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

2017

Ulwandle

KwaZulu-Natal's Coastal Management Newsletter

Overcoming the nurdle hurdle

Judy Mann-Lang, SAAMBR

On 10 October 2017, during the massive storm that lashed the KwaZulu-Natal (KZN) coast, an estimated 49 tons of nurdles spilt out of two containers in the Durban harbour after the ship that was transporting this cargo collided with another vessel. The nurdles were visible in the harbour soon after the incident, and were sighted on Durban's uShaka Beach a week later.

The nurdle cleanup started at uShaka Beach on 18 October 2017. Nurdles are small plastic pellets which serve as the raw material for the manufacture of many plastic products.

Photo: Ann Kunz (SAAMBR)

The South African Association for Marine Biological Research (SAAMBR) released a press statement and engaged with social media to mobilise the public to start collecting the nurdles off the beach. The SAAMBR staff initially worked out the best way to collect the nurdles and shared this information in a video and an infographic that informed people about the spill.

The CoastKZN information portal (www.coastkzn.co.za) was used as a central point for the dissemination of information and an interactive map was created to show the distribution of verified nurdle sightings along the coast.

The full scale of the disaster is only now being appreciated. So far, reports of the nurdles have been received from Kosi Bay (north) to Mossel Bay (south). The Mediterranean Shipping Company (MSC) has appointed Resolve and Drizit to collect the nurdles, whilst the Department of Environmental Affairs (DEA) has mobilised its Working for the Coast teams to assist with cleanups.

The spill has activated a groundswell of activity from local NGOs and the public, raising awareness of the extent of plastic pollution in our waterways and along our coast. The recent KZN Marine Waste Network meeting highlighted that an incident of this magnitude brings people together to address the issue of plastic waste in the marine environment. Sharing information and best practices, strategically focussing on particular problems and addressing them will improve our ability to deal with plastic pollution. Ultimately, however, we need to reduce our wasteful use of plastics.

While not toxic in their raw form (pre-moulded and packaged), nurdles over time attract and concentrate harmful substances such as pesticides, herbicides, other organic pollutants and heavy metals. Marine animals and seabirds often mistake the nurdles for food, resulting in blockages and starvation.

A selection of photos from nurdle cleanup efforts at uShaka Beach.
Photos: Omar Parak (EDTEA), Rabia Wahab (ORI) and Ann Kunz (SAAMBR)

Editors note: *Since SAAMBR's early efforts, large numbers of public volunteers, the KZN Marine Waste Network and response teams (Drizit, Resolve, WildOceans and DEA: Working for the Coast) are involved in ongoing nurdle cleanups. SAAMBR has collected and/or received 183.9 kg of nurdles, representing over 7.5 million nurdles removed from uShaka beaches, while overall, more than 4.1 tons of nurdles have been collected across the KZN coast as at 30 November 2017.*

A portal into the KZN coast

Bronwyn Goble, ORI

Our KZN coast is a popular destination, both for residents and tourists alike, fuelled by year-round warm weather and water temperatures. However, this intense use of the coastal zone makes its management critical. There are a number of legislative frameworks that have a bearing on coastal issues and as such a number of government departments need to be involved. This requires managers to have a broad range of knowledge and access to diverse information about the coast, its functioning, its resources and the management thereof.

In order to bridge this gap, and provide access to coastal-specific information and data in support of Integrated Coastal Management (ICM), the Oceanographic Research Institute (ORI) on behalf of the KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA) developed CoastKZN (www.coastkzn.co.za).

