



enviroworks

SPECIAL EDITION: MARINE AND COASTAL

Volume 2/10 December 2010

Biannual environmental newsletter of the City of Cape Town

Published by the City of Cape Town Environmental Resource Management Department in partnership with a range of other City departments.

Our coastline – priceless!

White sharks and humans
– learning to live together

Behind the sea-nns ...

What you can do to help keep
our coast beautiful

Learn ...

The least you need to know about our marine and coastal riches

See ...

How sea-level rise may affect our city, PLUS animals on our coast – reversible pull-out poster inside

Win!

Write to us and stand to win – see page 2 for more information



CITY OF CAPE TOWN | ISIKENKISO SASEKAPA | STAD KAAPSTAD

THIS CITY WORKS FOR YOU

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Brian Preen

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This newsletter is printed on SAPPI Triple Green paper, an environmentally friendly paper stock made from chlorine-free sugar cane fibre to support sustainable afforestation in South Africa.



CONGRATULATIONS to all our winners!

Feedback competition

Prize: Two tickets to the Two Oceans Aquarium

Winner: Sue Oosthuizen

Western leopard toad competition

Prize: Two tickets to the Two Oceans Aquarium

Winners: Daniël de Vaal; Fauwzia Holland

Biodiversity poster competition

Thank you to everyone who entered – choosing the winners was a difficult task! There were no entries in the age category up to 7, or in the category 15–18. The winners in the other two categories (and their prizes) are as follows ...

8–10 years:

- 1st – Alexandra van der Spuy, 9 (bush adventure with ten friends, or bush-camp sleepover)
- 2nd – Keegan Weaver, 9 (battery-free flashlight and radio)
- 3rd – Shivaan Pillay, 9 (can crusher)

11–14 years:

- 1st – John Peddie, 12 (bush adventure with ten friends, or bush-camp sleepover)
- 2nd – Katerine van der Spuy, 11 (solar garden light)
- 3rd – Jason Weaver, 12 (notebook and pencil from recycled material)



1st prize 8-10 years



1st prize 11-14 years

FEEDBACK from readers

Thank you to everyone who provided feedback on the previous issue of Enviroworks, or entered the competitions. We would like to keep the conversation going and offer a copy of Thomas Peschak's beautiful coffee-table book *Wild Seas, Secret Shores of Africa* to the best letter received. So, if you have anything on your mind, please use the details at the bottom of this page to air your views!

Write to us and stand to **WIN!**

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Our coastline – priceless!

Most of us have fond childhood memories of holidays spent on the beach – swimming, playing beach games, or exploring rock pools. As adults, we appreciate the beach in a different way – whether for long, romantic walks; adrenalin-packed water sports, or simply to bask in the sun. Yet, few of us consider the economic, social and environmental value of the coastline; even fewer realise that it is a dynamic space that requires care and attention.

With 240 km of coast to administer, the City of Cape Town faces significant challenges. The coastal ecosystems and associated services provide critical support to our coastal population. However, due to increased demand and pressure on these systems and services, our coastal environment is changing. Instead of dynamic spaces, we have – through poor planning and overdevelopment – created artificial, fixed spaces. If we do not turn this around, we will eventually smother the natural and dynamic coastal systems; they will no longer function and we will lose the benefits and services we have taken for granted (more on page 6).



An angler tries his luck at Bikini Beach.

Did you know?

In 1580, British navigator Sir Francis Drake passed the Cape of Good Hope, and later wrote: "This cape is a most stately thing and the fairest cape we saw in the whole circumference of the earth."

This issue of Enviroworks is therefore dedicated to our greatest (yet mostly overlooked) asset – our coastline. In the pages that follow, we look at how it works and why we need it so much. We cover some of the initiatives the City of Cape Town has launched to manage and protect our coastline, and also explore how we can help care for it today, so that our children and grandchildren will still be able to enjoy its benefits long after we are gone.



The least you need to know

Our coastline is our city's most valuable economic and social asset. We should stop taking it for granted and start taking joint responsibility for it.



Children and their parents enjoy a sunny day on St James Beach.

More information

CAPE TOWN'S COASTLINE:
www.ngo.grida.no/soesa/nsoer/issues/coast/intro.htm;
www.capetownguide.com/coastline.php



Flying the Blue Flag for Cape Town

Have you ever noticed the large blue flags flying on a number of Cape Town’s beaches? These flags attest to the fact that we have some of the top beaches in the world – right here on our doorstep! What does a beach’s Blue Flag status mean, and how does it benefit you?



Young girls enjoying sea, sand and sun.

The Blue Flag is an international, voluntary ‘eco-label’ that is awarded annually to beaches (and marinas) that meet certain stringent requirements. It aims to promote sustainable development through 32 criteria that span the following four aspects of coastal management:

- Water quality
- Environmental education and information
- Safety and services
- Environmental management

The Blue Flag has become a symbol of excellence. It also guarantees continued high standards of beach management, as a beach can lose its Blue Flag status if it no longer complies with the requirements.

The Blue Flag programme was started in Europe in 1987, and in 2001, South Africa became the first country outside Europe to apply for, and receive, Blue Flag accreditation for a number of its beaches.

!

The least you need to know

Cape Town has a number of Blue Flag beaches. Visitors to any beach carrying this international status can be assured of excellent beach cleanliness, environmental soundness, and adherence to international safety and other tourist standards.



Sun-worshippers enjoy a day out at Clifton 4th Beach.



Camps Bay, with the Twelve Apostles in the background.



More information

INTERNATIONAL BLUE FLAG BEACHES: www.blueflag.org
 SOUTH AFRICAN BLUE FLAG BEACHES: www.blueflag.org.za
 CAPE TOWN BLUE FLAG BEACHES: www.capetown.gov.za/blueflag

How can you benefit from Blue Flag beaches?



