edtea
Department:
Economic Development, Tourism and Environmental Affairs
PROVINCE OF KWAZULU-NATAL

Iwandle
KwaZulu-Natal's Coastal Management Newsletter
2018

uThukela: an estuary connecting catchment, coast and canyon

Fiona MacKay, ORI

Estuaries are dynamic socio-ecological systems and connect two realms - terrestrial catchments to the ocean. This complex setting, along with a plethora of unique and socio-economically diverse and valuable services, places them under competing uses. The effects thereof exert pressures that impinge not only on the estuary, but to near- and far-field ecosystems that have connection to the estuary. These connections are not always fully appreciated.

The uThukela Estuary is part of a continuum that over great distances unites catchment processes and activities to the coast and beyond. As a river mouth, it is an uncommon estuary type in South Africa with a freshwater outflow exceeding marine water ingression. This limited marine influence and seemingly uninteresting ecology in the lower river belies its true importance. The uThukela is primarily an offshore estuary, this signified by the extensive turbid plume often visible in the rainy summer months off the northern KwaZulu-Natal coast. Turbid waters also oppose the perception of 'Caribbean Blue' holidays on sun-kissed beaches. Beyond the perceived preferred value of a clean, blue ocean, a coastal plume has a critical ecosystem function - it is delivering catchment freshwater along with important nutrients to sustain a bottom-dwelling and planktonic food web, and transports suspended sediments that settle over time over a wide area of shelf to create a mud deposition centre. Mud, on a uniform sandy coastal shelf, is a rare habitat and attracts its own interesting creatures and associations. The uThukela River is also a critical source of sand supply to beaches along the northern KZN coastline.

In recognition of the uniqueness and ecological importance of this particular muddy habitat was the recent announcement of the uThukela Banks Marine Protected Area (MPA) on the 24th October 2018. The MPA is part of a protection network that brings the total area of potential coastal and marine protection to 5% of South Africa's exclusive economic zone (EEZ) (www.marineprotectedareas.org.za/uthukela-banks-mpa/). This MPA connects the uThukela Estuary to the offshore where submerged, ancient shorelines provide habitats for reef and sediment fauna, some of which are important recreational and commercial species and others have yet to be named. The deepest part of the area is close to a large submarine canyon, still to be studied and likely holding its own distinct animals and secret ecosystem.

The semi-permanent nutrient-rich plume from the uThukela River
Photo: Fiona MacKay

Lake Sibaya - an aquatic jewel

Rudy van der Elst

Some 100 million years ago the seabed off northern KwaZulu-Natal was geologically raised, creating a coastal plain with a number of shallow lakes, initially most retaining their links to the sea as estuaries. One of these is Lake Sibaya. This lake subsequently lost its direct link to the sea, and is separated by a narrow strip of high, richly forested dunes.

Sibaya is considered to be South Africa's largest natural freshwater lake, the surface area fluctuating from 60 to 77 km^2, closely linked to prevailing rainfall. Despite the area being endowed with many rivers (Pongola, Mkuze, iMfolozi etc.), Lake Sibaya does not enjoy major river inflow, and the replenishment of evaporated water is achieved simply by drainage from rainfall in its modest (530 km^2) catchment area. While this contributes to crystal clear water, it also limits the level of nutrients - so much so that some species – such as tilapia and catfish do not reach maximum size, with adult fish being stunted. The marine origins of Sibaya are clearly evident today, reflected in the composition of its aquatic life. For example, five of the 18 fish species recorded are of marine origin - having adjusted to a totally fresh water environment.

Although this beautiful lake is tucked away in a remote part of South Africa, it offers many benefits. Riparian communities have an excellent source of high quality water, subsistence fisheries provide protein, and modest agriculture yields fine crops. Tourism has great potential but is underdeveloped. The clear water, white sandy beaches, a growing population of hippos and crocodiles plus more than 250 species of birds must surely make this one of the finest KZN tourist destinations.

While Lake Sibaya enjoys some protection under the Ramsar Convention, it is only the eastern rim of the lake that is included in the iSimangaliso Wetland Park. The lake can best be reached from the south via Mbazwana and the north via Manguzi. To visit this aquatic jewel requires planning and a day permit from the Park Authorities. But rest assured, this is insignificant when compared to the quality visit you will experience.

Lake Sibaya
Photo: Fiona MacKay

Developing coastal zone capacity in KZN

Bronwyn Goble, ORI

EDTEA has always had a strong focus on training and capacity building for Integrated Coastal Management (ICM).