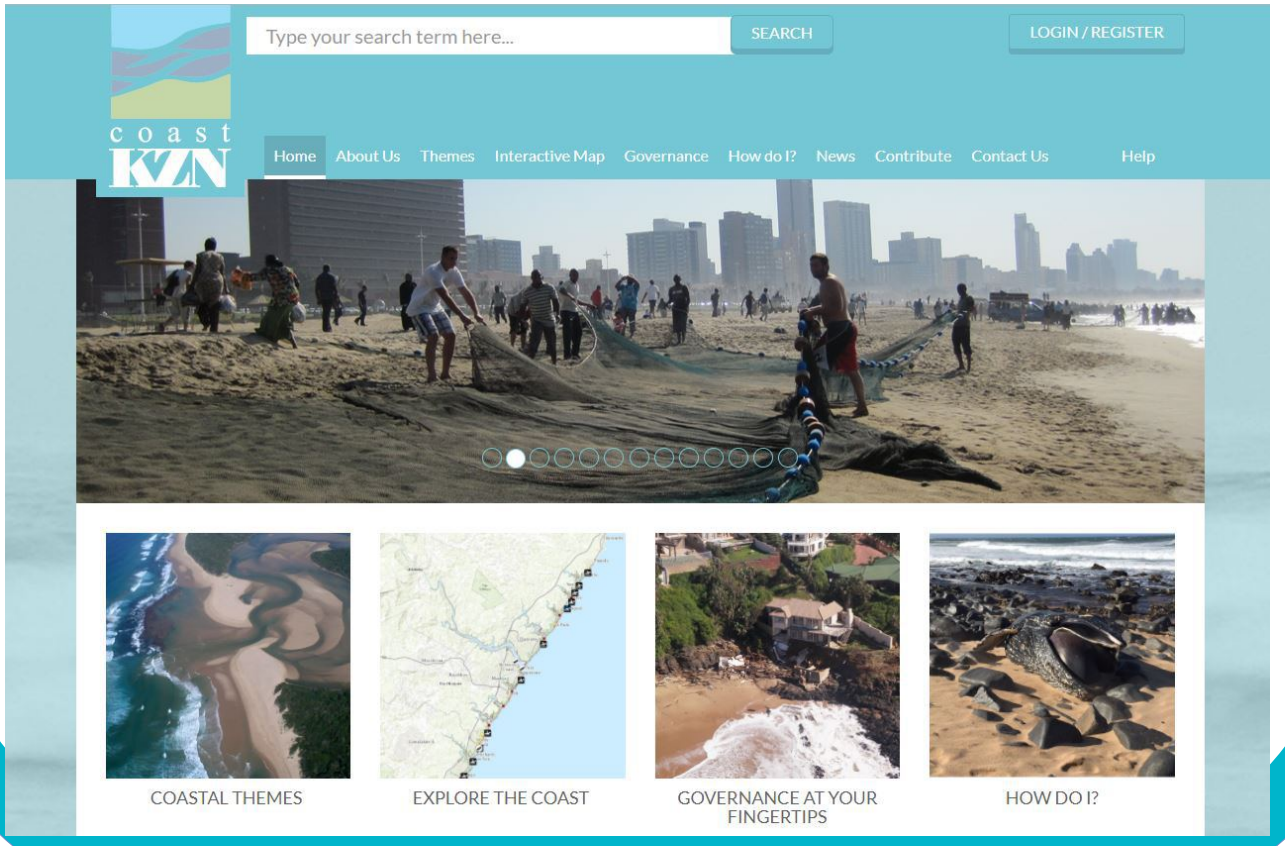
Citizen science in action

The CoastKZN portal is being used to gather information from the public regarding the extent of the spread of nurdles along the coast. The public has been uploading location details and photographs of nurdle sightings and collections. CoastKZN has also been providing information on drop-off points and cleanup initiatives, and as such serves as a critical information hub for the cleanup.

CoastKZN is a unique interactive website that focuses on the KZN coast and its ICM issues. The site is freely available to all coastal stakeholders and is a decision-making tool to assist managers on coastal management issues. It also provides coastal and estuarine information to the general public, and offers a platform for engagement as citizen scientists.