Lifeguards at Clifton 4th Beach proudly fly the Blue Flag.

Top quality beaches for you to enjoy

You and your family and friends can enjoy these beaches in the knowledge that they are clean and environmentally safe, and offer excellent life-saving standards, top-rate parking and spotlessly clean ablution facilities.

Increased tourism and retail income

Given the international accreditation that these beaches enjoy, foreign visitors are more likely to visit them. Those involved in retail around a Blue Flag beach should also see an increase in sales. This benefits individuals as well as the community as a whole.

Improved behaviour by beach-goers

A well-managed beach reduces visitor misconduct and the consequent inconvenience or danger to others, such as broken glass bottles on the beach, or surfing in areas demarcated for swimming.

Increase in property prices

Local authorities report that there has been a marked increase in property prices for homes near Blue Flag beaches. Specifically international buyers are partial to upmarket properties around Blue Flag beaches, such as Clifton 4th Beach.

Cape Town's Blue Flag beaches

A number of Cape Town beaches have been awarded international Blue Flag status for the 2010 / 2011 summer season, for excelling in safety, cleanliness, provision of amenities, and the maintenance of environmental standards. They are:

- Bikini Beach
- Camps Bay
- Clifton 4th Beach
- Mnandi
- Muizenberg
- Strandfontein
- Llandudno (pilot status); and
- Silwerstroomstrand (pilot status).



Top: The sun sets over Bikini Beach. Below: The iconic changing rooms at Muizenberg.

Why we need our coastline and oceans

Even those of us who do not live near the coast still need what our oceans and coastline offer.



A family enjoys lunch at Soetwater.

Did you know?

The tidal pool at St James Beach was built on an ancient stone fish trap that had been constructed by the Khoisan, who used these low-walled structures to catch fish during spring tides. Some of these fish traps still exist at Soetwater and other places along our coast.

- Oceans make life on earth possible: The sun shines on the ocean's surface. Water evaporates and forms clouds. Clouds move inland and fall back to earth as rain. On its way back to the ocean, rain nourishes life.
- Oceans act as a global thermostat, regulating climates.
- Oceans absorb carbon dioxide, and produce oxygen.
- Estuaries offer a safe nursing ground for many fish species' young – many of which will later

form an integral part of the diets of the estimated one billion people globally who are said to rely on fish as a primary source of animal protein.

- Estuaries act as water purifiers, regulating water quality along the coastline.
- Estuaries and sand dune systems provide protection from storm surges, flooding and erosion.
- Vegetated sand dunes also act as sand traps, preventing our coastal infrastructure and developments

from being covered in and damaged by windblown sand.

- Oceans act as a superhighway, carrying most of our global trade.
- Our coastline and oceans offer tens of millions of people the opportunity of unique ecotourism, recreational, educational, cultural and spiritual experiences.
- Last but not least, our unique Cape coastline provides people with a distinct sense of place, linking them emotionally and culturally to the area.



Tino Smith

Humankind has been using the sea for many years, whether for food, recreation or the transporting of goods.



More information

THE VALUE OF OUR OCEANS: www.suite101.com/content/worlds-oceans-have-huge-economic-value-a102187

Putting numbers to it



- Coastal environments cover a mere 20% of the earth's surface, yet they produce a quarter of our global biological diversity.
- Coastal environments are home to more than half of the world's human population, which includes as much as two thirds of the populations of developing countries. It is estimated that this figure will have risen to three quarters by 2030.
- South Africa's coastline supports 30% of its total population.
- Two thirds of the world's largest cities are coastal ones, and 80% of all tourism takes place at seaside locations. Tourism, recreational and leisure activities on Cape Town's coast generate R965 million to R3 billion per year. A high percentage of this amount is derived from eco-tourism, such as whale-watching, shark-cage diving, and visiting the penguins at Boulders Beach. Would tourists have flocked to our city if we did not have such a spectacular coastal setting?
- Marine resources (fishing, trek-netting, etc.) are estimated at R1,12 million per kilometre per year.
- Ecosystem services, such as the contribution to climate stability, protection against storm surges, carbon breakdown and oxygen production, are estimated at R1,2 billion to R6 billion per year (in terms of their replacement value).
- Property prices in Cape Town, as a coastal city, are generally high. When it comes to properties with sea views, or situated close to a beach, an especially high premium is paid.



The least you need to know

Our oceans and coastline provide us with a number of life-supporting resources and services, most of which we take for granted. It would cost us billions of rands to replace what we get from the sea. We may even discover that much of it is irreplaceable.



Every summer, visitors (locals and tourists alike) flock to beaches such as the ever-popular Camps Bay.

More information

ECONOMIC VALUE OF OUR COASTLINE:
www.capetown.gov.za/environmentalresourceconomics



A dynamic, ever-changing space

Cape Town has a spectacular coastline extending over 307 km, of which approximately 60 km falls within Table Mountain National Park. It stretches from just north of Silverstroomstrand on the West Coast, right around to Kogel Bay at the far end of False Bay. To make the best of what our coastline offers, both economically and recreationally, we need to understand the natural processes that shape this environment.

The combination of the warm Agulhas current that sweeps down the east coast, and the cold Benguela current that flows up the west coast, gives this area its incredibly rich and varied marine animal and plant life.

It's alive!

As the seasons change, so do the coastline and coastal conditions. Natural sediment continues to be deposited and transported, and our sandy beaches are constantly reshaped by wind, waves and currents. Winter waves erode sandstone and granite, and deposit these as sand on the beach. During stormy weather, rough seas erode sand from the beach and foredunes, and deposit it as an offshore sand bar. When calm conditions return,

gentle waves carry the sand back to replenish the beach. In summer, the southeaster drives this sediment along the shore at an angle to the coast, often transporting it for tens of kilometres before depositing it on another beach. Estuaries are equally dynamic: Over time, they naturally open and close, and migrate up and down shores.

