presentations was very wide and I really enjoyed learning about all the different research projects and backgrounds of the other participants. For me, the cruise was one of the highlights of the course. Being able to retrieve samples from the ocean floor which have never been looked at before was very impressive. I also really enjoyed the little excursions to the Desalination Plant and the Salt Works of Walvis Bay which were a nice change from the lectures. The course was also helpful to network

with very nice people from different disciplines from all over the world and I'm looking forward to build new collaborations from this course.

Eugenia Paulus, Namibia

How did you hear about the course?
I heard about the course from one of my colleague when I went to ask if there are activities that I could take part in.

What else would have been useful to know for the preparation of your own experiments?
I was not really aware of the fact that I needed to prepare my own experiment in my field of research since the course theme was on microbial oceanography and my project has nothing to do with microbial aspects in particular. Would I have knowledge well in advance that I could prepare my experiment which should not be strictly restricted to microbial oceanography, I could have done it better.

Suggest improvements, give recommendations for future courses.
I would recommend the chemistry and microbiology students to take part provided that the future course will be in line with microbial oceanography.

Were instructors and staff available when you needed them?
Yes, they were available at all times and were all helpful.

Did the course contents fulfill your academic expectations?
Yes, the contents was educating in different aspects of chemistry and microbiology, they were in line with the theme of the course therefore meeting my expectations.

How can the course section on land be improved?
I would recommend that the course be hosted outside Henties Bay so that the local participants will focus on the course alone rather than multi-tasking with their projects/thesis. Another issue that may require attention would be for all the participants to be treated equally in terms of transportation and meals. Local students were faced with a challenge to prepare their own meals (breakfast and lunch) but other participants were being provided with such meals, and for dinner they were faced with a challenge of joining dinner but organize their own transport back to their accommodations. There is a challenge of no local taxis in town and there was a situation where the local student had to walk back to their apartments late in the evening.

Was there enough time to execute the work at sea?
Yes, the time at sea was enough.

How did the collaboration function at sea?
The collaboration was good at sea with participants helping each other.

Did the course topics allow you to fulfill your personal goals?
Yes, the course gave me an opportunity to gain sea-going experience since it was my first time.

How do you judge the team spirit?
The team was working together and this is one of the important attributes of team.

Should the timing be changed?
Yes, because the time the course started collided with the time the local students are supposed to present their thesis to the department before approval. This was challenging

because striking a balance between RGNO course and their thesis was at some point impossible resulting in participants being absent from the course and work on their thesis.

Why is a course in microbial and geochemical oceanography needed / not needed in a DFAS Master program?
The course in microbial, geochemical and other oceanographic aspects is needed to provide a better understanding of how the ocean functions and relate these facts to the biological component of the ocean. That will be helpful in making informed decision, for instance in advising the decision-makers when allocating the quotas for the living resources, the implications some decisions would have on the system, how it could affect the entire ocean function and possible mitigation measures.

What were highlights for you in the RGNO course?
Redox reactions in the sediments
Production of sulphide in the sediments and how it ends up in the water column
The nutrients in the water column
Importance of microbes and how they form an important link in the entire food web.

What contents should be changed in future RGNO courses?
The location where the course will be hosted. I would recommend Swakopmund so that if there will be a chance of local students, they will better concentrate on the course.

How did you profit / not profit from the international participation?
The international participation and interaction was beneficial because I gained knowledge on microbial oceanography, redox chemistry and reactions in sediments, the production of sulphide & how it erupts in the water column which in turn affects the fisheries [which is the main focus of DFAS], nutrients in the water column, how their absence or presents affect phytoplankton and the associated phytoplankton blooms.

How well did your Bachelor studies prepare you for the knowledge and skills level that the RGNO course demanded?
The studies provided useful knowledge and skills needed that were demanded by RGNO course such as microscopy, basic laboratory procedures, report writing.

What changes would you recommend to be implemented in the existing Bachelor program to be better prepared for postgraduate studies?
Incorporate more oceanographic aspects in addition to the basics that are currently taught. This would help undergraduate students to broaden their horizon of understanding the factors behind the fisheries. It would also be helpful for those that want to go further their studies so that they will not only be restricted to fisheries but related fields too. It may be important to help in explaining why the state of the fisheries resources are how they are or any possible changes that may arise.

Amidou Sonko, Senegal

How did you hear about the course?
I heard this training via my internship structure (CRODT / ISRA).

How useful was the OLAT site for preparation before the course?
The OLAT site is very useful for the preparation of the course, it allowed me to follow the progress of the program, but also to ask questions about the points that I did not understand.

Did you get the necessary help in arranging for travel, visa and preparing your experiments?
Yes, everything is well explained on the site OLAT.

Did the pickup upon arrival work out smoothly?
It went well, there was no problem.

Were the teaching team / the instructors what you expected?
Much more what I expected, the teaching was very rich and diverse.

Did the course contents fulfil your academic expectations?
The course meets exactly my academic expectations (campaigns at sea, influences of the microbes on the cycles of the nutrients, ...)

Was the local organization satisfactory?
Very satisfactory.

Did the accommodations (room and board) fulfil your expectations?
Accommodation was very good.

What can be improved and how for any of the course sections?
If you could get connection to our rooms, it's even better. This allows us to work better at night.