In terms of the information presented by CoastKZN, there are four main categories, namely:

1. **Themes** – provides definitions and information on a range of coastal and estuarine topics such as coastal access, risk and vulnerability and the estuarine functional zone.
2. **Explore the coast** – offers an interactive map of KZN which shows a number of spatial layers related to the coast and the management thereof, such as a coastal vulnerability index, boat launch sites and estuary boundaries.
3. **Governance at your fingertips** – defines the coastal zone and archives copies of legislation, regulations and policies relevant to the coast and its management.
4. **How do I?** – provides information on how to undertake certain activities in the coastal zone and covers a range of topics from reporting incidents to applying for permits.



Are we losing coastal space?

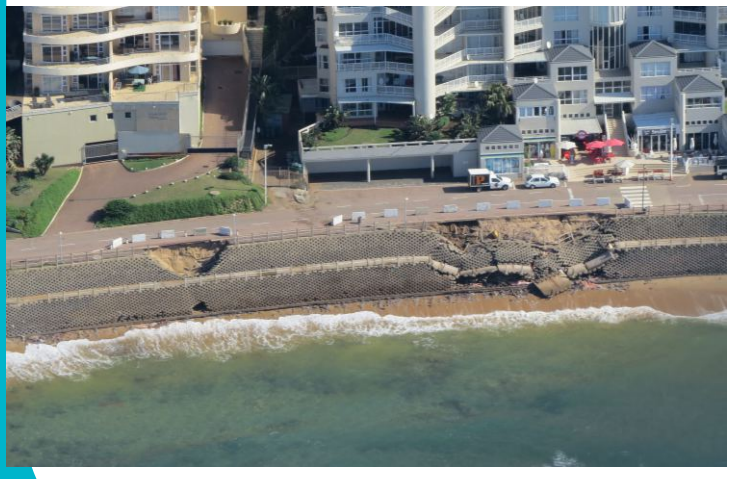
Bronwyn Goble (ORI) & Omar Parak (EDTEA)

The coast is a dynamic zone, always changing, moving and shaping. It follows cycles of erosion (loss) and accretion (gain) over seasonal and annual timescales. But are we reaching a tipping point? Are our coasts eroding at a greater rate than the natural cycle allows for?

During 2017, we have again witnessed significant erosion along the KZN coastline, both as a result of these natural seasonal variations and extreme wave or weather events. One site of concern is the Thukela Mouth Beach node, where major erosion has been noted and there is little evidence of accretion or stabilisation. Erosion on the north bank has resulted in the loss of recreational facilities and the launch ramp. There is growing concern that this erosion will continue into the carpark in the back-beach area.

In this regard, the Mandeni Municipality is beginning to strategically look at what management options can be considered now and in the future, based on the current and proposed activities in this space.

Thukela Beach has been experiencing significant recent erosion.
Photo: Omar Parak



Damage to the Loffelstein wall and narrowing of the beach (Umdloti, 2017).
Photo: Marinel Willemse (ORI)

Loss of foredune and coastal access boardwalk at Suncoast Beach, Durban.
Photo: Omar Parak

The loss of coastal space is not unique to the Thukela area. It is occurring more and more along our coast. Other key sites which popped up on the erosion radar in 2017 are Durban's central beaches, Umdloti and Richards Bay respectively. In the case of Umdloti, emergency repairs to the Loffelstein wall are being undertaken and the eThekwini Municipality has indicated it will also be looking towards a viable long-term solution for this stretch of coast. These are not new challenges as these sites have been subject to historical erosion over the years.

What does this all mean for coastal management in KZN?
We need to gain a clearer understanding of these changes and the associated risk in order to inform future management and the determination of the *coastal management line*. Bold planning and adaptation decisions will be required going forward as the reality of sea-level rise also looms large.

EDTEA is pleased to report that it has drafted a provincial coastal risk line and will shortly be following a formal process in consulting municipalities, government departments and coastal stakeholders towards the determination of the KZN coastal management line.

Did you know?

The KZN coastline is generally eroding, as is the case with most of the world's coastlines, at rates of between 20 cm and 2 m per year.

