

# Know your Seafood? Think twice...



## The Southern African Sustainable Seafood Initiative



environment  
& tourism

Department:  
Environmental Affairs and Tourism  
REPUBLIC OF SOUTH AFRICA

# How much do you know about your seafood?



More and more people are eating fish and seafood because it is seen as a healthy food choice and is available in an incredible variety of delicious forms, flavours and textures.

But how much do you really know about your favourite seafood? Do you know that not all fish are equal, and that if you knew more, you might want to make different choices?





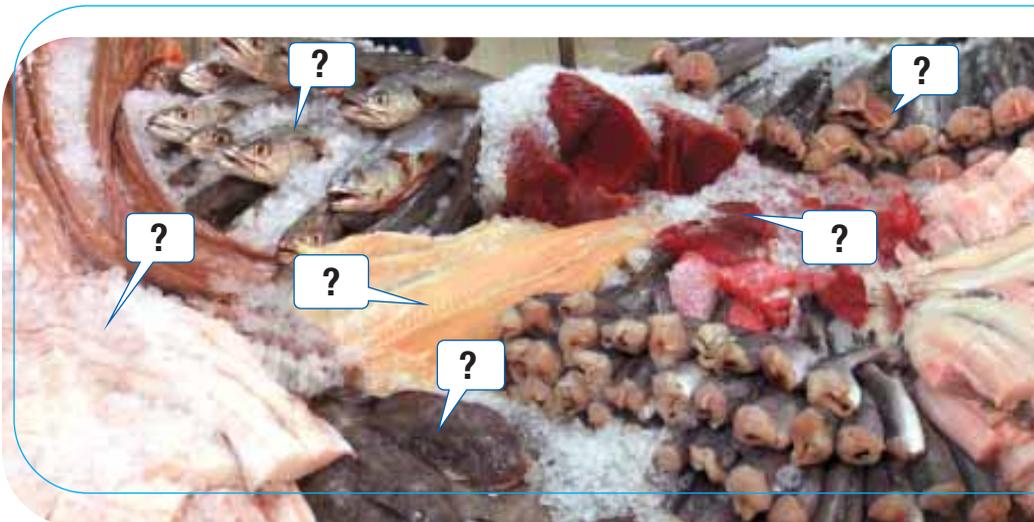
Kerry Srik

## Do you know?

- Where your fish comes from
- How it is caught
- That some species are severely overfished
- Which species may or may not be sold legally, and the reasons for this

## What do you see?

A supermarket fish counter well stocked with fresh fish. But do you know anything more than what the labels tell you?



Jaco Barendse

# A sea full of fish?

Even though the oceans cover 70% of the globe, not all areas of the sea are equally productive. Most fish are found in the relatively shallow water near the coastline of continents and islands. Here, there are different habitats, just like on land, where different types of fish live. So the perception that the sea is full of fish is largely unfounded.

## Fishing in South Africa

The 3 000 km-long coastline of South Africa with its associated continental shelf, and the two very different ocean currents, the warm Agulhas and cold Benguela, is home to a great diversity of seafood species. On the muddy flat beds of the Agulhas Bank you find great schools of hake, nearer the surface there are shimmering shoals of pilchard and anchovy, and coming and going are groups of migratory predators like snoek and yellowtail. The open ocean is the hunting ground of large predators, or game fish such as marlin, tuna and swordfish. Some fish travel vast distances to feed or breed, or to follow favourable oceanic conditions, while others can spend almost their entire lives on a single rocky or coral reef. This diversity of habitat and lifestyles means that some fish are more plentiful than others, some grow faster and others slower, and that some breed more frequently and abundantly. These differences also mean that humans need to use various fishing methods to catch them, and that some fish species can handle different levels of fishing pressure better than others.



**The South African coastline and adjacent oceans host a large diversity of seafood species. Coral reefs, home to thousands of marine species, are highly susceptible to damage by trawling.**

# Fishing has environmental impacts

**HOW MUCH WE CATCH is important.** When more fish are caught than can be replaced by the breeding activities of the adult fish population, **overfishing** occurs. **It is estimated that 75% of global fish stocks are either exploited at maximum levels, or overexploited.**

In South Africa, many commercially important linefish species are overexploited.

**WHAT WE CATCH can also affect the marine environment, to a greater or lesser degree.**

Some fisheries are very **selective** and catch almost exclusively the species they target,

while others are **non-selective** and may catch fish and other animals that are not intended.

These non-target animals such as other fish and sharks that are caught are called **bycatch**.

The death of other animals such as turtles, seabirds and marine mammals during fishing is called **incidental mortality**. Examples include dolphins and seals caught in nets, and albatrosses caught on longlines. The populations of **many species of seabird are threatened due to this mortality**.

Bycatch is not always useless to man, and some valuable species of fish are only caught as bycatch. **There are ways available to responsible fishermen that can reduce both bycatch and incidental mortality and consumers can play a role in ensuring that fisheries employ these methods.**

A wasteful fishery that has a high level of bycatch and that discards much of what is caught has a greater environmental impact than a more selective fishery that retains most of its catch.



Some fisheries are not selective and may unintentionally catch and kill animals that are not targeted such as this turtle caught on a longline.

**HOW WE FISH can affect the health of ocean.** Some fishing methods are known to destroy or alter the physical environment and change the habitat where fish live. Bottom trawling, in particular, may cause damage to reefs and the seabed, and in some areas may have long-term environmental impacts.



**Kelp forests occur in the highly productive waters of the Benguela region.**

# Fishing methods used in South Africa

## Nets and traps

**Bottom (or demersal) trawling** is a non-selective method that involves dragging a huge bag-shaped net across the seabed to catch fish that live there. Depending on the nature of the seafloor, it can cause habitat damage and can have high levels of bycatch. Hake, soles, and prawns are targeted, while kingklip and angelfish are caught as bycatch.