Marwa Baloza, Egypt

I heard about RGNO through my participation in the course "Ecology and Diversity of Marine Microorganisms" (ECODIM) 2016 that was held at the University of Concepcion in Chile, where I worked on a research project associated with the oxygen minimum zone along the shore of the South Pacific Ocean. In this project, I cultivated macrobacteria in order to know their role in the sulfur cycle.
RGNO was a complementary course for me. I found it another great opportunity to expand my understanding of the roles of microbial communities in mediating sulfur and nitrogen cycles in an anoxic environment near to the Namibian coast of the South Atlantic Ocean. I have also gotten a chance to sample one of the largest bacterial cell discovered until now, *Thiomargarita*. Further, it was my first time to work on an extended research cruise with a very professional team from NatMIRC and the RV Mirabilis crew.
RGNO was a real research discovery camp! I recommend it for all students who are looking for a new scientific experience and want to get to know about the Namibian culture. We had a great time not only getting lectures and tutorials. During the course, there were many field trips to AREVA Desalination Plant, Salt Works of Walvis Bay, an Oyster Farm and the place where the Early Cretaceous continental breakup happened and caused the separation of South Africa from South America!
We were also lucky to witness some of oceanic phenomena such as natural ocean fertilization through weathering and red blooms in salterns and to see a stranded humpback whale near the coast of Cape Cross, schools of seals and birds migration.
I really would like to praise the great efforts that were made by Dr. Kurt and Dr. Chibo during the course and make all facilities possible to collect samples, analyze them. Finally, I would like to thank Agouron Institute for supporting my travel and stay in Namibia.

Ibrahima Diack, Senegal

Barbara Lesniak, Poland

Essam Khamis Adel Moniem El-Shorbagi, Egypt

Testimonials RGNO 2016, Videos in mp4 format

Beth Waweru

Philip Eickenbusch

Blanca Ausin

Said Hashim

Ismael Kangueehi

Zimkhita Gebe

Leanne Hancock

Chibo Chikwiliwa

RGNO 2015 Testimonial

Erastus Shilongo Uusiku

Chemistry Section at the Namibian Standard Institution (NSI), Walvis Bay,
NAMIBIA

I heard about the course through a verbal invitation by one of the instructors Chibo Chikwililwa through my laboratory manager. I then searched the programme online and engaged with Chibo on the discussion of what the programme entails, who qualifies, how to go about applying and how it will benefit me and my employer.
The description of the course structure on the internet was very detailed. The schedule of activities were well outlined. The caretakers of participants, instructors were indicated with their qualifications and contact numbers and emails. Emergency services were also elaborated.

Preparation for the course
Firstly I engaged my employer with regard to the programme. I then made sure I gather all the contacts that I may need while partaking in this activity. I conducted literature to enrich my knowledge on my chosen topic of study.
Most of my preparation was based on the communication I had with the organizers through constant exchange of emails referring us to OLAT for all notices, arrangements and new developments. OLAT was the best tool that kept all participants in the loop with what was happening before, during and after the camp. Even though the site was not as straight forward to navigate as I expected, it was still very helpful and provided all I needed to understand the aims and objectives of RGNO 2015 as well as the logistics involved.
My costs of partaking were fully covered by the sponsorship.

Communication before the course
The organizers ensured that we had all the details we may need to fully prepare for the course. Any changes that developed were communicated by email as a reminder to check it up on OLAT. Since I am a not a foreigner, most of my travel arrangements was on stocking consumables. The organizers sent me stock list to verify if what I need is in stock.

I was selected to partake because of the industry that I work in. I work as a Chemist at the Namibian Standards Institution. The introductory presentations by the participants both students and instructors enabled me to know to which people I should align myself when I needed expert advice. I also learned new concepts especially about Oceanography.

The selected participants had broad interests even though most of them are in the Microbiology or Biology fields while I am in a Chemistry field. I wish I would have known more about Microbiology to understand most of the lectures since most were chemical Microbiology incorporated into Oceanography.

The organizers may improve the stock of consumables as some exceeded their shelf life. The laboratories were also not fully equipped. Although they work at SANUMARC with toxic chemicals, there was no fume hood for me to handle fuming chemical solutions and no suitable hot plates.

Course organization and contents
The instructors had the qualification, experience and capabilities just as I expected, at times they exceeded my expectations. They are committed researchers and scientists from different parts of the world with interests in oceanography.

The support staffs of the SANUMARC were very helpful and most of the time available when I needed their help especially with accessing the premises and acquiring the materials and instruments I needed to carry out my work.

The course content was very rich, but I feel that it was loaded heavily. We had lectures almost every day morning time and preparations in the afternoon to early evening hours. Through this I had less time for laboratory work than I anticipated. Improvement is needed with giving participants more lab time to carry out experiments. The course content itself has however met my academic expectations.
The special events organized were necessary, given the fact that Namibians are not motivated enough to study their own Benguela Upwelling System and the Namibian ocean at large.

Course on land
The local organization (SANUMARC) was satisfactory. The people responsible for executing the course were aware of their responsibilities towards national and international guest investigators and students and portrayed enthusiasm. They motivated the participants through their presentations and speeches.

The laboratory facilities did not meet the requirements of how a laboratory for research should function. I had no fume hood to work with. I used the Atomic Absorption Spectrophotometer's fume extractor instead. I was adequately prepared for lab work even though I had to use instrument that were not fully operational.

Accommodation was fairly acceptable. The rooms were cleaned periodically by hired outside staff and linens were changed weekly.

Course at sea
I was prepared in terms of personal protective gear (jacket, trouser, boots and helmet) supplied by the organizers. Information was provided on the Dos and Don'ts when you are at sea. Medical examination was also done to ensure I was fit to work at sea. The crew of the RV Mirabilis were very supportive. They knew their job and were easy to integrate with.

Achievements
The aims and objectives set out on the onset were achieved in most parts. The programme has been focused until the last day. Time allocated was also long enough but I think setbacks such as instrument malfunctions and less lab time versus more time allocated to lectures was the challenge. I couldn't analyze more samples as I envisioned.

The presentation of the results were informative. I understood all participant's topics after I learned about them during the course of the month. All participants were ready to work with each other and they just did so. People were very helpful. Those who went on leg one of the cruise sampled on behalf of those who went on leg two and vice versa.

Outlook/ Recommendations
Preparation of the laboratories need to be well carried out before the camp starts. Consumables in stock should always be within their valid shelf life. I believe that the timing was perfect, but maybe the monitoring of the toxic bloom may be a tool to make sure cruises take place during these time. That is if it occurs at all.

This course was beneficial to my daily work. I had time to experiment outside my scope of work. I figured out what works and what doesn't on matrices I haven't worked on before. My interest to continue engaging in projects of this nature was also awakened. I had the opportunity to know how other people from different parts of the world are doing things from which I could learn. I noted similarities too.