Why is one side warm and the other so cold?

The southeaster is responsible for the temperature difference between the warmer False Bay coast (at around 16–22°C) and the much colder West Coast and Atlantic seaboard (at around 10–15°C). This wind, which often reaches gale force, pushes and pulls the surface layer of water with it. In False Bay,

this results in warmer water piling up against the coast. On the other side of the coast, however, the same wind pushes water in a northerly direction, but it is deflected offshore due to the earth's rotation. Cold water from the dark depths of the ocean rises to replace this water – a process called 'upwelling'.

Cold is good

Even though it is not much fun swimming in cold seas, the upwelling of cold water makes the West Coast an extremely productive marine environment. This is because the colder water is rich in nutrients, and draws and nourishes an abundance of sea life. It is no coincidence then that this area supports most of our country's fisheries.

Life's a beach – or 100

As Capetonians, we have access to a staggering number of beaches that cater for all activities – from family picnics to romantic walks; from fishing trips to extreme water sports; from lazy sunbathing to running your dog.



The rugged coastline around Cape Point is undoubtedly one of the most scenic in the world.

The least you need to know

Our beaches are dynamic environments that change with the seasons. Even though upwelling results in unpleasantly cold water for swimming, it also supports our marine resources.

More information

OUR COASTLINE'S NATURAL PROCESSES: [Beaches book, pages 1 – 9 \(www.capetown.gov.za/beachesbook\)](#)
CAPE TOWN'S BEACHES: [www.capetown.gov.za/beachesbook](#)



Animals along our coast - marine

WHALES



Southern right whales visit our waters between July and November every year to mate and calve. As they were intensely hunted in earlier years, only about 10% of the original population remains.



Bryde's whales occur in our waters all year round – usually quite a distance offshore. Their name is pronounced 'Brew-dus', after the Norwegian who built the first whaling stations in Durban.



Humpback whales migrate up our coast to breed further north. Males are known for their haunting songs that last from 10 to 20 minutes, and can be repeated for hours at a time.



Killer whales have occasionally been spotted in False Bay during March and April, hunting schools of common dolphins.

DOLPHINS



Common dolphins are likely to be seen east of Cape Point, or in deeper waters.



Dusky dolphins are very acrobatic and usually found close to the shore on the West Coast.



Bottlenose dolphins are also likely to be found east of Cape Point, or in deeper waters.



Heaviside's dolphins are sometimes called Benguela dolphins, as they appear to prefer the cold water of the Benguela current.

SHARKS



Ragged-tooth sharks are often seen in aquariums. Despite their fearsome looks, they are virtually harmless to humans. They can swallow air to become buoyant and hover motionlessly in the water.



Great white sharks have become iconic in Cape Town. This is also the only area where great white sharks are known to breach while hunting.



SUNFISH

This unusual fish draws its name from a habit of lying on its side on the surface of the sea, as if sunbathing. On average, these creatures weigh around 1 ton. As they feed on animals such as jellyfish and bluebottles, they pose no threat to humans. Even so, they are often mistaken for sharks because of their angular dorsal fin that sticks out above the water. (Remember, a shark's dorsal fin moves in a straight line, while a sunfish's fin zigzags.)



Climate change and sea-level rise – what can we expect?

Due to Cape Town's extensive coastline, sea-level rise associated with climate change poses a major threat to this prominent coastal city.

Three different scenarios

In order to predict and manage sea-level rise, the City of Cape Town uses a computerised model called the GIS Inundation Model. This model uses long-term sea-level records, photographic images, and actual measurements of previous storms to

predict the run-up of storm surges over the next 25 years. This model also factors in the gradual rise in the sea level to determine these predictions. Based on this information, the GIS Inundation Model identifies three potential levels of inundation due to storm surges.

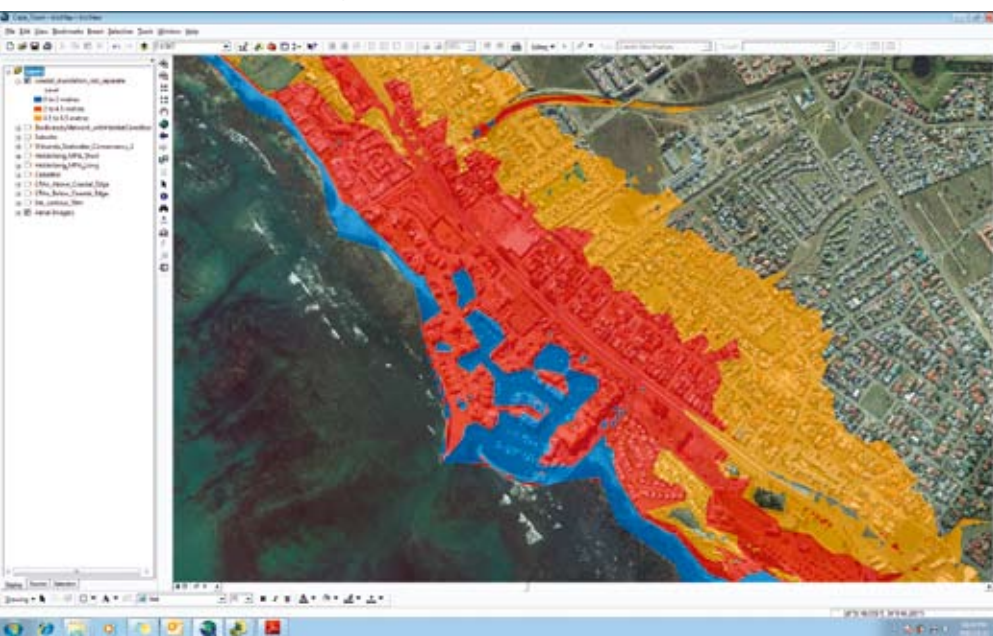
What does this mean for our coast and our city?