The 2017/2018 cycle focused on training relating to the CoastKZN information portal (**www.coastkzn.co.za**): i.e. how to use it and how it can be applied in the daily tasks of coastal managers. Training sessions were held in small groups so that individual assistance could be facilitated - overall 88 participants attended four sessions between October 2017 and March 2018.

Attendees found great value in the training sessions as many of them had not previously seen CoastKZN, nor had any understanding of what information it hosted and what functions it could provide. Participants from a wide range of coastal environmental sectors (DEA, DAFF, DWS, SANDF, Ezemvelo, district and local municipalities, environmental consultants and EDTEA) realised how CoastKZN could be used to improve their individual tasks.

EDTEA also hosted an exciting one-day workshop on ecosystems-based management for the coastal zone. The workshop presented information on alternative management approaches for the coast by considering green engineering and working with nature. The focus was on an integrated approach for the sustainable management of coastal areas and aimed to improve the balance between trade-offs in socio-economic development and coastal conservation.

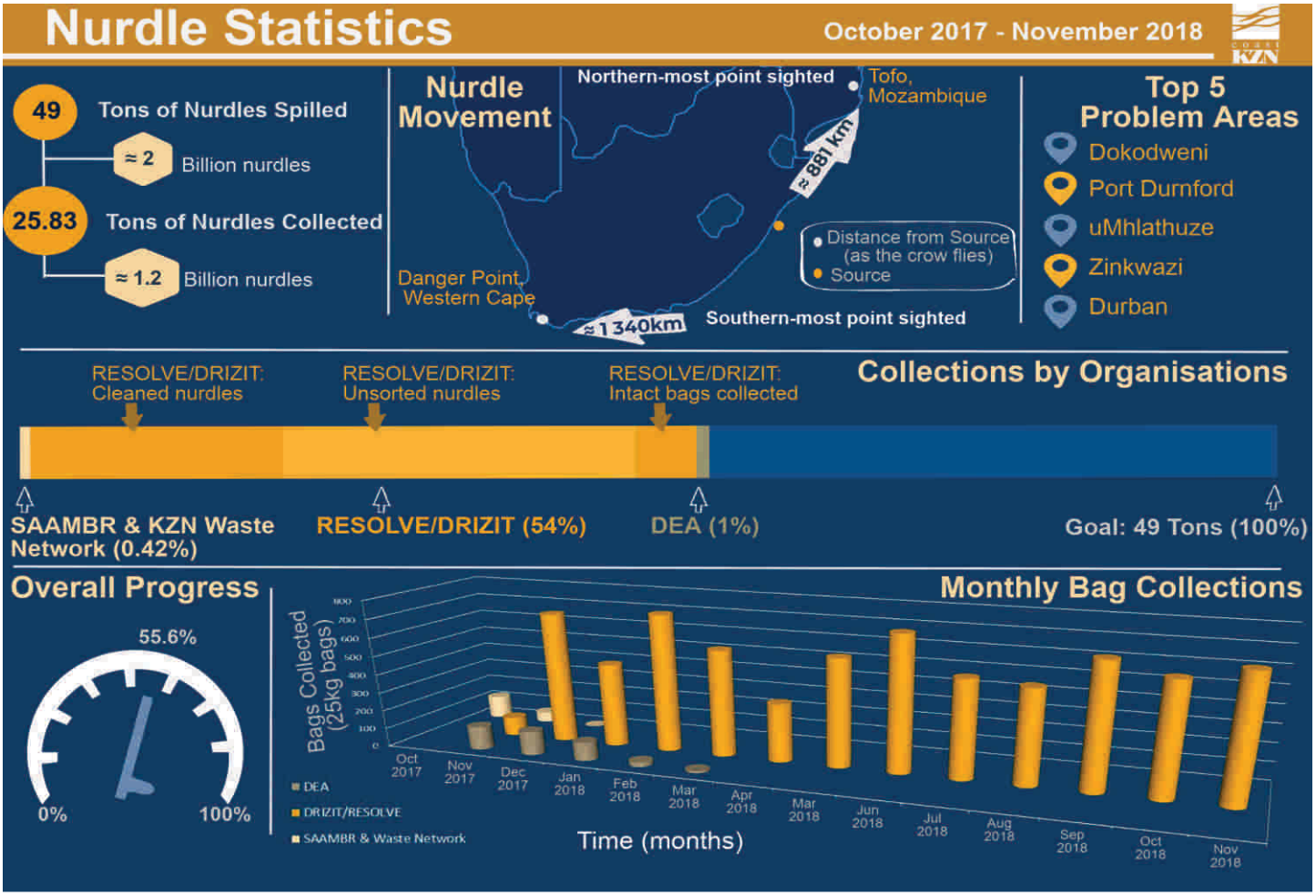
We were fortunate to have a leading expert in the field, Dr Luciana Esteves of Bournemouth University, presenting this workshop. Her knowledge and passion for the topic inspired the attendees. The course was well attended, with 42 participants from a wide range of governmental organisations. Attendees felt this training gave them exposure to novel international solutions and added a new dimension to their understanding of coastal management, which would serve to improve overall coastal knowledge and decision-making skills.