RGNO 2015 Testimonial

Isabella Ueitele
Zero Emission Research Initiative,
University of Namibia, Windhoek,
NAMIBIA

Announcement of the course

My MSc supervisor sent me an email encouraging me to apply for this life changing opportunity. I found the website very useful because it had comprehensive course content and description and a course schedule as well. We were provided with an outline of Invitation to Oceanography, 6th Ed, Paul R Pinet (2013), which proved very useful to someone like me who had no background in Oceanography. There were various other articles and documentation on OLAT which were also useful in preparing for the course.

Communication before the course

Communication was good and well in advance. Everything one needs to know was on OLAT or on the website and emails giving additional information or notifications were timely sent. OLAT provided a platform for communication with not only the organisers but also participants, allowing for exchange of ideas and information.
We were provided with a chemical inventory list, sailing order and inventory of equipment aboard the RV Mirabilis. The opportunity was also provided to purchase any consumables, which might not have been available on the list, thus preparation for experiments was effective. We also had contact with the Technical Assistants at SANUMARC in procurement of consumables.

I am privileged that although my present work with mushrooms was off from what the course offers, the committee ranked my interest in practical work in microbial ecology, highly. I was thus accepted and had the opportunity to explore the exciting world of marine fungi.
Introductory presentations by the participants were very useful and this led to successful collaborations between the participants.

Isabella Ueitele, ***Namibia***

Course Organisation and Contents

I was very impressed by the quality of instructors we had. I remain grateful for the opportunity to sit under expert instructors and for their willingness to impart their knowledge and skill as well as encouraging us to go a step further with our experiments and research. It was great that we all stayed at the same residence and could approach the instructors at almost any time.
The schedule was quite full but I would not expect anything less from a course of such high caliber.
The special events were a great success and provided a full experience of scientific research, which includes not only doing experiments but being able to discuss and present them to an audience.
The biggest challenge was the mostly inaccessible internet connection. It was such a challenge at times to access the necessary literature and software that could have been useful for the course.
For example the limited Internet connection did not allow for comprehensive Molecular phylogenetics (processing sequences), BLAST, phylogenetic tree building, environmental libraries and sequencing, community modeling, which I am quite interested in learning.

Course on land

The rooms were comfortable and spacious. Improvement can be made by providing an extra blanket and maybe heaters, since it was

quite cold during some nights. The meals were also minimal on some occasions, especially for people who are vegetarian; this can be improved.

Course at Sea

The RV MIRABILIS was a good experience and the equipment on board allowed for good sampling and storing of samples. The crew was helpful and allowed enough time to sample at the stations we were interested in. The information provided in the Sailing order and inventory of equipment on the ship allowed for adequate preparation for work at sea.

Achievements

It was such an eye opening experience to learn about the Namibian Benguela Current System and why people come from all over the world to study our system. It was exciting to experience firsthand things I have only read in a textbook such as the microbial diversity in ocean environments. The experiments worked quite well and I was able to isolate and grow some fungal species under culture as well as performing DNA extraction and PCR.

Outlook / Recommendations

It would probably work even better to have the course during the late summer months of February and March before the academic year kicks in, this way more people would be able to participate in the course.

Keeping in mind the full and comprehensive course schedule, it would be nice to arrange a weekend to the Etosha National Park, or somewhere similar, to allow, especially, International participants to see more of Namibia. This can be arranged for the last week of the course and be made optional to the participants.

First time experience at sea! R/V MIRABILIS was comfortable and ability to meet, work with and learn from such a diverse group of scientists. My eyes have been opened to a whole new world!

This was definitely a life-changing course, just as my supervisor suggested. The way I do my research will never be the same again. I am inspired to be an excellent researcher, learned to make observations, ask questions and think of possible reasons or answers. Challenged to develop a habit of reading widely and developing an interest in the Benguela Upwelling System, especially as a proud Namibian!

RGNO 2015 Testimonial

Clara Loureiro

Research Center in Biodiversity and Genetic Resources,
Department of Oceanography and Fisheries,
University of the Azores.
PORTUGAL

Clara Loureiro, PORTUGAL

The time spent during the RGNO 2015 discovery camp was extremely fruitful and productive. Since the application process it was clear that the course was going to be really well organized, with all the structure and information carefully described on the website.

The four weeks were intensive in terms of classes and cruise/lab work, which allowed me to acquire knowledge about the functioning of the Namibian oceanic system. From the beginning the atmosphere was very friendly, the fact that the students and instructors were "living" together at the SANUMARC campus rapidly created a very good interaction and with time I felt more and more motivated to learn and to integrate the different lines of research within the student group. Having instructors from different fields and from different types of institutions (International Universities, Ministry of Fisheries and University of Namibia) gave me a more solid knowledge about the biogeochemical cycles in the ocean and more specific in the Benguela Upwelling System, a global perspective about the work that has been developed in this system and about the importance of studying one of the most productive upwelling system in the world.

The campus has really good conditions, although it wasn't completely organized in terms of laboratory logistic, it does have a lot of instrumentation that we don't have at home or we don't easily get the chance to work with. But the equipment is not maintained well.

It was helpful to have a project previously delineated although the time to prepare for the first leg of the cruise was tight, since we were having classes, presentations and lab preparation all during the first week. The cruise was one of the best experiences that I had, the ship had really good conditions for scientific work, the technical staff and the scientific staff were extremely helpful and even if we had extra work that was not previously planned, like extra CTD casts, they were the first ones supporting and carrying out this extra sampling moments.

The fact that we had the opportunity to work in our projects, to present it to the scientific and public community and even showed it to students in the outreach day means that there is a lot of effort from the instructors, the SANUMARC and NatMIRC staff to successfully carry out such a course.

I'm really thankful for the opportunity, it was an amazing time being able to make new friends and create new contacts that I'm sure will give me good future perspectives.