The three scenarios may be translated as follows:

Blue: There is a 95% chance that this area will be temporarily inundated over the next 25 years. This will take place along areas of coastline that are sheltered (such as Hout Bay). Within this particular zone, there is approximately R4.9 billion worth of property and infrastructure.

Red: There is an 85% chance that this area will be temporarily inundated over the next 25 years. This will take place along areas of coastline that are exposed (such as Kommetjie). Within this particular zone, there is approximately R20.2 billion in property and infrastructure.

Orange: There is a 20% chance that this area will be temporarily inundated over the next 25 years. This will take place along areas of coastline that are very exposed (such as Sea Point). Within this particular zone there is approximately R11 billion worth of property and infrastructure.





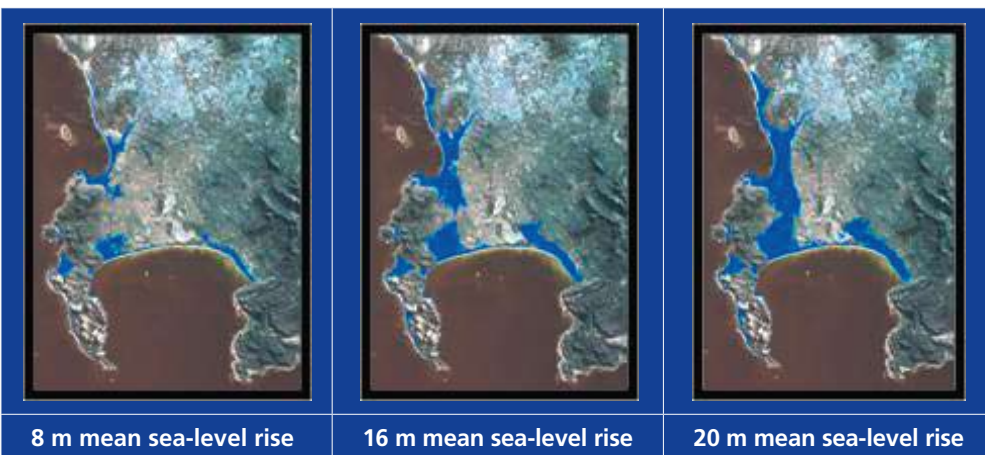
Luke Hardiman

The GIS Inundation Model has also been used to investigate the long-term impacts (100 years into the future) of the complete melting of the polar ice sheets as well as the expansion of the world's oceans due to global warming. The model identified the following three potential scenarios below:

What can we do to be more resilient to sea-level rise?

Through learning from the past, we must make the right choices now. These choices must be in the best interests of all, as opposed to the interests of only a few. Here are some of the actions needed to manage sea-level rise:

- The rehabilitation, protection and management of our coast as a functional natural system, as this system is the best protection against the effects of sea-level rise
- The establishment of a coastal protection zone to ensure its conservation, and the promotion of a 'no regrets' approach to future coastal planning
- The building of the City's coastal engineering and disaster management capacity, and the protection and rehabilitation of natural coastal ecosystems
- The monitoring of changes in the coastline; and
- Ensuring that the private sector, communities and individuals are well informed, accountable and responsible.



! PULL-OUT POSTER

This reversible poster is ideal to laminate and take along to school, or keep at home for beach sight-seeing outings. Use this side to learn about future changes in our sea level, and what we can do to make ourselves more resilient to these changes. You could also use the other side to identify wild animals you may encounter along our coastline.

Animals along our coast - terrestrial



African black oystercatchers, contrary to what their name suggests, mainly feed on limpets and mussels. They pair up for life, and nest on the beach, where they are particularly vulnerable to disturbance by human activity.



African penguins are commonly known as jackass penguins because of their donkey-like bray. They are particularly vulnerable to oil pollution.



Cape fur seals are the only seals that breed in southern Africa, and are protected in South Africa.



Porcupines eat mostly plants, and usually forage at night. Contrary to popular belief, they do not shoot out their quills. Instead, when chased, they will suddenly stop dead and raise their quills, often leaving their 'hunters' with a face full of quills.



Cape grysbok are small buck (8–12 kg) that inhabit the thick fynbos vegetation along our coastline, especially in protected areas such as Table Mountain National Park.



Cape clawless otters are quite common, but are rarely seen because they usually hunt between dusk and dawn. They mainly feed on crabs and lobsters.



Chacma baboons often supplement their usual diet of fruits, plants and insects with inter-tidal animals such as crabs and limpets.



Caracal have been displaced in inhabited coastal areas, such as Boulders Beach, but these nocturnal cats continue to be found along most of our coastline, where they hunt small animals, including penguins.

Did you know?

In summer, when the southeaster is howling, many seal pups are washed from Seal Island onto our beaches. The City of Cape Town is well aware of this, and has procedures to deal with the situation as it arises. Similarly, there are detailed interdepartmental (and often even national) action plans and procedures for eventualities such as whale or dolphin strandings, shipwrecks and oil spills.



More information

ANIMALS AND PLANTS ON OUR COAST: www.ekapa.ioisa.org.za/module1/poster.htm

KILLER WHALES IN FALSE BAY: www.scenicouth.co.za/2010/06/false-bay-a-bay-of-whales

Our coastline – under immense pressure

With our coastline playing such an important role in our lives, it makes sense to learn more about the various threats it faces, so that we can all help prevent or manage them.