CoastKZN training group and facilitators
Photo: Mariana Tomalin

Ecosystem-based training for coastal zone management facilitated by Dr Luciana Esteves
Photo: Rabia Wahab

The nurdles spill one year on

Rabia Wahab, ORI



Remembering an ocean conservation warrior

Marilyn Bodasing, ORI

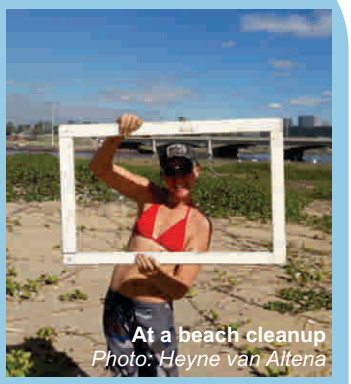
My earliest memory of Caroline Reid is as an exuberant 2nd year student on a field trip. She continued to learn and grow during the next twenty years. Her broad range of interests combined with passion for the projects that she tackled. She immersed herself energetically in the task at hand; she didn't just swim, row, sail and dive, but taught others to do the same, to promote water safety. Caroline was also just hours away from achieving her pilot licence.

If there was an environmental cause to champion, she was the first to volunteer: nurdles, plastic pollution, beach cleanups, recycling, air quality and offshore mining issues. She coordinated many beach and diving cleanups and with her networking skills, petitioned many business contacts to become involved. In 2017 she coordinated the International Coastal Cleanup, and her list of contacts helped SAAMBR take over at short notice in 2018.

She could not bear to see a person or animal in need, and would give away her own food and clothing to the destitute. Testament to this is that many of her dog rescues ended up as her pets!

She became involved in feeding schemes for low cost housing projects (e.g. Kenneth Gardens) and life skills for child-headed households (in Phoenix where she taught swimming and reading),

Caroline Reid
Photo: Douw Steyn



At a beach cleanup
Photo: Heyne van Altena

sustainable vegetable farming techniques, and recycling projects in a number of communities. She also participated in crochet projects and created awareness on the side effects of plastic breast implants.

Caroline filled her 41 years with high-spirited action. Yet she was a 'behind the scenes' activist, never seeking the limelight. Her untimely death is mourned by the KZN marine and coastal community. We offer our condolences to Heyne van Altena and thank him for sharing Caroline's story.

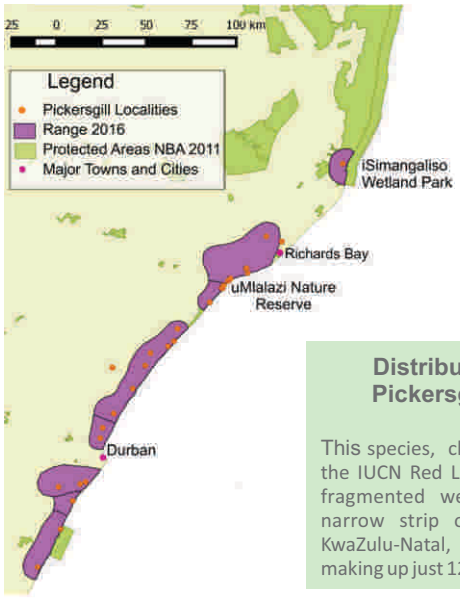
"I will not be another flower, picked for my beauty and left to die. I will be wild, difficult to find and impossible to forget." (Erin Van Vuren)

Back into the wild

Jeanne Tarrant: Threatened Amphibian Programme Manager, Endangered Wildlife Trust (EWT)

H. pickersgilli
Photo: Nick Evans

The 17th September 2018 marked an exciting leap for amphibian conservation in South Africa. Through the collaborative efforts of several organisations, the first reintroduction of a captive-bred threatened South African frog species back into the wild took place. This marked the culmination of a decade of work, and is the first major step in a long-term project aimed at reintroducing Pickersgill's Reed Frog, *Hyperolius pickersgilli*, to new or rehabilitated sites in the wild.