Jessica Cofrancesco Roethe
Oklahoma State, University,
USA

It was truly an honor to be selected to participate in the 2015 RGNO course. It was an experience that I will never forget. The course was very structured and organized the whole way through. I enjoyed working together in a team with other scientists from around the world. Because of this opportunity I have also made many new friends. All of the instructors were very knowledgeable and they covered a broad range of different subjects. The housing facilities in Namibia were comfortable, and the food was good.

I had a really nice time on the research vessel MIRABILIS. This ship is truly a “first class“ facility for doing research. The entire crew was very helpful and friendly.

*Jessica Cofrancesco Roethe, **USA***

I was able to obtain more than enough samples to finish my master’s thesis. The Mini-Symposium was an excellent experience for me. It is a good idea to bring together all of the current research from every discipline into one place. We all learned a lot from each other.

I sincerely want to thank the RGNO leaders for the opportunity to participate in this unique and special experience.

RGNO 2015 Testimonial

Felipe Sales de Freitas

Organic Geochemistry Unit, School of Chemistry, University of Bristol, **UNITED KINGDOM**, Science without Borders Program, CAPES Foundation, Brasília, **BRAZIL**

Felipe Sales de Freitas, ***BRAZIL***

The RGNO 2015 was a great experience, which I'm very glad of having been part of. The highly interdisciplinary character was one of the best points of the course. The mix of different backgrounds and experiences among the students and instructors covered the broad view of relevant topics to understand the oceanographic processes in the Benguela Upwelling System. Additionally, this also provided the opportunity to establish future networking and research collaborations.

I heard about the RGNO from one of the instructors during a workshop while we were discussing student training and sampling opportunities, which at that point was one of the struggles of my PhD. Afterwards, I looked at the website, where I could find a very detailed description of what RGNO was, how to apply and prepare for it. The use of OLAT facilitated preparing for the course, since I found combined at the same place course information, instructions, and a means to discuss my plans with other participants. Using this communication channel, I could prepare my travel, my experiments and sampling.

The teaching team was excellent. They covered a very broad and relevant range of topics to understand the microbiological and geochemical process that happen in upwelling systems, especially in the Benguela System. The lectures were interesting, well delivered with use of relevant resources. The instructors also provided valuable feedbacks to student research projects.

The diversity of backgrounds from all students was very interesting. The individual project presentations offered a broad view of what each of us are researching and how we could correlate our projects with others. From that, it was possible for me to identify future work collaborations based on similar interests.

The cruise on the R/V Mirabilis for training and sampling was fantastic. The crew and scientific team on board were very welcoming and helpful. They offered all the support we needed during our sampling and processing. The teamwork between students was also amazing. Everyone had different sampling demands and particularities, but we were able to work together helping each other to achieve our aims. At the end, we were all happy with the teamwork and all the samples we were able to collect.

In general, all my expectations were fulfilled. I learned about several topics from instructors and students. I was able to contribute with my knowledge in organic geochemistry and my experience in oceanographic cruises and collect samples for my PhD, from which I expect

to get exciting results. I established contact with researches from different study fields. All those combined will certainly impact positively my PhD studies. One thing I missed and suggest for the next RGNO editions is more time for students to interact with other students' experiments. We had this great interdisciplinary opportunity, but we didn't have enough time after the cruise to actually work together and learn different analytical technics.

Finally, I would like to acknowledge all the sponsors and organizers from RGNO 2015 for offering this unique opportunity. Also, I'd also like to thank for the financial support I had from RGNO for course registration and accommodation.

RGNO 2015 Testimonial

Hermina M. Namupala

Chemistry at the Namibian Standard Institution (NSI), Walvis Bay, NAMIBIA

First and foremost, I would like to take the opportunity to thank the sponsors for sponsoring the 2015 RGNO course and making the event possible, without your helping hand it would not have been possible. Secondly, I would like to thank the organizers, the coordinator and everyone who took part in making the course possible.

I was introduced to the course by one of the instructor Ms Chikwililwa. She asked our lab manager for suitable candidates and fortunately I was selected to attend the course. My main focus was to determine the PST associated with the *Alexandrium* species along the southern coast of Namibia. There were 14 students from different countries with educational backgrounds, which were very diverse. The difference in background helped during the lectures and lab work and having students with a more advanced training level was a great learning experience and a great means of information sharing.

I liked the means of communication before and during the course i.e. via the OLAT website and the Library box. It was a good way of knowing each other and sharing information from other participants before the course. The communication between the coordinator and the students was smooth and the course outline was clear, self-explanatory and one knew already from the beginning what to expect.

Hermina M. Namupala, ***NAMIBIA***

The local organizers did all they could to make the event possible that is prepare the consumables to be used during the course and for that we appreciated their effort. As for the team on the vessel, I didn't have any complaint at all and they were helpful all the way through our stay on the vessel.

Oceanography alone is a diverse field with a variety of terminologies and different subtopics but the instructors made sure we understood most of the work presented to us. Both the staff and instructors were helpful in any way they could all the way to the end of the course. Given the little time we had, one had to balance between the lab work and the lectures therefore I wouldn't really say the work was heavily loaded but equally distributed.

One more thing I like was the awareness days, the special events outreach and symposium were an eye opener and information sharing to the Namibian community and I have a positive feeling that it meant a lot to them as well. The school children had an opportunity to get a brief introduction and if only such events happened so often that we will have many local people partake in doing oceanographic research. The course was like an

introduction to my master degree, therefore it helped me be aware of the challenges to be faced and the possible solution I could come up with.

Outlook

What I recommend in the announcement of the course is that if there is a way that people are more informed about the course, I mean I did not know anything about the course until Ms Chikwililwa forwarded us the link. An advert in the local media would help because not everyone was reached with the email that was sent out.

My goal was to obtain samples, extract and analyze to determine the presence of PST in *Alexandrium* species. Given the fact that the species of interest are seasonal, and occur only at specific areas in Namibia, I wasn't able to obtain the desired samples, because the vessel did no go as far as the area of study due to delays that occurred during the cruise. If it is possible, I'd have wished that we had more days to cover all the areas of interest.