Coastal erosion is exacerbated by a regional sand deficit due to a combination of drought, sandmining, dam construction and inappropriate coastal development.

Coastal erosion is commonest in winter, being driven by southerly to south-easterly swells, which create a south to north littoral drift, triggering erosion in the southern parts of bays. In summer the direction reverses, causing a seasonal beach rotation, but the winter pattern dominates over the long term.

KZN public launch sites to be gazetted

Bruce Mann (ORI)

Boat launch sites are important access nodes along the coast which enable people to go to sea and undertake various activities such as fishing, scuba-diving and whale-watching. In terms of the Public Launch Site Regulations (2014), all operators of marine and coastal public launch sites in South Africa have to apply for formal listing (excluding those sites inside the boundaries of a protected area or within an operational harbour area that has already been physically modified from its original natural state).

To this end an inspection of all boat launch sites along the KZN coast which had applied for listing was undertaken by the KZN Boat Launch Site Technical Committee (BLSTC) from 4-6 September 2017. The BLSTC comprises of members from EDTEA; Department of Environmental Affairs; Department of Agriculture, Forestry and Fisheries; KZN Sharks Board; South African Maritime Safety Authority; Ezemvelo KZN Wildlife; National Sea Rescue Institute and the Oceanographic Research Institute (ORI). During inspections, each site was evaluated according to a set of criteria and current launch site operators (usually the ski-boat club chairperson) and the launch site licence holder (local municipality representative) were interviewed on the day-to-day running of their sites. A total of 26 boat launch sites were evaluated in this manner between Amatikulu in the north and Port Edward in the south.

Launching activities at Hibberdene.

Photo: Bruce Mann

Pennington launch site.

Photo: Omar Parak (EDTEA)

The KZN BLSTC conducting an interview with municipal authorities responsible for managing the launch site at Shelly Beach.

Photo: Bruce Mann

Following the site inspections, three public meetings were held in Uvongo, Salt Rock and Durban (17-19 October 2017) to ensure open and transparent communication with all stakeholders and concerned members of the public regarding the listing process.

Going forward, the listed public launch sites will continue to be monitored through the KZN Boat Launch Site Monitoring System and operational licences will be re-evaluated every five years.

Any queries on the management of public launch sites in KZN should be addressed to omar.parak@kznedtea.gov.za.

TABLE 1: KZN boat launch sites which are being considered for listing in the Provincial Gazette.

Amatikulu	Umdloti	Rocky Bay / Park Rynie	Shelly Beach / Sonny Evans
Thukela	Umhlanga	Pennington	Ramsgate
Zinkwazi	Isipingo / Reunion	Bazley / Macnicol's	Glenmore
Blythedale / Umvoti	Amanzimtoti / Chain Rocks	Mtwalume	Port Edward
Tinley Manor / Umhlali	Warnadoone / Warner Beach	Hibberdene	The Pont
Salmon Bay / Ballito	Umkomaas	Injambili / Pumula	Note: This does not include launch sites within protected areas or harbours.
Westbrook	Scottburgh	Spillers Wharf	

Did you know?

A total of 52684 individual marine launch records were received and captured for 2016. Ski-boats were the most common type of vessel used for launching (56% of launches).

Protecting the coastline and beyond

Omar Parak (EDTEA)

Operation Phakisa represents a new spirit of moving faster in meeting Government's targets. "Phakisa" means "hurry up" in Sesotho and the application of this methodology highlights Government's urgency to deliver.

One area of delivery is Marine Protection Services and Ocean Governance. In this regard, a Compliance and Enforcement Working Group was set up to monitor compliance and enforcement in the ocean space as part of the broader Governance structure. This Working Group comprises of representatives from a range of National, Provincial and other authorities.

Signs of an illegal campsite (above) and tracks from illegal driving in the coastal zone (below). These transgressions will continue to be targeted by the authorities during coastal compliance operations in KZN.