Distribution map of the Pickersgill's Reed Frog

This species, classified as Endangered on the IUCN Red List, occurs only in highly fragmented wetland habitat within a narrow strip of the central coast of KwaZulu-Natal, restricted to 12 locations making up just 12 km^2 in area of occupancy.

The species is threatened primarily by loss and degradation of its coastal wetland habitat due to urbanisation, mining, agriculture and industrialisation, pollution and the drying of its habitat caused by invasive plants.

Ezemvelo approached the Johannesburg Zoo to breed *H. pickersgilli* in captivity so that an assurance population could be established, in the event that this species might go extinct in the wild. This population would also be able to provide frogs for reintroduction into the wild and to secure well-managed sites.

In 2012, the first 20 adults were collected in Durban and taken to the zoo to begin the breeding programme. Although little success was had at this time, the zoo continued to care for the frogs and maintained them in good health for about five years. A further 30 adults were collected in September 2017 and very quickly the staff found themselves looking after hundreds of tadpoles, and subsequently juveniles. Much about the species' breeding biology and behaviour has been learnt through this project, including development, diet and husbandry.

The first batch of some 200 individuals bred in captivity were released at Mount Moreland's 'Froggy Pond', an 18 hectare reed-bed wetland from which the breeding stock was originally collected. Work done by the EWT and the Mount Moreland Conservancy through support from the Department of Environmental Affairs (DEA) to remove alien vegetation has ensured that the site is well managed, and in the process creating jobs for people living in the vicinity of the site.

Did you know?

Globally amphibians are the most threatened group of vertebrates.

About 30% of South Africa's frogs are considered threatened.

Delegates release juvenile captive-bred Pickersgill's Reed frogs at Froggy Pond wetland, Mount Moreland.
Photo: Jeanne Tarrant

Coastal access in KwaDukuza Municipality

Nhlanhla Joshua Mdakane, KwaDukuza Municipality

Public coastal access to municipal beaches has become a pressure point for the KwaDukuza Municipality (KDM), mainly due to historical access restrictions. Challenges include providing reasonable coastal access to previously disadvantaged communities, addressing private access and illegally closed public access routes.

Access to the coast is a right outlined in the ICM Act, and as a municipality, KwaDukuza is responsible for ensuring reasonable access to coastal public property within its jurisdiction, which extends from the Ballito beaches in the south to Zinkwazi in the north. This includes many popular beaches: Salmon Bay, Ballito, Willard, Thompson's Bay, Shaka's Rock, Salt Rock, Sheffield, Tinley Manor, Nonoti, Blythedale and Zinkwazi.

KDM has completed an audit of coastal access which includes existing and historical access points. The outcome was 63 public coastal access routes. The municipality is now validating these before they are formally designated as *Coastal Access Land*. In order to manage these areas, the municipality plans to develop a set of coastal access by-laws. This process will also ensure that environmentally-sound access points, both new and existing, are utilised and

A beach access point at Nonoti
Photo: Ivan Govender

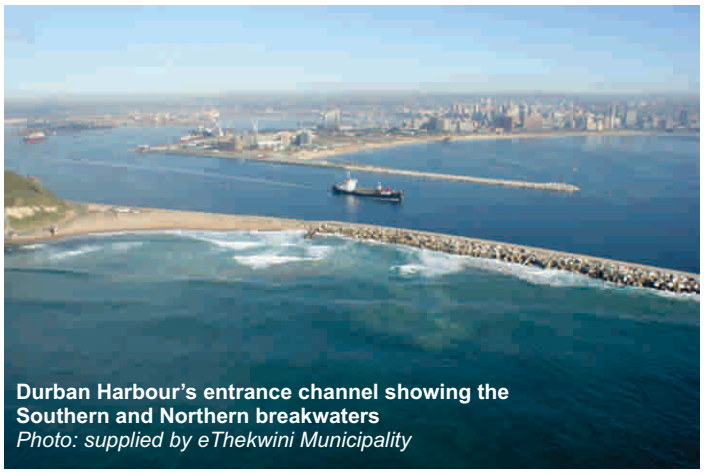
it will prevent unlawful restrictions on access rights. KDM aims for all beaches to be used, managed, protected and conserved through the Beach Nodes Development Framework and the current Beach Maintenance Plans. The Municipality, through the assistance and support of EDTEA and DEA, is on its journey to develop a KwaDukuza Public Coastal Access Plan.

