

Petrel Post



SANAE 58th Overwintering Team

Chapter 4

Meet our Team Medical Doctor, Salomé Odendaal, who will tell you a bit more about herself and the medical facilities at the base.

Further in this chapter we will tell you about waste management here at SANAE IV, cooking, braai, our weather summary for the month and another interesting fact about Antarctica.



"Lorenzen Piggien" Viewed from the SANAE IV Base (Zoomed), Antarctic Petrel in flight over the top of the mountain.



From left to right: Marvin, Jacques, Bongisipho, Juffer, Mpati, Travis, Sanele, Ewald and Salomé.

SANAE 58

Editor: Salomé Odendaal

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Weather		SANAE				
	Minimum	01	02	03	Maximum	
Temperature (°C)	-35.8 (21 June)	-27.5	-24.1	-21.8	-12.2 (26 June)	
Humidity (%)	22 (08 & 17 June)	48.6	58.7	59	89 (26 June)	
Wind Gust (m/s)	0.0	7.5	10.6	13.3	32.2 (11 June)	
Pressure (hPa)	857.6 (21 June)	873.2	875.5	876.1	887.5 (17 June)	

Did you know?

Sled dogs hauled supplies for Norwegian explorers led by Roald Amundsen in 1911. Sled dogs were kept and used in Antarctica for years after that. However, they were banned from the continent in 1993 due to fear of potentially transmitting canine distemper to the Antarctic seals or that they may escape and disturb the local wildlife.

Neringa
<https://www.boredpanda.com/interesting-antarctica-facts-south-pole/>

MEET OUR TEAM DOCTOR: SALOMÉ

Salomé Odendaal (DEA Medical Doctor)

Hi! My name is Salomé Odendaal. I'm the S58 team's doctor. My job is to look after the general health of the team and to take care of any medical emergencies and evacuations (should it be required...but really praying for it not to be needed). This includes having to clean and maintain anything related to healthcare at the SANAE IV base, i.e. the medical areas (consultation room, pharmacy, hospital and theatre area), medication, supplies, equipment, etc. Everything needs to be ready to handle any medical emergency or event that may occur at any time. Luckily, most of the time I only need to provide primary healthcare...and I had to do some dental fillings!! I am the only health care practitioner at the base and will therefore rely a lot on the rest of my team to assist me if anything serious would happen. They have all completed a first aid course before coming to Antarctica and I try my best to turn them into "mini medics" by expecting from them to sit through numerous medical training sessions while we are here at the base. During these sessions we refresh what they were taught during their first aid training and I cover various topics by means of discussions, power point presentations and practical sessions. Those who called me a slave driver before will have true empathy for my team members. ☺



Apart from healthcare, I am also responsible for the food stores and general hygiene in the kitchen and dining room. This means keeping an eye on the food supplies in the dry stores room (our big pantry), the cold room (fridge) and freezer. A lot of our food are irradiated prior to being transported to Antarctica and kept at low or far below freezing temperatures in order to keep it good for as long as possible. I regularly get asked what we eat. Well, almost anything you eat at home really. We have a very good supply of spices, condiments, sauces, pasta, flour and almost all the usual dry foods in the pantry. A lot of canned, bottled and dried foods. We still have eggs, butter and milk in the fridge and lots of frozen vegetables and meat products in our freezer. Even calamari. Oh, and some samosas, pies and sausage rolls for a quick meal. We are however really starting to crave and miss fresh fruits and vegetables as fresh fruit and vegetables do not last long and all our food supplies are delivered only once a year, usually in December. There's no Pick n Pay or Woolworths just around the corner, unfortunately. We have a big kitchen and every team member gets an opportunity to cook dinner for the team. Thus, what we eat depends on what you are willing to make or the cooking skills of the (unqualified and not trained) chef for the evening. Mpati will tell you a bit more about cooking later in this newsletter.