Overexploitation is one of the worst threats to our marine resources. Most affected are abalone (perlemoen), which is poached, and many linefish, which are overfished. Even offshore species, such as hake, kingklip and deep-water lobster, are considered overexploited. Intense harvesting of these and other food sources, such as mussels, limpets and oysters, is severely affecting our biodiversity.

Habitat destruction is primarily caused by development. Dune systems are flattened for parking areas; estuaries are turned into housing and marina developments, and permanent structures, such as weirs and dams, change the flow and silt load of rivers. Mining (for sand, minerals and diamonds) places a further burden on the environment.

Pollution in our coastal zone arises from direct effluent discharge from pipelines; runoff via rivers and stormwater drains, and shipping activities. Sewage pollution, in particular, poses a threat to our health – both directly, through bacterial infections, and indirectly, through contamination of the filter-feeding shellfish we consume. Heavy metals and oil spills add to this environmental and health threat.

Invasive alien species out-compete our indigenous species, and thereby alter natural processes. Ironically, some of these invasive species – such as the Port Jackson and Rooikrans trees – were originally introduced

to bring about ‘improvements’ by stabilising sand. However, they now inhibit the natural sand exchange between beaches and dunes, resulting in long-term changes in beach profiles. Other invasive species include the Mediterranean mussel, which is displacing our own mussels and limpets, as well as the predatory European green crab.

Climate change is expected to affect our coast by increasing the frequency and severity of storms, and accelerating sea-level rise. (Refer to the pull-out poster in this newsletter to see how climate change – and the resultant sea-level rise – may affect our city.)

The City of Cape Town’s strategy for coastal zone management, along with the newly established coastal protection zone, aims to address many of these threats (more on this on the next page).



The least you need to know

There are many threats to our marine and coastal zone, and therefore also to our own well-being. However, all of these threats are directly or indirectly man’s fault – so it is also man’s responsibility to prevent or manage them.



Sandbags fail to stabilise the dunes at Dolphin Beach.



Inspectors with illegally harvested juvenile crayfish.

More information

THREATS TO OUR COASTLINE AND OCEANS:
Beaches book, page 14 (www.capetown.gov.za/beachesbook)



Taking action to protect our coastline

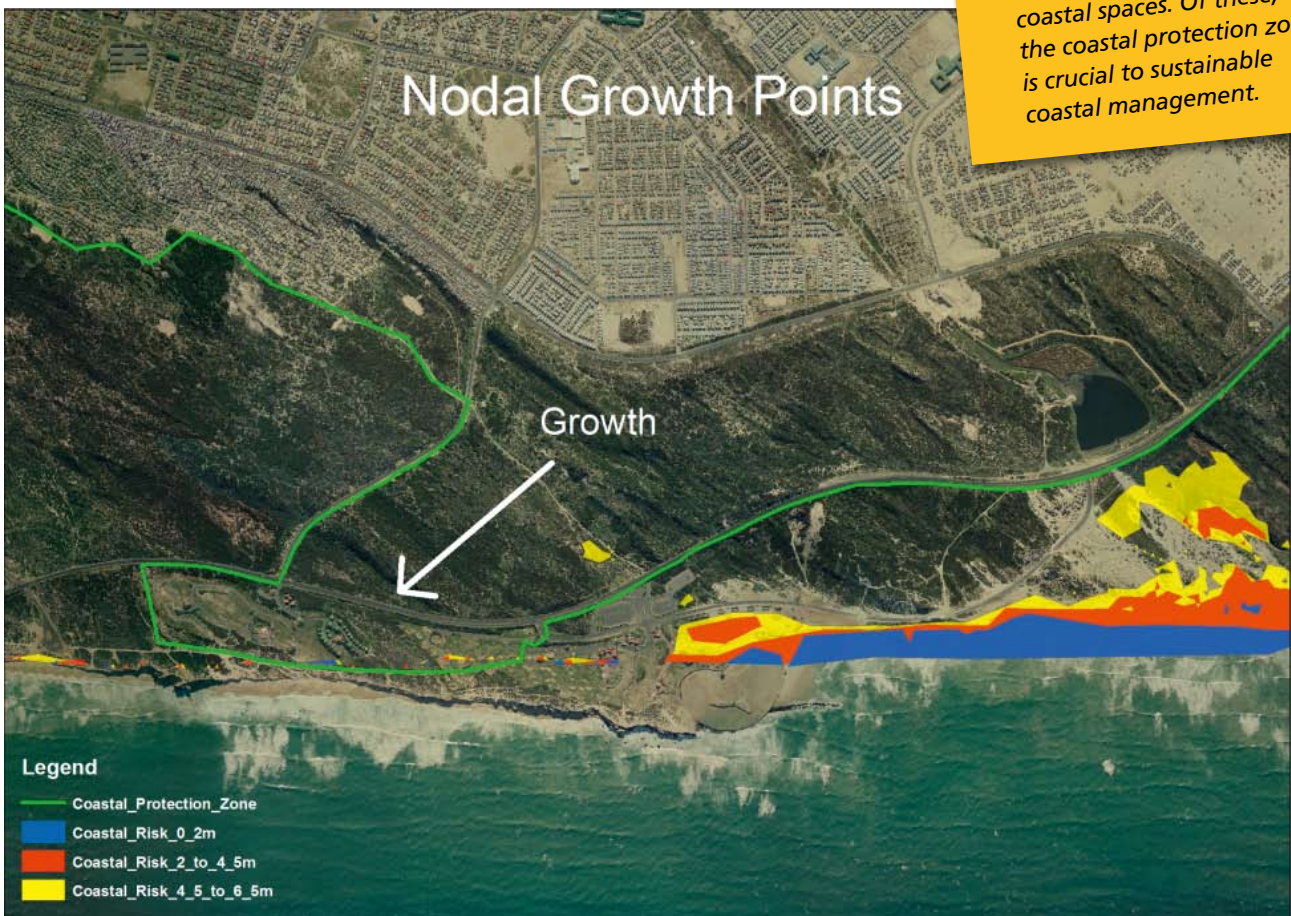
Managing some 240 km of coastline is a responsibility that the City of Cape Town does not take lightly. Various strategies ensure that this precious space is managed so that it can continue to sustain us – both economically and socially.