Replenishing Durban's beaches

Godfrey Vella & Nishal Misthry, eThekwini Municipality

Under normal conditions, waves approach our coastline at an oblique angle and drive a nearshore current that moves from south to north. This current picks up and deposits sediment along the coastline and effectively acts like a conveyor belt that supplies/removes sand to/from the beaches, with a nett migration of sand from south to north along our coast.

In Durban, the harbour entrance breakwaters are essential for providing safe navigating conditions for vessels entering and leaving the port. However the breakwaters impede the northern longshore sand drift, with the southern breakwater acting like a very large sand trap, slowing down and diverting sand from reaching the northern section of coast. Over time this accumulated sand moves around the southern breakwater and can reduce water depth, causing sand to deposit at the tip of the breakwater. This reduces the entrance channel depth and makes it unsafe for ship navigation. The Durban beachfront is therefore not functioning naturally and the sand replenishment programme is critical to maintaining the beach zone.



Durban Harbour's entrance channel showing the Southern and Northern breakwaters
Photo: supplied by eThekwini Municipality

Sand replenishment is a joint exercise between eThekwini Municipality and Transnet, and has been in operation for the last 40 years. Sand is removed from the sand trap, south of the harbour entrance, onto the Central beaches.

The primary purpose of the scheme is to transfer sand from the southern side of the harbour entrance to the northern side, mimicking the natural northern movement of sand up the coast. The programme is operated to provide about 480 000 m^3 of sand to the beaches every year, equivalent to the amount of sand eroded from these beaches annually. In addition, the Central beachfront piers trap sand and aid beach formation between the piers.

Historically sand was supplied to a hopper station, owned and operated by the City. This was removed during a harbour widening project and replaced by a new hopper operated by Transnet. It is intended that this will be linked to a newly-constructed hopper station and pump along the beachfront with 5 booster stations owned and operated by the City. However, there have been delays in the construction. The interim solution over the years has been to pump dredged sand directly onto the beach as far as Addington Beach, where it is intercepted by the littoral current and moved gradually northwards.

Sand replenishment on North Beach
Photo: Marinel Willemse

In order to track its success, the City has implemented a coastal monitoring programme that includes monitoring the sand profiles along the eThekwini coastline, dating back to the 1980's. Beach surveys are undertaken frequently using mobile ground-based LIDAR in order to track the gain or loss of sand onto the Durban beaches. The information from these surveys is used to estimate the volume of sand which has been eroded or deposited onto our beaches and track areas of erosion or deposition. The effect that high swell and wave events have on our beaches are also tracked and monitored using this information.

The value of the sand replenishment programme is difficult to quantify. However, the benefits can be indirectly estimated based on the purpose it serves in providing protection to infrastructure located along this stretch of coast which is an important all-year local, national and international tourist destination. This scheme aids in maintaining a safer, clear and deep enough entrance channel for ships and ensures wider, safe recreational beaches for beachgoers.

Blue Flag beaches in KZN:
2018/2019

BLUE FLAG STATUS		PILOT STATUS*	
Ray Nkonyeni	Marina	*towards Blue Flag requirements	
	Trafalgar	**Kwa-Dukuza**	Blythedale
	Lucien		Salt Rock
	Southport		Willard
	uMzumbe		Tinley Manor
	Ramsgate	**Mandeni**	Dokodweni South
	Hibberdene		Tugela Mouth
eThekwini	Westbrook	**eThekwini**	aManzimtoti
	uShaka		uMgababa

Blue Flag South Africa

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Keeping our beaches clean: International Coastal Cleanup Day 2018

Varsha Naidu, SAAMBR

SAAMBR (the South African Association for Marine Biological Research) coordinated the International Coastal Cleanup activities in KZN on the 15th September, in partnership with Ocean Conservancy and Plastics SA. Volunteers from conservancies, hotels, lifesaving clubs and private citizens were eager to participate and host cleanups. Champions in each area assigned bags, data sheets, posters and provided advice. SAAMBR ensured that bags and data sheets got to all locations and communicated with all champions to ensure that data was collected at each cleanup for the Ocean Conservancy Report. Ezemvelo and Use-it transported bags up and down the coast from Durban to the provincial borders.

Returns were collated from 43 sites and the most common items collected were cigarette butts, followed by food packaging, as shown in **Table 1** below. In addition, 25 000 small foam pieces and 22 000 small plastic pieces were collected.

Table 1: Summary of common items collected across all sites.