Get an opportunity to have more time for sample collection and laboratory work so that we have something solid to present. This way we will have more information to share with the scientific community and to encourage young Namibians to take up research in oceanography.

Internet access wasn't great, if there is a way to get reliable internet access, which we did not seem to get from UNAM, it would help the course. Lab work being part of my daily job, I was fully prepared for lab work. The housing accommodations were good, but the lecture room had hard seats without back, which weren't really comfortable to sit in for a whole morning in the cold room.

RGNO 2015 Testimonial

Victor Miti Libuku,
NatMIRC, **NAMIBIA**

I heard about the course from one of the Namibian instructors Chibo Chikwililwa. The description of the course structure on the Internet site was informative but failed to clarify that the course had a strong biochemistry and microbiological emphasis. I prepared myself for the course by reading up and trying to find a study interest and focal point that I would be able to continue after the course. I read about the SANUMARC research institute and tried to find out about available materials and equipment at the institute and in the course. The OLAT website was very useful and an exceptional means for communication and coordination.

It would be better in future to refine the information about the course focus so as to allow interested candidates to decide on possible focal fields and as to whether the course will provide the necessary capacity enhancements.

Feedback from the organizers was very prompt and commendable, pick up upon arrival was efficient and smooth. I was informed of why I was selected. The introductory presentations were helpful in allowing me to realize the expertise at my disposal and possibilities for collaborative work and they also informed me about the main aspects of the course. The outreach and the symposium were necessary components for such a course in Namibia, because they allowed an unaware audience to be informed about the course and develop future interest. Student activities were adequate considering the time available to go through several aspects of the broad and diverse biogeochemistry and microbiology fields. It may be helpful for future courses to have more student group presentations about the work covered by their activities thus making the knowledge a more practical application.

The local organization was satisfactory considering their limitations and location. The lab facilities and infrastructure were somewhat a disappointment as several pieces of equipment were not functional. The accommodation was good, the meals need to be reconsidered in the future, however.

I chose a resuspension experiment as my project. My personal goals were partially met as I received a better understanding of work being done in marine Biogeochemistry & Microbiology. However, being unable to pursue my interests due to the course focus, which is not in my direct line of work leaves a partial un-fulfillment of personal goals.

The team spirit was high as fellow course mates were willing to share knowledge and collect samples at sea when I could not attend the particular leg that sampled another area of interest.

The course will definitely have a positive impact on my career, my work and my outlook on science as I have been exposed to even greater facets of science that will help me understand its holistic importance.

Thank you very much for a wonderful experience and the knowledge gained.

RGNO 2015 Testimonial

Katharina Sledenberg
Westfälische Wilhelms-Universität,
Münster, **GERMANY**

The RGNO course exceeded all of my expectations and I am very greatful for the opportunity to take part in this program. I think the concept of the course is outstanding: I had the possibility to design my own project idea and follow this project to its subsequent states – from the very beginning of developing an idea, to finally presenting and discussing my first preliminary results. The Symposium, proposal writing and poster preparation were a good, complementary components of the course. The teaching team was very helpful, friendly and it was very inspiring for me to see their high motivation and dedication for the course. They were available when I needed them and very motivated to help and support me.

The communication before the course was difficult in the beginning. I was not quite sure what kind of equipment is available on the vessel and in the labs on land so that in the end I sent a lot of lab stuff that was already there (for example, a filtration device). For this reason, it would be good to have an inventory listing available laboratory equipment. Moreover, I would recommend to use the forum in OLAT earlier to get to know the other participants and their projects, and hence provide the possibility to coordinate sampling strategies and lab work.

The time schedule was a bit unbalanced, especially the last two weeks of the course were very cramped. In my opinion it would be better to have most of the lectures prior to the cruise so that one has enough time afterwards to concentrate on the lab work, the presentation/proposal and also sending samples back to the home institute.

Katharina Sledenberg, ***GERMANY***

Moreover, additional events like the Outreach Day should not be squeezed into this already very tight time plan in the last week of the course but rather at the beginning of the course when we have more time to prepare for this event.

Unfortunately, I had problems with the transportation of my samples by a courier service back to my home institute. I'd like recommend to plan the shipping well in advance. Especially when the samples need to be cooled/frozen it might be better to transport them as additional luggage or at least bring the adequately packed samples directly to a shipping company. Furthermore, if one is required to send material or equipment to Namibia or order chemicals via UNAM, it should also be done well in advance.

The highlight of the course was the ship cruise on the R/V Mirabilis. The team spirit on the cruise was exceptional, everyone on board (the crew, as well as the RGNO participants) was highly motivated and helpful. All of the RGNO students' sampling stations/strategies were considered making it possible for me to get a very promising sample set for my PhD research.

I am very excited to continue the work I started during this program and to incorporate the new data and insights into my scientific line of work, hopefully collaborating with other participants of the course.

RGNO 2015 Testimonial

Stéphanie Follonier

HES-SO Valais, Switzerland

Announcement of the course

I read about the course in the newsletter of the Swiss Society of Microbiology. The description of the course on Internet is very detailed which is on one side very nice because all information can be found there but on the other side it is almost too detailed if one wants to have a general overview of the course quickly. Maybe it is just due to the structure of the site, where all information is on the same page. *I would suggest adding a more synthetic, general description of the course first and then the more detailed information on different pages with links*.

I prepared for the course by reading the literature related to the project I wanted to carry out as well as the summary of "Invitation to Oceanography" by Pinet that was uploaded on OLAT. I was also studying the information uploaded regarding equipment and consumables available in order to determine what experiments would be possible and what I would need to take along or order.

Not being a student anymore, I find that the expenses for this course are low (also compared to other similar courses) and that is the reason why I could afford it even without help from my institution. I am thus really grateful to the course sponsors as well as to the SGM that supports part of my travelling fees. Since I could transport my samples with me and did not need to ship them I also saved a lot of money, otherwise this may have been a problem.