Photos: Santosh Bachoo (Ezemvelo)

The Working Group meets monthly to coordinate the optimisation of inter-departmental compliance and enforcement functions. A workplan was developed to enable the parties to cover activities in joint operations in the four coastal provinces, including whale watching and white shark cage diving, marine protected species (seals, seabirds, turtles, penguins etc.), illegal developments, illegal fishing, effluent discharges and dumping at sea.

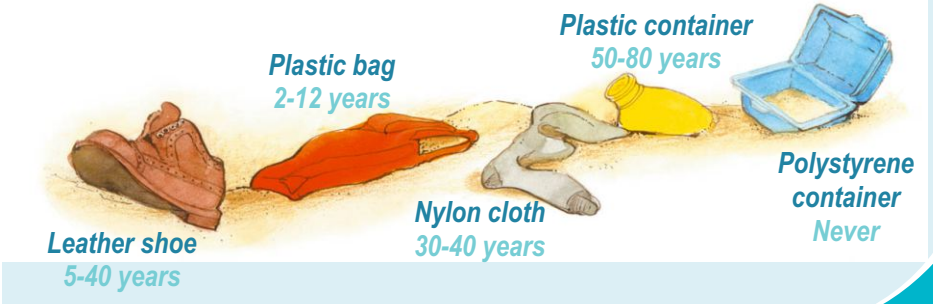
During 2017, the Working Group was instrumental in leading joint operations in KZN regarding the restriction of access to coastal public property by some private landowners; encroachments into the Admiralty Reserve; illegal discharges into coastal waters; prosecution and fines for sales of East Coast rock lobster; numerous charges and fines for poaching and illegal beach driving; and fines for illegally camping on the beach. Charter vessels were also inspected for permits and fish were checked and measured.

Continued efforts in compliance and enforcement will occur in 2018, contributing to the protection of our coastal zone for the benefit of current and future users.

A fence erected across an estuary mouth on the KZN coast. Any person in South Africa has a right of reasonable access to coastal public property, including an estuary. This fence was subsequently removed after intervention by the authorities.

Photo: Omar Parak

It takes many years for our litter to degrade...



Did you know?

Plastic nurdles make up 10% of the litter on beaches across the world.

Every piece of plastic ever produced still exists; it just fragments into smaller and smaller particles. A large proportion of this ends up in our oceans.

More cooler water species strand in KZN

Jennifer Olbers, Ezemvelo

The KZN Marine Stranding Network has had a busy season with seal and penguin strandings. Generally seals and penguins, which are cooler water species, follow the sardines in winter and find themselves stranded on KZN beaches. Seals come ashore to rest, and when ready, they return to the water. In some cases, seals come ashore on popular or busy beaches, which make them prone to disturbance while resting. In such cases, it is important that they are relocated to quieter or protected beaches.

Strandings are caused by both natural factors (such as diseases, abandoned neonates, severe oceanographic and weather conditions), and anthropogenic factors (such as noise interference, toxins and entanglements).

South African Police Services (SAPS) with a stranded elephant seal.
Photo: Jennifer Olbers