The coastal protection zone – a crucial intervention

The coastal protection zone (CPZ) is essentially a demarcated zone along Cape Town's coastline. The intention of the CPZ is to protect the remaining coastal open spaces and ecosystems. Through protecting these remaining spaces, Cape Town stands to benefit in many different ways, including the following:

- Communities' access to coastal resources will be improved.
- The recreational and amenity value of the coast will be retained and improved.
- The coast will be promoted as a shared and common space.
- Existing problems with infrastructure at risk from storm surges and erosion will be prevented from recurring and worsening in the future.
- By creating space for dynamic coastal processes (such as windblown sand and migrating estuary river mouths) to take place uninterrupted in the CPZ, the potential risks that these processes pose to infrastructure are reduced.
- Biodiversity is protected, specifically from a fynbos species perspective.
- The 'open spaces' characteristic of Cape Town's coastline, which gives it aesthetic appeal and a sense of place, can be retained.

! The least you need to know
 The City of Cape Town has launched, and is involved in, a number of initiatives for the protection and careful management of our coastal spaces. Of these, the coastal protection zone is crucial to sustainable coastal management.



The green line represents the landward boundary of the CPZ. Access to the coast is promoted in this zone, while areas where potential sea-level rise and dynamic coastal processes pose a risk will be managed appropriately.

Some of the City of Cape Town's other coastal management strategies and initiatives

- **Events Strategy (in progress):** This strategy aims to integrate environmental concerns specific to the coastal zone, with the City of Cape Town's general application process for filming/events. It includes a guide on requirements for applicants, depending on their planned activities.
- **Beach Cleaning Policy (currently being reviewed):** This policy aims to establish a balance between an environment conducive to a high standard of recreation, and the preservation of natural ecosystem processes and functions, by identifying certain areas from which kelp will be removed.
- **Large Marine Animal Stranding Policy:** This policy provides for a coordinated response to marine animal stranding by various authorities and agencies, to allow for effective rescue attempts of live animals; management of the public and volunteers; environmental protection, and the removal and disposal of any carcasses.
- **Coastal technical committees:** These committees include representatives from the various City of Cape Town departments involved in coastal management. They aim to facilitate integration, cooperation and coordination between officials; promote awareness of coastal management issues among City of Cape Town officials, and monitor and advise on various issues arising along our coastline.

- **White Shark and Recreational Safety Policy and Strategy:** This aims to find a balance between white-shark conservation and recreational safety, by identifying mitigation measures that ensure increased water safety in appropriate areas, while leaving our unique marine ecosystem intact.

In addition to the above, the City of Cape Town is also engaging other spheres of government to ensure the preservation of our coastal spaces. This involvement includes, for example, representation on an off-road-vehicle task team, marine protected area (MPA) forums, and provincial coastal committees.



Vegetation is used to trap windblown sand and build dunes.



Table Mountain forms a dramatic backdrop to the Diep River in Milnerton.

More information

CITY OF CAPE TOWN COASTAL ZONE MANAGEMENT STRATEGY: www.capetown.gov.za/environmental/policies

CITY OF CAPE TOWN COASTAL REPORTS: www.capetown.gov.za/environmental/reports

DOLPHIN ACTION AND PROTECTION GROUP: www.dapg.org.za

KWAZULU-NATAL SHARKS BOARD: www.shark.co.za

OCEANS AND COASTS (branch of the National Department of Environmental Affairs): www.environment.gov.za/branches/marinecoastal/areaswork/aboutmcm/structure.html

AFRI-OCEANS CONSERVATION ALLIANCE: www.aoca.org.za



Coastal partners

WWF Sanlam Living Waters Partnership



Recognising the threats to marine ecosystems, and consequently to many human livelihoods, the WWF (Worldwide

Fund for Nature) has partnered with Sanlam to fund 20 successful projects. These projects are gradually increasing the surface area formally protected in MPAs (marine protected areas), minimising exploitation of threatened fish species, and reducing the wider impacts of fisheries on marine ecosystems. Their projects are also linked to the Southern African Sustainable Seafood Initiative (SASSI) – a partnership between the WWF and other organisations that is effectively tackling marine conservation issues, and encouraging consumers to make more sustainable seafood choices.

More information: www.wwf.org.za/what_we_do/marine/; www.wwf.org.za; www.wwfsassi.co.za

Save Our Seas Shark Centre (SOSSC)



The SOSSC manages and implements shark conservation initiatives. They also conduct groundbreaking research on white shark behaviour in conjunction with the Shark Spotting programme, and develop internationally recognised educational opportunities, including material and media campaigns that challenge public perceptions of shark and marine conservation.

More information: www.saveourseas.com; www.saveourseas.com/projects/sharkcentre_za; www.sharkspotters.org.za

National Sea Rescue Institute (NSRI)



The NSRI is run by more than 800 highly skilled

volunteers countrywide, providing fast and effective rescue services – often in extreme weather conditions – in emergencies such as drownings and shark attacks, and promoting beach, water and boating safety among the general public. The Institute relies on donations and sponsorships.

More information: www.nsri.org.za

Lifesaving Western Province



Lifesaving Western Province has been

responsible for saving many lives on our city's beaches. Volunteer lifeguards patrol specific beaches from 14:00 to 18:00 on Saturdays, and from 10:00 to 18:00 on Sundays and public holidays between 1 November and Easter weekend, and at all hours over the festive season.