Regarding the quite low number of Namibian student, *I would really suggest to try integrating the course in their normal university schedule, e.g. as a module that would get them credits for their degree*. I can imagine that a regular student already busy with mandatory lectures and exams may hesitate to apply to this course otherwise, just for time reasons.

Communication before the course

The feedback from the organizers was really good and always really quick. I did not have any problems for arranging travel and for me the pickup at the airport was fine since I was

Stéphanie Follonier, ***Switzerland***

one of the last to arrive (others had to wait longer). *Warn the next participants to check the date they get on their passport when arriving in Namibia*!

I did not know the exact reasons why I had been selected until the course.

I found the introductory presentations by the students really good. It helps to have an overview of who is doing what, who I need to talk to if I have questions about some specific topic, etc. I also really like the mixture between geologists, chemists and biologists. Of course it results in some lectures that are a bit more challenging than others but that way I could learn a lot and it also favors interactions between students who can then help each other more than if they all had the same background.

Regarding the laboratories in Henties Bay I was surprised to see how much equipment, glassware and even plastic ware were available (although part of these was mainly organized by the RGNO course). In contrast, I was expecting the labs to be actually more used by local students/researchers so that basic things such as bins, soap for cleaning glassware, paper towels, etc. would be organized already. The lack of DI water was also quite a surprise as well as the lack of places for sterile work (either in a proper laminar bench or with Bunsen burner). But in the end, most of these things could be solved with a bit of time and creativity. Something that I was not expected either is that *the R/V Mirabilis would have such nice lab spaces and equipment (MilliQ water, all kind of freezers, microscopes, etc.) allowing preliminary experiments to be carried out on the boat. This would be good to tell the next participants early*

so that they can plan their experiments accordingly from the start.

Course Organization and Content

The teaching course and the instructors from the RGNO course were all really good, all experts in their own field and available anytime. As mentioned before the breadth of the lecture topics, not only between disciplines (geology, microbiology, etc.) but also between more general lectures and lectures about the specific features of the Benguela Upwelling System, was a really positive point for me. I was also impressed by the quality of the lectures in general.

The schedule was quite intense, with 6 days per week and presentations in the evening. Although I understand one should try to learn as much as possible within the time available, I think it should be slightly reduced in order not to overload the students too much. In particular, *the number of lectures taking place every morning after the cruise can be reduced to allow having more time in the lab for experiments and to have more time for the preparation of the final presentation, proposal and poster*.

Regarding the availability of the local staff on Campus, I think we were quite unlucky because of the number of *holidays that occurred during the course (May) and that may partially explain why it was sometimes quite difficult to find them. This should be considered for the next courses*. Yet, the guards were always there to open (and close) the labs so that we had a 24/7 access to them.

The Outreach and Symposium were nice opportunities to present our work to both a scientific and non-scientific audience. It was really rewarding to see people and students getting excited and asking questions about topics they were not familiar with but that can potentially affect their daily lifes.

Course on land

In general the organization of the course was good but something should be organized in order to improve *internet connections*. According to local participants, cheap solutions exist so I would recommend setting this up for the next courses. Otherwise it was fine for me (except maybe the chill temperature inside the classrooms).

Course at sea

Being on the 2nd leg cruise I had enough time to prepare my work at sea but it seems to have been more difficult for the participants of the 1st leg. Work on the boat was intense but ok for a few days. Students have to be aware that 3 people are needed to process one single core. Since almost each student needed an entire core most of the time, team work was mandatory and it was also not feasible to work in shifts. One had to be there when the cores were taken and process them as fast as possible so that the boat could then go to the next station. That being said, the collaboration worked really well in our group and in general everybody was helping each other a lot so that the work could be carried out as fast and as good as possible. Helping each other was also a great way to learn different sampling methods and what you need them for.

Achievements

Not having a background in oceanography before this RGNO course completely fulfilled my expectations. The varied and high-quality lectures given by international and local experts in the field allowed me to learn a lot about different aspects of oceanography and to understand some of the challenges the oceans and the Benguela Upwelling System are facing. For me, it was really a great and effective way to discover a new research field that I hope I will be able to combine with my own research field (the production of PHA biopolymers) in some future projects.

The cruise on the R/V Mirabilis (my first time on a research vessel) was definitely a highlight. Not only did I get familiar with the sampling methods and equipment needed when working with water and sediment samples but I got access to very rare samples that may have a lot of potential for my research. Also, I really appreciated the nice atmosphere and the team-work on the Mirabilis. In general the team spirit was very good both during all the course and it was very rewarding to interact with students and instructors from such varied backgrounds. Finally, having to work and set up methods in a lab with limited facilities was at times challenging but also very educational.

RGNO 2015 Testimonial

Lorenzo Lagostina

ETH Zürich, Department of Environmental Systems Science, Zürich, SWITZERLAND

Lorenzo Lagostina, ITALY

Announcement of the course
I heard about the course through my supervisor, Professor Mark Lever.

The website provide a thorough overview of the content of the course. The idea of a platform for connecting the students and staff before the course is indeed really good. It was very helpful for travel arrangements, preparation and packing of research equipment (especially for students that never have been on a sampling cruise before).

The course fees are in my opinion very low considering the opportunity to take part in a short sampling cruise and attending state-of-the-art lectures in different disciplines. Clearer instructions should be given on how to pay tuition fees.

Communication before the course
As already mentioned, thanks to communication possibilities via OLAT and email exchanges with the instructors before the course I got the necessary help in arranging for travel, visa and preparing my experiments.
In spite of all this, however, the person who was supposed to pick me up at the airport didn't show up and I had to go by taxi to Walvis Bay and from there I could get in touch with the organizers that then sent another person to pick me up. That can certainly be improved in the future.