I was born and bred in Frankfort in the Free State of South Africa. My favourite childhood memories include camping and fishing with my family at a dam or a river and enjoying all aspects of nature. After school, I got my medical degree from the University of the Free State and worked in various clinics and hospitals within the public and private sector of South Africa (North West, Mpumalanga and Gauteng) after qualifying. At times, I also volunteered to work some shifts with Advanced Life Support Paramedics on their response cars during my off time. After working in an Emergency Department in Pretoria and then gaining experience in critical care while working in a High Care Unit and Intensive Care Units, I started as an air ambulance doctor for the Johannesburg office of the world's leading medical and travel security assistance company. At this company, I fulfilled many different positions over the years, which included acting as a medical escort on air ambulance and commercial carrier international flights, amongst others. After overseeing the medical advice line for some commercial maritime vessels, I became curious about maritime medicine and wanted to experience it for myself. My next role was thus to work as a doctor on cruise ships. This I did for 3 years. While visiting the peninsula of Antarctica via a cruise ship, a desire to experience Antarctica in more depth was born. Seeing Antarctica was majestic and breath-taking. I started to investigate whether it is possible for a South African doctor to work in this beautiful country and here I am...

I am extremely grateful for this experience and challenge and I must be honest, I learned (and am still learning) a lot more about myself, people and many other aspects than medicine. When fantasizing about playing in the snow as a child, I did not foresee myself slaving for hours trying to clean out the inside of a challenger or a caboose in far below zero degrees Celsius temperatures. Somehow it always seemed to be more fun in my dreams. Nevertheless, driving a challenger or a skidoo, filling a snow smelter, assisting a colleague to fix an anemometer and watching the extreme weather conditions changing on the other side of my bedroom window while sipping hot chocolate in my short sleeve pyjamas and enjoying the warm underfloor heater beneath my feet, remains an experience of a lifetime...

MEDICAL FACILITIES AT SANAE IV

Salomé Odendaal (DEA Medical Doctor)

I briefly mentioned the medical areas above, which include a consultation room, pharmacy, hospital (clinic) area and theatre area. It may sound like a lot of stuff for only 9 to 10 people for most of the year, but we can be up to approximately 100 people at SANAE during the annual relief period (the 2 to 3 months of take-over at the end of each annual expedition). Additionally, we are very remote, and any evacuation will be quite challenging and time consuming; therefore, we need to be able to stabilize and support a patient during the event of a medical emergency for as long as possible, while assessing the logistics and timelines for the quickest and easiest possible evacuation solution. This will likely require either treatment at the base until recovered, if within the capability of the base's facilities, or evacuation back to South Africa. Due to polar nights, other weather conditions and the layout of the surrounding areas, flying safely directly to our base to collect a patient in the middle of the winter is highly unlikely... basically impossible. Evacuation may require transportation to one of our neighbouring base Neumayer, which has better landing capability for an aircraft in this challenging environment and it will provide an additional healthcare practitioner to assist with treatment of the patient. It will take approximately 48 hours to reach our neighbours though... weather dependant.

For these reasons, the medical facilities need to be maintained to be able to provide medical care at a high standard. As with our food supplies, the medical supplies are also replaced only once a year and need good monitoring to ensure we maintain supplies within their expiry dates as far as humanly possible. The consultation room allows for medical consultations and examination with the availability of the most important some side room investigations. The hospital area has a bed where a patient can be admitted, with its own separate bathroom. The hospital area also functions as the dental room with a dental chair, equipment (including dental X-ray) and supplies. The pharmacy is where all medication and supplies are stored with the room temperature being maintained below 25 degrees Celsius but well above freezing temperatures. Enough supplies of pharmaceuticals and consumables are stored in the pharmacy to allow treatment of most medical illnesses and injuries. The theatre has wall oxygen and equipment to stabilize, monitor and treat a patient during a medical emergency, including a ventilator and a defibrillator, amongst others. The oxygen supply is provided from big oxygen bottles kept in an area adjacent to the hospital.



Figure 1: Consultations room. Available at www.sanap.ac.za [Accessed June 2019]



Figure 1: Hospital area with dental chair and mobile X-rays. Available at www.sanap.ac.za [Accessed June 2019]



Figure 3: Theatre. Available at www.sanap.ac.za [Accessed June 2019]



Figure 4: S58 team members learning about suturing during a medical session in the hospital area during the month of June 2019.

WASTE MANAGEMENT

Salomé Odendaal (Medical Doctor)

An important responsibility we have while living in a base in Antarctica, is the proper handling and disposal of waste. The Antarctic Treaty provides guiding regulations regarding the proper handling of waste that must be adhered to by all signatory countries. For those not aware of what the Antarctic Treaty is, it is an international agreement that was signed by 12 nations (Argentina, Australia, Belgium, Britain, Chile, France, Japan, New Zealand, Norway, South Africa, the United States, and the Soviet Union) in December 1959, in which the Antarctic continent was made a demilitarized zone to be preserved for scientific research. Later other nations acceded to the treaty. These international protocols and some local South African legislations need to be followed with the aim to avoid any disturbance of Antarctica's environment, as far as humanly possible.