More information: www.lifesavingwp.co.za

Kommetjie Environmental Awareness Group (KEAG)

KEAG is an active community



organisation that aims to promote social upliftment and environmental conservation through

projects such as marine monitoring, the Shark Spotting programme, and running the Witsands-Soetwater Coastal Conservancy.

More information: www.keag.org.za; www.soetwater.wordpress.com

Table Mountain National Park (TMNP)



The TMNP, run by SANParks, includes 1 000 km² of MPA around the

Peninsula. It is the only national park to be entirely surrounded by a city, and is our most visited national park. It also promotes social and economic development through the aesthetic and recreational attraction it provides to tourists.

More information: www.sanparks.org/parks/table_mountain/about/profile.php

Southern African Foundation for the Conservation of Coastal Birds (SANCCOB)



SANCCOB is an active role player in the protection of South Africa's sea birds, particularly threatened

species. They are also internationally recognised leaders in rehabilitating oiled, injured or ill birds, and rearing abandoned young, and are committed to developing young minds through environmental education, outreach programmes and research.

More information: www.sanccob.co.za

Society for the Prevention of Cruelty to Animals (SPCA)

Cape of Good Hope



The Cape of Good Hope SPCA is South Africa's oldest animal welfare

organisation. It is on call 24/7 to ensure that rescue and emergency operations involving not only domestic and land animals, but also marine animals, such as stranded dolphins or whales, are well handled, efficient, and in the best interests of these animals.

More information: www.sPCA-ct.co.za/about.asp

Behind the sea-ns ...

Many people give much of their lives to caring for our coastline. These are often 'behind the scenes' champions, who few people know about. This article is a tribute to some of these unsung heroes on our coastline.



Alison Kock has been conducting groundbreaking white shark research in False Bay for the last six years, giving Cape Town a far

greater understanding of these mysterious animals.



Legend of Fish Hoek Lifesaving Club **Clive Wakeford** is still actively involved in the Club today, as well as being the president of

Lifesaving Western Province. He played an important role in getting the shark-spotting programme started at Fish Hoek in 2004, and remains active on the shark-spotting steering committee.



Geoff Brundrit is an oceanographer of global repute, who continues to advise all spheres of South African government on coastal climate

change matters. He is also actively involved in the Friends of Simon's Town civic association.



Coming from a well-known surfing family, **Greg Bertish** is a big-wave surfer and all-round water-man, who was individually responsible

for starting the shark-spotting programme in 2004 at Muizenberg Corner. He remains active on the shark-spotting committee.



Mike Meyer of the National Oceans and Coasts Branch has always been at the forefront of efforts to save injured, stranded or entangled whales,

dolphins and other marine animals, leading the way to ensure that these animals are treated ethically, humanely and with the greatest of care.



Monwa Sikweyiya has been with the shark-spotting programme from the very first day of operation, and continues to oversee

public safety at Cape Town's beaches daily.



Head of the Dolphin Action and Protection Group **Nan Rice** has played a leading role in campaigning and raising funds for the conservation

of dolphins and whales, and raising public awareness of the importance of conservation.



Tony Cerfontyne has worked on Cape Town's coastline for the past 24 years. As the beach manager at Mnandi, he ensured that Mnandi became

the first Blue Flag beach in Cape Town, in 2004. Mnandi has retained its Blue Flag status ever since.



Director of the Kommetjie Environmental Awareness Group **Wally Petersen** has been central in involving

disadvantaged communities in coastal projects. He has created thousands of work-day opportunities; kept the scenic drive near Ocean View free of litter, and rescued countless injured and distressed sea animals.



Dr Niel Malan was pivotal in the development of coastal management in South Africa, and building a coastal management capacity

in South African government. It was his persistence that set the wheels in motion for the development of a sustainable coastal development policy more than 20 years ago, eventually resulting in the Integrated Coastal Management (ICM) Act.

Did you know?

One of the most famous heroes on our Cape coast was Wolraad Woltemade, who in 1773 saved the lives of 14 sailors after their ship, De Jonge Thomas, had floundered in stormy seas. Woltemade and his horse swam into the sea again and again, rescuing sailors from the storm-tossed ship two at a time. When the ship finally broke up, the remaining sailors became so desperate that a great many grabbed hold of the already overtired Woltemade and his gallant horse, dragging both down to a watery death. (For the full story, visit <http://juststories.atspace.com/stories/wolraad.htm>.)

White sharks and humans – learning to live together

There have been sharks – including great white sharks – in our waters for thousands of years. To wish them away would be foolish, as these majestic animals are an icon of Cape Town, and offer much in ecological and tourism value. We simply have to accept that we share a space from time to time, and that we should do our best to do so with the least harm to either of our species.

Although most of us have never – and probably will never – come face to face with a great white shark while enjoying the waters off our coast, our fear of sharks is probably one of our most primal. Movies such as Steven Spielberg's *Jaws* do little to improve the public image of these powerful predators.

Protected for a reason

As apex predators, great white sharks play a very important role to maintain the balance in our marine environment, and to keep our coastal ecosystem healthy. For this reason, they are also a protected species in South Africa.

Why nets will not work

There are various reasons why we cannot practicably employ shark nets in Cape Town. The main reason is that shark nets work as gill nets (and not as barriers as many believe), which means that they trap and kill all large animals that become entangled in them. With our high levels of marine diversity, we would not only kill many great white sharks, but also whales, dolphins and seals. This would simply not be acceptable in a city where we value nature in the way that we do. Moreover, with our stormy seas, such nets would be very hard to maintain.

Shark Spotters to the rescue

A shark-spotting programme introduced by the City of Cape Town in 2004 (see more information on the opposite page) is proving to be very successful in avoiding conflict between humans and white sharks on many of our beaches.