Presentations by the participants
The presentations were very useful, to have an overview of the very different background and research interest of all the other students.
The interests are certainly broad, but that was one of the strength of the course, bringing together very different topics connected by the common environment under study.
For the preparation it would have been useful to know from SANUMARC personnel chemicals and consumables that are available. It would have avoided some stressful situations. I refer to liquid Nitrogen and dry ice. I was assured that it will be available in Walvis Bay on a daily basis, but then in the end it was not. And the notice arrived one day before we needed it, making it difficult to change plans on the spot.

Course Organisation and Contents
The teaching team was above my expectations, definitely satisfied.
SANUMARC staff was satisfactory but not available that often during working hours. The NatMIRC staff and MIRABILIS crew was extremely supportive.
Our instructors were available almost 24/7.

The course was tightly scheduled but in a way adequate for the experience. Maybe one evening per week without activities could be considered.
The course contents fulfilled my academic expectations fully.
Outreach and open symposium were a fundamental elements for the course. A key point of the course is to foster marine science research's progress in the Namibian society, and these events are a way to raise interests and broaden research horizons.

Course on land
The infrastructures are suitable for performing basic research activity. More care from SANUMARC staff should be taken to maintain the infrastructures and instrumentations outside the timeframe of the RGNO course.

Internet access was not good, since it was only sporadically available in the first part of the course.

Unfortunately an instrument I was supposed to bring to SAMUMARC didn't arrived on time at my home institution so I was not able to perform all the experiments I was planning when I wrote my application.

Accommodations were satisfactory. Lunch bags for days outside SANUMARC were not satisfactory. Also more options for vegetarians should be considered.

Course at Sea

It was my first time on a sampling cruise but I was supported excellently by instructors, staff fellow students and crew.
We had enough time to execute the work at sea; it was each participant's responsibility to plan the sampling and experimental part (if any) during the cruise.

Students helped each other and staff helped without the need for specific planning. This was possible thanks to a careful organization of the sampling schedule before departure, mediated by the experienced instructors and the NatMIRC cruise staff.
Everything on the cruise worked very well.

Achievements

The workload was quite heavy, but the spirits of the group has always been positive.

Having the course earlier during the year would be nice to enjoy the end of the Namibian summer and warmer weather.

The week on sea was a terrific experience, thanks to perfect organization, crew and colleagues' support. On land the introduction to geology (class and on short field trip) was extremely stimulating and broadening for a PhD trained in molecular biology.

The course provided me with fundamentals in key topics for my PhD thesis, and I obtained samples that will constitute one of the main samples' sets of my PhD project.
Due to my disorganization, I was only able to perform preliminary screenings.

Furthermore I met many great colleagues among students and instructors, and with some of them I will likely collaborate in the future.

Testimonials by Participants of the 2014 Course

The announcement of the RGNO course was done well in advance and it was thus available to all interested students in Africa and abroad. The course itself was well organized and it took place at SANUMARC in Henties Bay on the west coast of Namibia, where marine sciences are a research focus. The organizers of the course were qualified to organize such an event, many had experience in upwelling ecosystems, particularly the Benguela Upwelling System.
The course participants were transported to and from SANUMARC. There was easy access to the labs, and lectures took place in a comfortable room equipped with modern teaching infrastructure. The facility in Henties Bay was in good condition.
Connection to the internet was available at SANUMARC and at the hotel, which made it easier for students and instructors to communicate and to exchange documents and lecture slides via the course web site. The internet and the papers made available on the course web site also helped to produce the research proposal.
I'd like to recommend that before doing any field work students should be well prepared so that they know what to do when they are in the field. I think this is important as I experienced difficulties and would have liked more guidance on this.
The students had the opportunity to present their research findings to staff members of NatMIRC as well as to UNAM undergraduate students. This provided the platform for the course participants to enhance presentation skills and to defend their research findings. This should be done on every RGNO course each year.
The course was a great opportunity to interact with leading researchers in geochemistry and geomicrobiology and to build a network of contacts in these fields. All in all the participating students responded well to the activities that were offered and they were able to learn from each other.

***Blessing Kamwi**, MSc Student, University of Cape Town, Dept. of Oceanography, Cape Town, SOUTH AFRICA*

The RGNO course in Namibia fulfilled and exceeded my expectations. I made connections and formed friendships with people in my field and related fields. I learned about current topics in microbial oceanography that motivated me to consider new project ideas and could potentially lead to future research collaborations. The course provided an excellent opportunity to get more research cruise experience, which can be difficult to gain even as an oceanography student depending on the thesis topic. In the end, I left Namibia with valuable friendships, bright memories, new research ideas, and a promising sample set for my thesis research that I probably would never have obtained otherwise.
Improvements: A list of equipment that is available in which room would have been helpful. I could have used the large centrifuge for my extractions, but I didn't discover it until it was too late.

***Kate French,** PhD Student at MIT & WHOI, Cambridge & Woods Hole, USA*

The course offered very detailed contents and good introductions. The schedule was a bit too hectic at times, however. The tutorials were good and interactive especially the redox reaction part.
I had a very good experience on the Mirabilis research vessel. This was my first time on a vessel, which I enjoyed tremendously. The coring activity as well as the phytoplankton identification were very good learning experiences.
The lab work in general was good, but I feel that more time should have been allocated to students who did not have a background in microbiology.
The Mini-Symposium is a very good idea and it was a really enjoyable activity to bring SANUMARC and NatMIRC researchers together.
In general, I learned a lot and am really grateful to have been part of the RGNO.

