

Monitoring KZN's launch sites

Due to the attractiveness of KZN's coastal waters, there are high levels of ski-boat activity along the coast, for which there are a number of specially demarcated launch sites. In order to ensure that these sites are managed and maintained, a number of key stakeholders are involved, including: the Department of



Agriculture, Environmental Affairs & Rural Development, Ezemvelo KZN Wildlife, the Oceanographic Research Institute, ski-boat operators and launch site license holders. Collaboration between stakeholders has led to the development of a Boat Launch Site Monitoring System (BLSMS) that generates unique, comprehensive launch statistics for each launch site. It also provides information about associated activities such as recreational fishing, charter fishing and scuba diving.

This system is the first of its kind in South Africa! It allows for province-wide monitoring of launch sites. Excellent participation by most launch site users has ensured the success of this programme to date. During 2008...

- ↳ 45 launch sites participated in the programme.
- ↳ A total of 52 023 individual launches were recorded.
- ↳ The most common launches were for: recreational fishing (55%), charter scuba diving (22%) and charter fishing (10%).
- ↳ Of the 45 launch sites, 10 were utilised regularly (>70% of available days).
- ↳ Average launch frequency for the province ranged from 109 launches per day on weekdays to 227 launches per day on weekend days.

~ Musa Khumalo (ORI)
mkhumalo@saambr.org.za

Sonny Evans launch site, Shelly Beach

Photos: O Parak

Granny's Pool launch site, Umhlanga Rocks



Did you know?

Ever wondered if fish get thirsty?

Fish living in the ocean actually need to drink a lot of water to prevent themselves from shriveling up like prunes! Fish constantly lose water through osmosis - whereby water moves from where there is less dissolved salt to where there is more. Fish have less dissolved salts in their bodies than in the sea water around them so water constantly 'flows' out of them - thus the need to drink to replace this water! Luckily for fish they have a special mechanism on their gills that allows them to excrete the excess salt as they drink!

In contrast, sharks make their bodies as concentrated with salts as the water around them in order to prevent osmosis occurring. This is done by building up levels of urea in their blood...so sharks won't do well in fresh water because water would rush into them by means of the same osmosis process!

Marine mammals on the other hand generally don't drink sea water...they get most of the fresh water they need from the food they eat. However, these mammals are still taking in more salt than they need...and they need to get rid of it! In order to do this they have very powerful, complex kidneys which allow them to produce very salty urine. Seals and sea lion species are known to have urine that contains two and a half times more salt than seawater and seven or eight times more salt than their blood!



~ Bronwyn Palmer (ORI)

The light side ...

Global Warming by Shelby P.



Please send all correspondence to: Mr Omar Parak
DAEA&RD, Private Bag X9059, Pietermaritzburg, 3200
Tel: (033) 355 9438 | Fax: (033) 355 9614 | Email: omar.parak@kzndae.gov.za



KZN Agriculture, Environmental Affairs & Rural Development
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kweMiphakathi yaseMakhaya
ISIFUNDAZWE SAKWAZULU-NATALI



Ulwandle, meaning "sea" in Zulu, is produced by the KwaZulu-Natal DAEA&RD in association with ORI



Tackling sea-level rise

The eThekweni Municipality has recently undertaken a project to map potential sea-level rise along its coast. This has been done as part of its climate change programme. For this project the High Water Mark (HWM), as defined by the new Integrated Coastal Management Act, was determined using a wave run-up model based on actual recorded wave run-up heights from the March 2007 storm event.

Three sea-level rise scenarios were mapped for this century: 300mm (current rate of sea-level rise), 600mm (a doubling of the current rate of sea-level rise) and 1000mm (scenario to cover accelerated sea-level rise due to ice melt). The 100m coastal buffer or setback from the HWM has also been plotted.

The image below is an example of the model's output. The data is available on request from the author.

~ Andrew Mather (Project Executive: Coastal Policy,
eThekweni Municipality)
mathera@durban.gov.za

Image: A Mather



Amanzimtoti Beach

A Place *U* should Visit!

Trafalgar Marine Reserve

About 65 to 140 million years ago, during the Cretaceous period, the great continent of Gondwanaland was breaking up into the smaller land masses we have today. This was a momentous time for Mother Earth with massive fluctuations of sea levels and a period of mass extinction, with more than 70% of species dying out forever. For

reasons yet to be confirmed, the global ecosystems failed and the age of the dinosaurs was over. But some relics from that era have remained. At a few places along the KZN coast, there are outcrops of Cretaceous formations reflecting the life of those times. One such place is at the small marine reserve of Trafalgar along the KZN South Coast, stretching from just south of Marina Beach for a few kilometres to the Mpenjati estuary. Here a petrified forest, some 90 million years old often lies exposed in the shallow surf zone at spring low tide. In clear conditions, even better when using snorkel gear, large fossilised trees can be seen lying in close formation. Interspersed are rocks rich in diversity of invertebrate fossils from that period, including small ammonites - a unique form of prehistoric mollusc. Several other such outcrops occur in the region, especially at Mzamba, just south of the Mtamvuna River at Port Edward. While you will not encounter a live dinosaur, a visit to the Trafalgar MPA and its 66ha Mpenjati Nature Reserve is always a great and informative outing.

Useful link: www.kznwildlife.com

~ Rudy van der Elst (ORI)

Fossilised trees at low tide

Cleaning up our coast!



The 19th of September 2009 was International Coastal Cleanup Day and thousands of people from over 100 countries around the world volunteered to help clean up their section of coast.

In KZN there were a number of initiatives along the coast aimed at cleaning our beaches, dunes, reefs, intertidal rocks, harbours and major river systems from Port Edward to the Mozambique border.



Photos: Sea World Education Staff

Action against pollution



The coastal environment is regarded as being unique and dynamic while offering a wide range of goods and services. As a result it was recognized that something should be done about the effects of land-based activities and pollution on the coastal environment. Activities such as mining, development, off-road vehicles and dredging often cause coastal erosion or damage to beach and dune systems.

In light of this, 108 governments and the European Commission came together in 1995 and adopted a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA). What resulted was a commitment from the governments involved to develop a National Programme of Action (NPA) aimed at ensuring the protection of their coastal marine environment from the effects of land-based activities. South Africa recently released its NPA. It is a comprehensive framework in which action against marine pollution and degradation from land-based activities can be organized and mobilized. It also highlights and coordinates national, provincial and local initiatives. The NPA ultimately aims to ensure sustainable coastal development in South Africa.

~ Bronwyn Palmer (ORI)
bpalmer@ori.org.za

Marine & Coastal Education



The Marine and Coastal Educators Network (MCEN) is essentially a coordinating body of the South African Network for Coastal and Oceanic Research (SANCOR), which comprises of marine and coastal educators from around the country. It includes a wide range of educators from traditional teachers, people working in aquariums or environmental education centres, to people working along the coast or at sea. MCEN undertakes a range of activities for educators, including: facilitating communication and collaboration, ensuring that scientific work is available and understandable, and enabling hands-on experience and exposure to other coastal education areas.

MCEN holds an annual conference every year in January, while regions also arrange regional workshops and conferences throughout the year. This year's conference was held in Mossel Bay, where it was well supported and a number of issues and challenges were discussed. The 2010 conference will be in Cape Town and we are sure a number of new challenges will be tackled.

For more information about MCEN – please contact Andre Schutte: awschutte@gmail.com or 082 920 6150

~ Lyn Britz (Sea World Education)
lbritz@seaworld.org.za



Photo: L. Britz

Delegates learn what to look out for at an archaeological dig site.