Figure 5: S58 team members in the Waste Room, busy with their Waste Room Skivvy for the week. The waste produced in other areas of the base is taken to the Waste Room where it is then separated, processed and sealed in different colour-coded drums.

Firstly, we are to produce as little waste as possible but there will still be waste produced. At SANAE, we have eight different categories for waste. Each type of waste is stored separately from the rest and is colour coded to ensure correct handling on return to South Africa. Different coloured bins are distributed throughout the base to assist with waste separation. For example, orange is used for general waste, green for glass, red for medical and blue for metal. All waste is to be disposed of in the correct bin and at the end of each week it is processed as part of our base duties (skivvy's). This takes place in the designated waste room.



Figure 6: Jacques crushing cans.

In the Waste Room, all waste gets sorted according to type. Glass gets crushed with a specially designed glass-crusher. Metal cans are crushed by means of a can crusher by inserting a can into the crusher and pressing down on the lever, thereby flattening the can. The broken glass, flattened cans, waste food as well as any contaminated liquids (such as oil) are put into separate empty 210 litre Jet-Fuel drums. The empty drums are fuel drums that arrived at SANAE full of jet fuel, which are then repurposed to store the separated waste during the year. Holes are cut into the tops of these drums, which are then filled with waste and sealed. These sealed drums are also colour-coded with paint according to the different waste categories for easy identification. The rest of the rubbish (general waste) is compacted using the hydraulic trash compactor in the waste room, sealed in plastic bags and stored in a container.

All the stored waste is to be stored and secured in such a way that it is not blown away by the Antarctic winds. At the end of the annual relief period, all waste containing containers are then loaded onto the SA Agulhas and transported back to SA for recycling or disposal.



Figure 2: Travis unfolding boxes, putting it in a bag, awaiting loading into a waste container.

Our Team Leader has the very flattering title of "Waste Manager" during the overwintering period and it is his / her responsible to ensure proper storage of the waste during the year and assist with the planning of the waste loading to the ship during the annual relief period. During the waste loading period, all efforts are made to prevent accidental spillage or leakage.

We also have several guidelines and procedures to assist with minimizing and handling pollution. At SANAE it involves pumping fuel using pipes and couplings that doesn't allow liquid to flow when not connected; and inspecting vehicles for oil and antifreeze leaks, every time they are started. Even with precautions in place, accidents do happen. In the event of a spill, all contaminated snow is



Figure 7: Marvin crushing glass.



Figure 8: Waste Room compactor.

collected by hand and placed in drums inside until it has melted. The melted contaminated snow is then pumped into drums, sealed well and also shipped back to South Africa. Any smaller spills that may have been missed are then usually cleaned up as part of the annual 'chicken parade' at the end of summer. The entire summer team scours the areas around the base and fuel bunkers to collect any contaminated snow.

Another kind of waste to consider is exhaust gasses, like those produced by the electric generators and vehicles. Proper maintenance and up keeping of the engines reduce the number of harmful components in the exhaust gasses while also minimising the amount of fuel necessary to produce the required energy.

Waste water management will be discussed in a still to come newsletter... For now, from waste to cooking.

COOKING

Mpati Boleme (SANSA VLF Engineer)

"Good evening SANAE base, supper is ready." I have to admit, hearing this sentence is the highlight of my day. I love food and I am always looking forward to every supper we have with the team. During take-over, we had two chefs dedicated to preparing three meals a day for everyone on base. Things are different now, from Monday to Friday we take turns in pairs to prepare supper for the team. Saturdays are dedicated for braai and Sundays, well I guess it is every woman for herself (or man).

I think I speak for most of the team that this has been very challenging; cooking for eight very different individuals from different backgrounds, with different tastes and preferences is not an easy task. Somehow it seems to be working out because personally, I enjoy the food that comes out of that kitchen every evening with exceptions of minor mishaps every now and then, (we had vegetables that were still frozen one night, talk about taking the word 'frozen' vegetables literally), but that is to be expected.