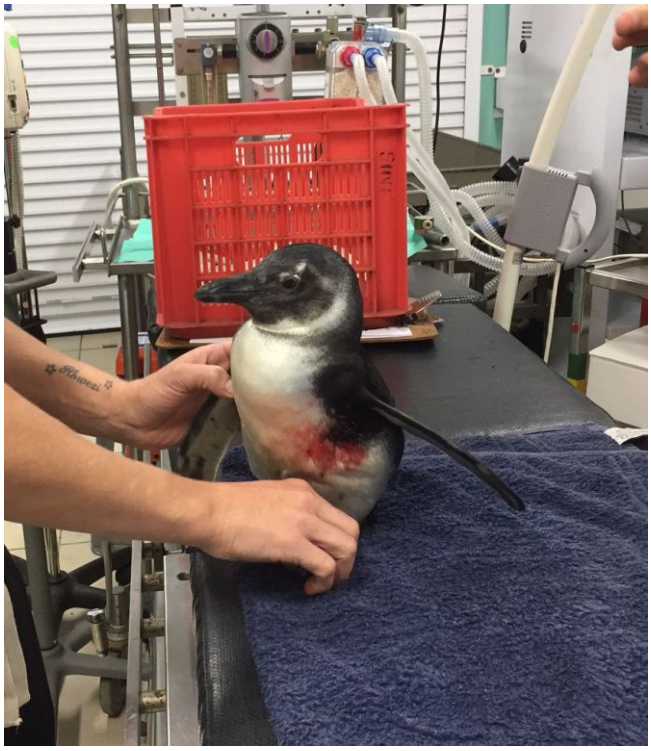
In 2017, three seal species came ashore in KZN: the southern elephant seal, the South African fur seal and the Sub-antarctic fur seal respectively. Three southern elephant seals were reported, which is unusually high for KZN, possibly because they required longer periods of rest.

TABLE 1: Comparison of strandings on the KZN coast during 2016 and 2017.
**Correct up to 8 December 2017.*

KZN strandings	2016	2017*
seabirds excluding penguins	38	10
penguins	4	7
seals	5	8
dolphins	8	4
whales	10	7
turtles	9	7
TOTAL	74	***tbc**

More juvenile African penguins were also seen along the KZN coast than usual, with seven individuals rescued so far. In cases where animals are sick or injured, they are removed for rehabilitation. Three KZN rehabilitation facilities are members of the KZN Marine Stranding Network: the Centre for Rehabilitation of Wildlife (CROW) and Second Chance Avian Rescue (SCAR), both of which specialise in coastal birds excluding penguins, while uShaka Sea World rehabilitates seals, penguins, turtles and coastal birds.

The KZN Marine Stranding Network is a collaborative initiative with various organisations including SAAMBR, Ezemvelo, KZN Sharks Board, EDTEA, coastal municipalities and various NGO's.



Indigo, a young African penguin that stranded on 11 September 2017.
Photo: Jennifer Olbers

Important Contacts

Organisation	Contact Numbers	Stranded Animals
uShaka Sea World	031 328 8222 (o/h) 031 328 8060 (a/h)	dolphins, whales, seals, turtles, whale sharks, penguins
KZN Sharks Board	031 566 9499	dolphin and whale entanglements
CROW	031 462 1127 (o/h) 031 469 0583 (o/h) 031 212 5281 (a/h)	seabirds excluding penguins
SCAR	083 246 6765 074 343 3396	seabirds excluding penguins

Did you know?
Modern whaling started out of Durban in 1908 and continued until 1975, during which time coastal whaling decimated humpback, blue, fin and sei whale populations. Only the humpback whale has shown strong recovery in the last 30 years.

A prickly problem...

Rob Crankshaw, Conservation KZN

Prickly pear (*Opuntia monacantha*) is an invasive plant indigenous to South America, which has spread in areas where the indigenous dune vegetation has been removed and dominates large sections of our dune ecology. One of the main problems with this is that it causes destabilisation of the frontal dunes, resulting in an impact on the secondary dunes from wind and wave erosion. The entire dune structure also becomes more vulnerable to climate change events - from both weather and changes in close-shore ocean currents.

Clansthal Conservancy is planning a project to remove the invasive prickly pear from dune vegetation along the coastline between the uMahlongwa River and the uMkhomazi River. This 8km stretch of coastline on Durban's south coast lies opposite the Aliwal Shoal Marine Protected Area (MPA).

Prickly pear and other invasive plants need to be completely removed and the gaps replanted with suitable locally indigenous vegetation. Such vegetation will serve to trap sand and allow the build-up of a sand reservoir, thereby protecting the dunes behind from wave action and the intrusion of sea water.

Prickly pear (*Opuntia monacantha*) invades dune vegetation along our coast.

Photos: Rob Crankshaw

For more information visit www.conservationkzn.co.za

CONSERVATION KZN
Making Conservation Work

Is coastal sandmining on the up?