Did you know?

Surfers can be grateful that they were not catching waves between 25 and 1,5 million years ago, when an enormous (now thankfully extinct!) shark known as *Carcharocles megalodon* ruled the sea. This super-predator, which scientists believe looked rather like a stocky version of our great white shark, grew up to 20 m long ... not the kind of creature you would like to meet in the water!



Michael Scholl

'Mirror, mirror on the ceiling ... who's the shark that's most appealing?'

Shark Spotting programme pays off



Adopted by the City of Cape Town in 2004 in response to a spate of shark bite incidents and increased shark sightings, the Shark Spotting programme is the primary shark safety method used in Cape Town. It has attracted international and local attention

because of the novel way it seeks to find a solution to potential conflicts between sharks and people. Basically, shark spotters situated at vantage points above various beaches keep a constant eye on the beach, and radio information to beach staff.

The staff in turn use flags and sirens to indicate the shark safety status of the beach at any time. The more than 790 sightings and resultant warnings since 2004 bear testimony to the success of this programme.

What the flags mean



A **green** flag means visibility for the spotters is good, and no sharks have been seen.



A **black** flag means visibility for the spotters is poor, but no sharks have been seen.



A **red** flag means a shark has been seen recently, but is no longer visible to the spotters.



A white flag with a black shark, along with a loud siren, means a shark has been sighted, and bathers should leave the water immediately.

Important: No flag means that shark spotters are not on duty.



The least you need to know

The great white shark is a powerful predator with which we share a space from time to time. The Shark Spotting programme is proving to be very effective in minimising potential conflict between sharks and humans.

What is your role?

If you exercise caution, and are aware of your environment, the risk of a shark attack can be lowered further. Here are some tips to reduce the risk of attack:

DO:

- ask the local law enforcement official, lifeguards or locals about the area if you are a first-time visitor to a beach area;
- pay attention to any shark signage on beaches;
- consider paddling in groups, and staying close together (in a diamond shape) if you are kayaking or surf-skiing far out to sea;
- consider using a personal shark shield when you go surfing or kayaking;
- obey beach officials if you are told to leave the water; and
- consider using another beach for the day if a shark has recently been sighted in the area.

DO NOT:

- swim, surf or surf-ski when birds, dolphins or seals are feeding nearby;
- swim in deep water beyond the breakers;
- swim if you are bleeding;
- swim near river mouths;
- swim, surf or surf-ski near an area where trek-netting, fishing or spear-fishing is taking place; and
- swim, surf or surf-ski at night.

More information

SHARK SPOTTING PROGRAMME: www.sharkspotters.org.za
WHITE SHARK FACT SHEETS: www.capetown.gov.za/sharkspotting

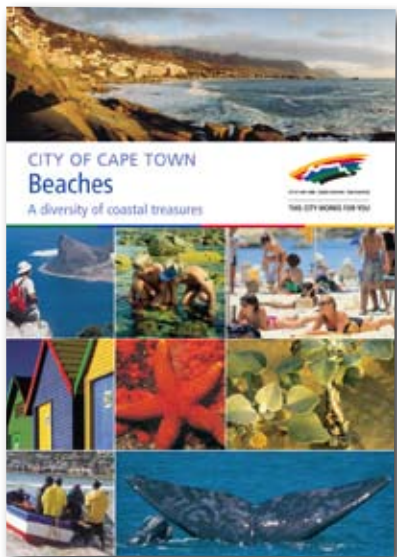


What you can do to help keep our coast beautiful

Do you keep returning to the same beach every summer? In Cape Town, we have access to more than 100 beaches, so perhaps it is time to learn about a few more, and to become involved in preserving the natural beauty of our coastline.

Information at your fingertips

Wondering where to start? Use the informative beaches book published by the City of Cape Town to explore some of the beautiful yet lesser known beaches along our coast. Download the book from the internet (see "More information" below), or request a copy from Glen Takeloo on 021 487 2829 or glen.takeloo@capetown.gov.za.



Become involved by supporting International Coastal Cleanup Day

On the third Saturday of September each year, volunteers around the world take part in the world's biggest coastal cleanup, known as International Coastal Cleanup Day. The event has been held internationally each year for over 20 years, with people heading to the beaches, and removing debris and rubbish from shorelines, waterways and oceans. Each year there is a vast increase

in the number of marine animals injured or entangled in debris found in the oceans. Turtles mistake floating plastic bags for food, and thousands of seals, whales, dolphins, sharks and birds die from entanglement in fishing line and other debris.

If you want to take part in this initiative, please contact the regional co-ordinator, John Kieser, on 021 591 5512 or 073 775 8561.

Make responsible seafood choices with FishMS

Next time you order fish at a restaurant, make sure that you make a sustainable choice. Simply SMS the name of the fish for sale (e.g. kingklip, dorado, etc.) to the Southern African Sustainable Seafood Initiative (SASSI) number, and you will receive an immediate reply to indicate the status of that species.



- GREEN** – recommended as the most sustainable choice
- ORANGE** – may be legally sold, but an increased demand could compromise a sustainable supply, so please consider the implications of your choice
- RED** – illegal to buy or sell in South Africa



Simply SMS the name of the fish to 079 499 8795.



Volunteers do their bit on Coastal Cleanup Day.

The least you need to know

We have a beautiful coastline and a range of magnificent beaches. However, to keep our coastline beautiful (and functional), we all need to take more responsibility for its care.

More information

BEACHES BOOK: www.capetown.gov.za/beachesbook

SASSI: www.wwf-sassi.co.za

GENERAL INITIATIVES: www.gondwanaalive.org; www.environment.gov.za/ProjProg/CoastCare/working_for_the_coast.htm