Item collected (*= proportion of total number/s)	Number
Cigarette butts (*95%), cigar tips & lighters	17234
Food wrappers (*64%), plastic and foam take-away containers	9817
Plastic caps (*70%), metal bottle caps	12064
Sticks, stirrers, lollipop sticks	6134
Plastic bottles (*58%), glass bottles	12313
Plastic grocery bags (*52%), other plastic bags	5369
Paper, plastic, foam plates, cups	3954
Fishing gear: buoys, pots, traps, nets, pieces of net, fishing line (1 m = 1 piece; *38%), rope	3796
Condoms, diapers, tampons, syringes	1509

Learners sorting litter collected at uShaka Beach
Photo: Judy Mann

Part of SAAMBR's role was to host the Woolworths School Programme schools on the day at uShaka Beach. Despite a 7 am start, sunny weather and a good mood pervaded the uShaka Sea World dolphin stadium meeting point. Education Director, Jone Porter, briefed the learners and teachers on the sorting process, while Woolworths' Jackie Hardien shared information on the sustainability programme which Woolworths is passionate about. Our volunteers were excited about a major change in the goodie bags this year, which included reusable water bottles instead of once-off juice boxes.

Most of what was found at uShaka Beach was small litter that had been on the beach for a while, disguised in the sand, but our groups were determined to find them! Over 5600 cigarette butts, 1500 straws, and over 6000 small pieces of plastic were picked up in an hour by our 500 learners and 20 volunteers. There were also more than 1600 nurdles (plastic pellets) collected on the beach - just under a year after the harbour nurdle spill in October 2017.

For the learners, the morning was informative, fun and most of all, a time to reflect on how users impact the beaches we enjoy so much.

Enter our exciting competition!

WIN 2 tickets to uSHAKA SEA WORLD

Send your name, surname, email and telephone details with your answers to these 3 easy questions, either via the *Contribute* page on www.coastkzn.co.za or email us at coastkzn@gmail.com.

Entries close on 28th February 2019. The winner will be notified by email and telephone on 4th March 2019.

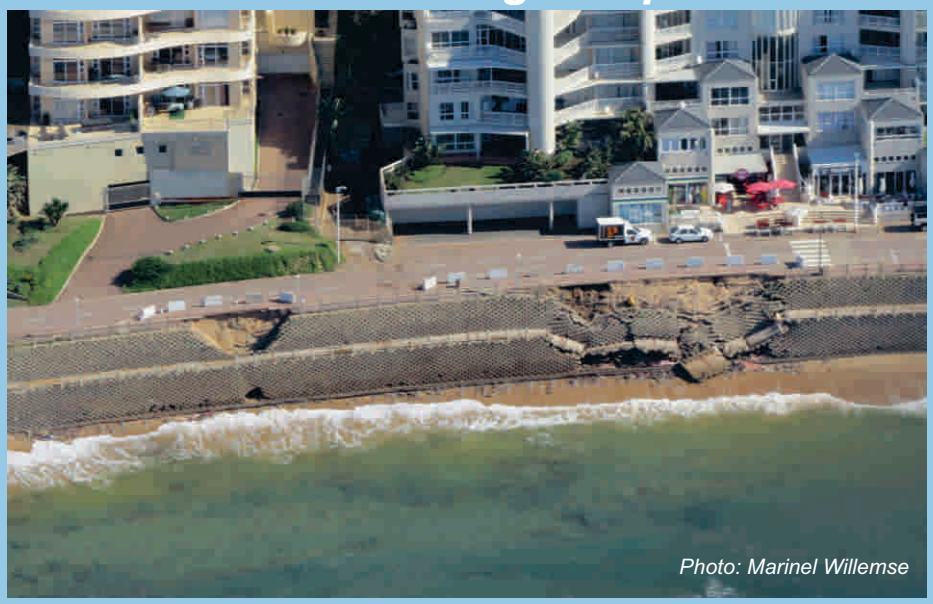


Photo: Marinel Willemse

1. Which frog species was re-released in some KZN coastal wetlands where it had previously occurred?
2. What was the most common item found on KZN's beaches during the 2018 International Coastal Cleanup?
3. In which part/area of the eThekwini Municipality was this photo of coastal erosion taken? *(see picture above)*

Estuarine management: The Abbott judgment and its implications for Local Government

Andrew Mather, eThekwini Municipality

Mr Abbott attempted to compel the municipality to breach an estuary to reduce the flooding of his dwelling alongside the estuary. He took the Overstrand Municipality firstly to the High Court and thereafter to the Supreme Court of Appeal. Abbott lost his case in both Courts but several clarifications around environmental and estuarine management were provided by these rulings, and are of national relevance.