Di Jones, Coastwatch KZN www.coastwatch.org.za

In 2007, Coastwatch conducted an inventory of sandmining operations in KZN rivers. It was recognised then that the manner of extraction as well as the volumes of sand being removed were having a detrimental effect on both estuaries and beaches. However, relevant data was required in order to better raise concerns related to licences issued by the then Department of Minerals and Energy (now Department of Mineral Resources). Another concern was that the number of illegal operations was unknown. The survey was conducted through a partnership between Coastwatch, Ezemvelo and eThekwini Municipality (Environmental Planning and Climate Protection Department), with the work being undertaken by Marine and Estuarine Research (MER).

Ten years later, a similar exercise is being carried out, this time courtesy of the Bateleurs and one of their volunteer pilots, Daryl Kimber. Luckily for Coastwatch, Nicolette Forbes has once again kindly volunteered her time and expertise.

To date, two of the three scheduled flights have been completed, covering the systems north of Durban. The third flight will cover the systems south of Durban. The completed flights have yielded GPS co-ordinates, descriptions and photographs of sandmining operations. A report will be produced which details this information and includes an assessment comparing data for the past 10 years. This will enable relevant authorities to have access to accurate, current comparative information on the status of sandmining activities along the KZN coast.

The report and data collected will also be available to the public. Coastwatch hopes that in this way it can assist in keeping our coastal environment healthy and functional, as well as contributing to improved decision-making on sandmining activities.

An example of recent sandmining activities on the KZN North Coast.

Photo: Nicolette Forbes

COASTWATCH
KWAZULU-NATAL

WIN WIN WIN

2 TICKETS to uSHAKA SEA WORLD

Answer these three simple questions and send **your name, surname, email** and **telephone contact details either via the Contribute page on** www.coastkzn.co.za or email us at coastkzn@gmail.com. Entries close on Friday, **23 February 2018**. *The winner will be announced on 1 March 2018 and notified by email and telephone.*

1. **What is a plastic nurdle?**
2. **In the 2014 autumn issue of Ulwandle, an elephant seal washed up on the KZN coast. Why was it named SELSO?** (*Hint: Ulwandle archives can be found on the News page*)
3. **If you find a stranded seal on the beach, who should you report this to?** (*Hint: see How do I?*)

Clues can be found at **www.coastkzn.co.za**

New eco-label award for the coast

Vincent Shacks, WESSA

The *Green Coast Award* is a new eco-label award developed by the Wildlife and Environment Society of South Africa (WESSA). It is awarded to coastal sites in South Africa where a sensitive species, habitat or cultural heritage site is being sustainably managed, leading to increased tourism along the coastline. The Green Coast label complements the international Blue Flag award, which ensures a world class experience at swimming beaches.

Suitable sites include unspoilt beaches and wild spaces with minimal infrastructure. Green Coast sites are expected to include local resident associations or community groups who are able to mobilise active citizens to participate in the management of the site. These sites will have to comply with a set of site-specific requirements and inspection criteria. Local municipalities will be responsible for upholding the criteria, assisted by WESSA, who will provide support in collecting and monitoring baseline ecological information as well as managing the overall process.

We hope that communities along the KZN coastline will begin to get actively involved in this exciting initiative.

For more information visit www.wessa.org.za

Green Coast sites aim to protect sensitive habitats, species and cultural heritage through community involvement.

Photo: Chris Galliers

Photo: Gavin Tweddle (ORI)

Zinkwazi Estuary on the KZN North Coast.

Did you know?

KZN has 580 km of coast, representing 18% of South Africa's coastline. In addition, it is home to 76 of the 300 estuaries in the country. We have representation of all 5 of the estuarine types (i.e. estuarine bays, permanently open systems, river mouths, estuarine lakes and temporarily open systems).

According to the National Biodiversity Assessment (2011) at least 20 of the Province's estuaries are degraded.

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