Days before my turn for cooking, I get busy scouting the internet for recipes. Before I came to SANAE I was convinced I enjoy cooking, but the added pressure of cooking for 8 other people has put doubts in my head. What I love the most about this experience is getting to explore different tastes from everyone in the team. We mostly cook what we are comfortable with, with little experiments every now and then. Most of us have found our comfortable dishes which never go wrong. Like Ewald's curry & mince (best mince I have ever tasted), Bongisipho's ribs (which always comes out perfectly), Marvin's onion rings (which are the exact replica, if not better, of Spurs' onion rings), Sanele's traditional meals (that I am sceptical about but are always surprisingly good). A lot of creativity goes into Salomé's chicken meals, Travis is very proud of his pizza making skills and our team leader Jacques is our braai guy. He is very good with marinade. Marvin together with Jufter is our dessert go to men, they prepare the best cakes.

This has been an amazing experience for me, I am looking forward to all the different meals that are yet to come out of the SANAE kitchen, and I know I will enjoy each and every one of them.



Figure 9: Ewald, Travis, Mpati, Jufter and Bongisipho in the kitchen preparing for our Midwinter Dinner occasion. Here is where we prepare supper for the team on a rotational basis. There are 2 team members on duty every evening from Monday to Friday, one acts as the main chef and the other one assists where needed, especially washing the pots and pans and cleaning up.

BRAAI IN ANTARCTICA

Jacques Robbertze (Team Leader & DEA Diesel Mechanic)

Braai time! ☺ Where you find South Africans, no matter the ethnic group, you will most probably find a braai!!! And down here at SANAE is no different. From an outside braai, yes believe it or not, to an inside braai, we are staying true to this part of our heritage by having a braai once (sometimes twice) a week.

The inside braai consists of a 5-gas burner station and on the other side an area for charcoal. An extractor fan takes all smoke that is generated from the braai to the outside of the base so that we don't suffocate or have a fire alarm going off.

Our next mission: weber braai on the ice!



OUR WEATHER

Marvin Rankudu (Senior Meteorological Technician)

Table 1. SANAE IV weather statistics, as recorded for the month of June 2019.

Weather Statistics: June 2019						
SANAE IV - VESLESKARVET						
	Minimum	Q1	Median	Average	Q3	Maximum
Temperature (°C)	-35.8 (21 June)	-27.5	-24.6	-24.1	-21.9	-12.2 (26 June)
Humidity (%)	22 (9 & 17 June)	49.0	58.7	59	67	89 (26 June)
Wind Gust (m/s)	0.0	7.3	10.6	10.3	13.2	33.2 (1 June)
Pressure (hPa)	857.0 (21 June)	873.2	876.6	876.1	880.1	887.5 (17 June)

°C, degrees Celsius; Q1, first quartile or 25th percentile; Q3, third quartile or 75th percentile; %, percentage; m/s, meter per second; hPa, hectopascal

ANTARCTICA MATTERS

Salomé Odendaal (Team Medical Doctor)

Midwinter. According to the Merriam-Webster dictionary, the definition of midwinter is “winter solstice” or “the middle of winter”. Winter solstice is an astronomical phenomenon in that it is the shortest day of the year, i.e. shortest period of daylight and longest night...there are still however 24 hours in this day. ☺ Solstices are opposite on either side of the equator. Winter solstice in the Southern Hemisphere (where we are) is the summer solstice of the Northern Hemisphere and vice versa. In short, solstice means the turning point of the season and from winter solstice onwards, we are moving towards the longest day (usually in December) again. Winter solstice was on 21 June this year.

For us here in Antarctica, midwinter means that we are halfway through the polar night and the sun will be moving towards the horizon again. We are heading towards sunshine and warmer weather (still below freezing though) again. Thus, it is a big deal in Antarctica and is celebrated all over the country.



Midwinter at SANAE involved the following: Invites were sent and received, games were played, and huge amounts of food and drinks were consumed. We had midwinter games during the whole week. On Friday 21 June 2019, the whole team participated in preparing for the evening function. Some worked on decorating the area and the rest worked in the kitchen preparing all the food for dinner. A massive, fancy dinner was enjoyed as a team with each receiving wrapped presents. After a lovely dinner, the games finals were played, and we ended it with singing Karaoke. A very long shortest day of the year, but it was fun-filled and satisfying.



References:

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**Congratulations to our overall games champion:
Juffer !**



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 A dartboard and charcoal for the year as ours was "forgotten" back home.
 Thanks guys, you made every braai day this year happen for us.



We would like to thank each of our sponsors for making our year that much more durable and comfortable.