Constitutional competency

The Constitution provides for spheres of government to operate within a clearly defined mandate. Schedules 4 and 5 set out these mandates. The Courts ruled that as Environment is a Schedule 4A competence (concurrent National and Provincial), Local Government does not have the mandate to breach estuaries.

The National Estuarine Management Protocol (NEMP), which was finalised after the ICM Act, was found to have no legal standing as far as allocation of responsibilities to Local Government. It failed because it had been approved outside the ICM Act and furthermore there was no formal assignment to Local Government as provided for in Clause 156(4) of the Constitution.

Artificial breaching of an estuary
Photo: ORI/EDTEA

What needs to happen to fix this?

- The NEMP needs to be amended to reflect that estuarine management is the co-responsibility of National and Provincial Government. This is an interim arrangement until the ICM Act is revised to properly mandate Local Government this responsibility.
- The DEA needs to prepare revisions to the ICM Act and consult stakeholders, particularly Local Government, given the additional environmental responsibilities being considered.
- Changes to the ICM Act may still take several years. In the meantime it is possible for National and Provincial Government to approach Local Government for a formal assignment in terms of Clause 156(4) of the Constitution. This route provides for a formal assignment of Schedules 4A and 5A competencies to Local Government. However this is subject to:
  - i) agreement on powers and limitations;
  - ii) conditions stipulated by Local Government (financial, human resources or other requirements); and
  - iii) the capacity of Local Government to administer the mandate.

Further reading:
www.saflii.org/za/cases/ZASCA/2016/68.html

Monitoring humpback whales in KZN

Jennifer Olbers, Ezemvelo

From June to July 2018, after a 16 year hiatus, the East Coast Humpback Whale Survey was undertaken at Cape Vidal within iSimangaliso Wetland Park. Previous surveys in the 1980's, 1990's and early 2000's were undertaken with the aim of estimating the population of the humpback whales. The whales migrate along the East Coast annually between May and November from their summer feeding grounds in the Southern Ocean to the warmer breeding grounds off Mozambique. During this time they are relatively close inshore.

It is estimated that ~210 000 individual humpback whales were slaughtered during the commercial whaling period in the 1900's in the Southern African region. Humpback whales were protected in 1963 in South Africa and there has been a remarkable recovery of this population in recent years. This may count as one of South Africa's greatest marine conservation accomplishments.

Humpback whale
Photo: Sean Fennessy

A theodolite used in whale monitoring
Photo: Jennifer Olbers

The survey focused not only on gaining an estimate of overall whale numbers and group sizes but also to understand the daily densities and migration speeds. It is anticipated that the results from this project will allow scientists and conservationists to expand their current knowledge of the humpback whale populations as well as to base future conservation and tourism initiatives on the best available scientific information.

This project is a collaborative effort between a number of organisations including WildOceans, the Mammal Research Institute of the University of Pretoria, Ezemvelo KZN Wildlife, Wildlife ACT and the Cape Peninsula University of Technology.

20 MPAs approved by Cabinet

Tamsyn Livingstone, Ezemvelo

On the 24th October 2018 the Acting Minister of Environmental Affairs, Derek Hanekom, announced that Cabinet had approved 20 new Marine Protected Areas (MPAs), endorsed as part of Operation Phakisa. This was welcome news after 10 years of work by scientists and environmentalists across South Africa, led by the South African National Biodiversity Institute and DEA: Oceans & Coasts.

South Africa is bounded by three oceans. Our coastal waters have a range of habitat types and ecosystems, supporting about 1000 marine species. While previous MPAs provided protection mainly for coastal areas, these new MPAs will also ensure protection of offshore ecosystems and include several threatened and fragile ecosystem types such as the mud, gravel and shelf-edge habitats found on the uThukela Banks. This network of MPAs increases our ocean protection from 0.4% to 5%, and goes some way towards meeting the IUCN goal of conserving 10% of the marine environment by 2020. In comparison, about 8% of South Africa's terrestrial area is under protection.

MPAs are declared through the NEM: Protected Areas Act and managed by agreements between the DEA and various authorities at a local level. In KZN, this includes Ezemvelo KZN Wildlife and iSimangaliso Wetland Park Authority. The MPA may be attached to a national park, heritage site or reserve, in which case the same authority would manage both the terrestrial and marine protected area, e.g. iSimangaliso Wetland Park Authority manages the iSimagaliso MPA.