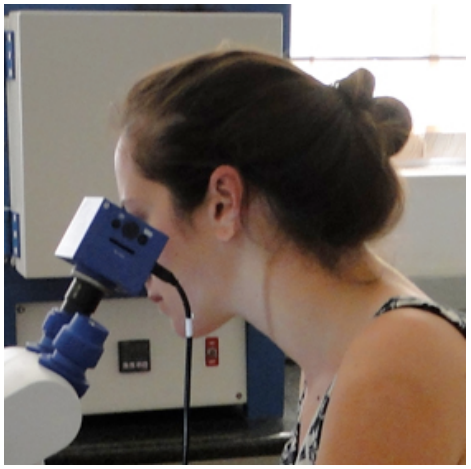
***Cathleen Deelie**, MSc Student, Biology Dept., UNAM, Windhoek, NAMIBIA*

Firstly, I'd like to thank the RGNO team for this wonderful opportunity. In general the course was very educative, both during the lecture classes and during the laboratory work. The course content and structure was fine, although some parts could not be covered due to limited time. Some of the course topics were new to me and very informative. I have the interest in learning more on the chemistry of the ocean, especially with thermodynamics, which I found more challenging. Everyone in the team was very kind and helpful.
For the next course I would suggest that students have their proposal ready before the cruise, as it would be much easier to collect samples when at sea and to prepare the types of equipment and reagents that are used during the course. This may perhaps shorten the productive duration of the course or it will diminish the number of course topics.
The course could be held during the period when UNAM has a break so that the students from the department can possibly join the lectures without interference with their classes.
I also think group activities for students during free time can be organized to be part of the course, since some students came to Namibia for the first time.

***Johanna Dijerenge K.,** MSc Student, UNAM & NatMIRC, Swakopmund NAMIBIA*

The course contents were interesting, but some repetitions between different instructors could have been omitted. At the beginning of the course, I would have liked to have had more time for general overviews of all topics.
It would have been helpful to have a detailed description in advance of the kind of facilities and equipment that were available, in order to develop a more organized sampling strategy and a good project.
I would also have liked to have had more time for organizing my sampling strategies and time to develop my project and prepare appropriate equipment for sampling on board.
I'd like to recommend that the introductory presentations of the student participants should be made available to all SANUMARC students at the beginning of the course in order to establish interactions with them throughout the entire course period. I would also have appreciated more free time for interaction between the student participants of the course.

Maria Papadatou, *PhD Student, Singapore Centre on Environmental Life Sciences, SINGAPORE.*



I highly appreciate having been able to participate in the first RGNO course in Namibia. The atmosphere was welcoming during the entire three weeks, the instructors inspiring, helpful, friendly, and the fellow students highly motivating. The experience of sharing a research vessel with scientists from Namibia was my highlight of the course. The interaction between research and environmental monitoring was extremely interesting and caught my attention for the future. Although the resources for research in Namibia are less advanced than in my home institution, I learned a lot from this stay abroad: by interacting with several stakeholders of the Benguela upwelling system and by developing a successful research project with much less. And I expanded my knowledge to applying thermodynamics to actual environmental problems. This course changed my perspectives for future research plans and I believe that every participant has the same feeling.
The field-work was really exciting for me. I learned a lot from Bronwen while on the boat. A number of things that were announced on the course website, however, were not done and I was expecting to be able to do them.
I would like to suggest a few things that could be considered for the next course: More time should be dedicated to laboratory work, especially at the end of the course when the time is tight for the individual projects. More techniques in geochemistry and microbiology should be taught. All instructors should present their actual projects at their home institution, e.g. the presentations of Jake and Verena at the symposium were highly inspiring and would have been useful at the beginning of the course. It was a pity that we were working with Thiomargarita without having a special lecture dedicated to it. The basic lectures are necessary but the research lectures have more effect on motivating students to do research, at least from my perspective. I also missed very much a course entirely dedicated to the oceanography of the area. We had some fragments in several lectures but I built my knowledge on the Benguela upwelling system through scientists from NatMIRC.
The choice of the personal projects were dependent on the instructor on board, maybe a pre-selection during the application could be helpful for the organizing team. Moreover, I would suggest having a better planning on board the RV Mirabilis. Some students were a bit lost and left alone from instructors because their projects were not well enough defined. The project preparation before the sampling cruise could be made more efficient by assigning a "supervisor". Finally, I really appreciate our trip to the Welwitschia and dune 7. I'd like to propose to have one leisure afternoon at the beginning of the course; it could help building relationships, or organizing a quiz or game evening or something similar.

Marion Jaussi, *PhD Student, Center for Geomicrobiology, Aarhus University, DENMARK*

For me, the course proved to be a very good supplement to my PhD research work and a systematization of knowledge concerning the Benguela Upwelling System. Advantages of the course were undoubtedly:

- A possibility for sampling on a cruise on the RV Mirabilis,
- An international teaching staff covering topics regarding the Benguela Upwelling ecosystem,
- Working in the same location which was investigated,
- Establishing contacts with researchers from the University of Namibia and the Ministry of Fisheries and Marine Resources in Swakopmund,
- Developing my own research projects, from the very beginning to the end.

Minor disadvantages, which can be improved for future courses are:

- More about topics concerning physical oceanography of this region, as well as marine biology, which were not discussed in detail in this course,
- More free time for participants for writing a proposal, reading articles and even sightseeing.

Przemysław Jerzy Dabek, *PhD Student, Paleoceanography Unit, Institute of Marine Sciences, University of Szczecin, POLAND*

My overall impression of the RGNO course 2014 was very positive - it was a great experience based on an inspiring and exciting theme, staff and perspective. I got some research cruise experience and I was able to recover the samples I needed for my project.
However, and this is probably because the course was held for the first time, there are aspects that can be improved for future courses.
I'd like to recommend having the first three days of the course as orientation where students and staff present their professional background and staff members present putative projects, which are doable and interesting for the Benguela Upwelling. On the fourth day, the students then have to have picked a general theme for their project, which they present briefly even though it is not yet fully developed, but they should have an idea when they need what kind of samples, because the group has to split up to participate in the cruise. Some projects may require samples right away whereas others may need longer preparation work before samples become important and this is an organizational aspect that can cost a lot of time when not done in the proper way. As the equipment is very limited onboard, I also recommend shortening the time at sea to have more time in the lab on land.
My personal goals were

- to gain experience in teaching, both in giving lectures and assisting in lab questions,
- to initiate some experiments with fresh Thiomargarita concerning growth and nitrate uptake, and
- to bring home samples of Thiomargarita.

All of these goals were met and I am very glad about it.

Verena Salman*, Junior Instructor, Postdoc at University of North Carolina, Chapel Hill, USA*