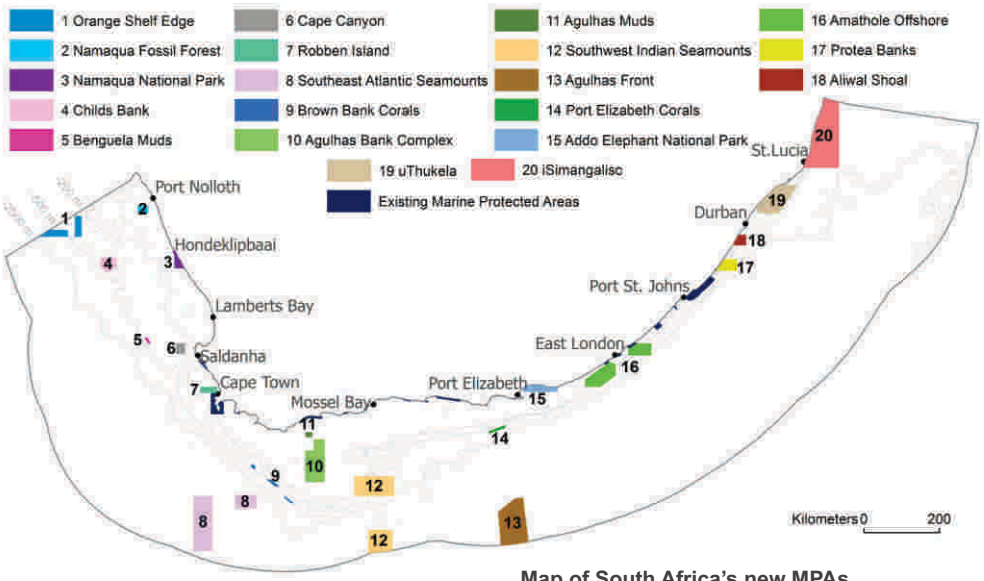
In KZN two new MPAs are to be formally declared, along with the expansion of 2 existing MPAs. These areas are as follows:

1. iSimangaliso: This MPA includes the original Maputaland and St. Lucia MPAs declared in the 1970's and extends from the Mozambique border to Cape Vidal and 3 nautical miles out to sea. The area currently protects the critically endangered leatherback and endangered loggerhead turtles as well as the beautiful reefs which attract scuba divers from all over the world. The new iSimangaliso MPA is about 10 times larger than the original area and will provide protection to the full extent of the canyons which form a refuge for South Africa's most accessible and known coelacanth populations, as well as securing protection of the foraging area of turtles.

Coelacanth
Source: Ugu Lwethu - Our Coast
Photo: Peter Timm

2. Aliwal Shoal: This is an existing MPA which extends 7 km out to sea and includes the Aliwal Shoal Reef about 5 km offshore from the uMkhomazi River. The MPA will expand northwards to the iLovu River and southwards to the uMzimayi River as well as offshore. It will provide protection to South Africa's threatened linefish as well as preserving habitats for geelbek, dusky kob and migrating predators such as ragged tooth sharks, for which this area is well known. This MPA will also promote ecotourism.

3. uThukela Banks: This MPA was identified as a priority area for protection of threatened mud and gravel seabed habitats, reefs and submarine canyons. It is supported by South Africa's second largest river, the uThukela River, which provides nutrients and sediments to the area *(also see pg.1)*. The MPA preserves spawning and nursery areas for many different species such as prawns, other crustaceans and hammerhead sharks found within the turbid waters. Recent research has also revealed deep reef systems supporting a wide variety of seafans and black corals, as well as providing homes to some of South Africa's threatened linefish such as the seventy-four and black musselcracker.



Map of South Africa's new MPAs
Tamsyn Livingstone (Ezemvelo)

4. Protea Banks: The MPA extends from the uMzimkhulu River to the iMpenjani Estuary and adjoins the Mpenjati Nature Reserve and the existing Trafalgar MPA, which covers about 6 km of coastline and extends 500 m out to sea. This MPA starts offshore at about 40 m depth and extends beyond the continental shelf to cover the Protea Banks reef system, three offshore canyons and other deep ocean habitats. The area forms part of the annual Sardine Run and is well known for shark aggregations which will now be provided protection, together with a number of important linefish, corals and canyon habitats. The implementation of this MPA will aid the tourism industry by providing protected habitat for these species which many visitors come and enjoy.

The formal gazetting of these new MPAs is expected early in 2019.

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