Thomas P. Paschick

A bottom trawler hauling up a net full of hake and other fish also attracts the interest of hundreds of seabirds.



**Treknet fishermen gather their catch of yellowtail on a False Bay beach. This traditional method is mainly used to catch harders (mullet) in the Cape and sardines in KZN.**

**Midwater trawling** catches fish that form schools between the sea surface and sea-bottom, mostly targeting Horse mackerel (maasbanker). It is more selective than bottom trawling and does not cause habitat damage, but may have significant bycatch of non-target species, such as ocean sunfish.

**Purse-seine (pelagic) fishing** uses fine-meshed nets to encircle enormous shoals of small fish such as sardines and anchovies that swim near the surface of the ocean. The net is pulled closed like a bag and the catch hauled aboard the vessel. The method is very selective with no habitat damage and little unwanted bycatch.

**Treknetting (Beach-seine)** is a traditional fishery where schools of fish are encircled with a long net deployed by a rowing boat, and then hauled up onto the beach by hand. In the Western Cape it targets harder (mullet) though certain linefish species, such as yellowtail, may be caught in the False Bay area only. In KwaZulu-Natal (KZN) the method is used to catch sardines. At low effort levels it has a low impact and it is fairly selective, though it may have a bycatch of rare linefish and sharks. However, the method allows for these to be released alive by responsible fishers.

**Gill-netting** is a non-selective method that involves a small-meshed net that is anchored in a fixed position, entangling fish that swim into the net. This fishery targets harders and St Joseph sharks. Depending on the mesh size, gill nets can catch juvenile fish, and illegal gill-netting in estuaries can devastate local fish populations.

**Pots, traps and hoop nets** are baited and set on the seafloor in order to catch rock lobsters, crabs, octopus and fish. The method is very selective with minor bycatch. When lost, baited traps could continue to attract and trap animals and so kill these unnecessarily.



Traps on the deck of a west coast rock lobster fishing boat moored in a harbour.

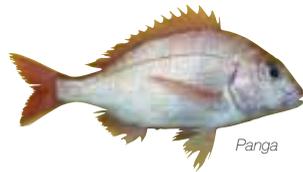


Jaco Berendsse

A linefisherman holds up a shiny Cape snoek, one of the most important commercial linefish species.



Squid



Panga



Yellowtail



White stumpnose

## Hooks and lines

**Linefishing** uses hand lines and fishing rods with baited hooks to catch fish. Linefish are caught from both the shore (recreational fishers only) and from boats (commercial and recreational). This can be a fairly selective method with little unwanted bycatch, if different hook sizes and bait types are used. It targets numerous species including snoek, yellowtail, rockcods, redfish, and also hake. Many linefish species are now very rare due to overfishing.

**Tuna pole-fishing** is a highly selective method that exclusively targets yellowfin and longfin (albacore) tuna. Tuna are attracted to boats by spraying jets of water onto the surface of the sea. They are then caught on baited hooks on short lines attached to strong bamboo poles. The fish are hauled aboard the boat with gaffs. This method has no bycatch issues and the fish caught is of high quality, if treated correctly.

**Longlining** involves setting a main line with hundreds of baited hooks attached on the seafloor, or near the surface, depending on the target species. Longlines can be up to 100 km long with as many as 20 000 baited hooks. Bottom longlines target hake with a kingklip bycatch, and surface longlining targets tuna, swordfish and sharks. Though much more selective than trawling, the bycatch of seabirds, turtles and non-target sharks can be a problem when preventative measures are not taken.

**Squid jigging** is a highly selective method that targets squid or calamari. These are attracted to boats at night by powerful lights and caught with barbed lures that are hauled vertically through the water with a fast motion. It has very little impact.



**Fresh from the sea: A yellowtail is swiftly pulled from the ocean.**

*Jaco Barendse*

## Mariculture

This is not a fishing method, but the industry of **farming with seafood species**. Abalone, mussels, oysters and prawns are the only species farmed in significant quantities in South Africa. Many types of imported seafood such as prawns and salmon are produced in India, Malaysia and the United States. Unfortunately mariculture can suffer from similar problems that are normally associated with intensive agriculture on land, such as local pollution, disease and contamination with toxins.

# Why should you care?

**Unsustainable fishing is a reality.** This means that the populations of some fish in our oceans have been reduced to fractions of the population levels that they were at before humans started catching them. **When a fish species is overfished it becomes less and less available until it all but disappears from your fish market and restaurant menu.** Continued overfishing is detrimental to everyone involved, from the fish and ecosystem, to the communities whose livelihoods depend on fishing, through to seafood retailers, and you, the consumer.

## Consumer's Seafood Species List

**A species list has been compiled to help you make choices that are better for the environment, when buying seafood or dining out.** This list will inform you about the conservation status of popular fish species and allow you to consider your seafood choices from an ecological perspective.

In South Africa all living resources in the marine environment are managed according to the **Marine Living Resources Act** (Act 18 of 1998) and its amendments. This Act (or the MLRA) determines how, and by whom, different species may be utilised. Regulations are based on the most recent fisheries research.



The livelihood of many coastal communities depends on the sustainable harvesting of seafood species.

# How does the list work?

Species, or in some cases groups of similar species have been placed into different colour categories. Each colour has a different meaning:



## GREEN

These are species that are from relatively healthy and well-managed populations that can sustain current fishing pressure. Some green species are not targeted by any particular fishery, but are managed as a sustainable bycatch. These species are recommended as the most sustainable choices available.

## ORANGE

These species may be legally sold by registered commercial fishers and retailers. However, an increased demand for these could compromise a sustainable supply, due to one or more of the following reasons:

- The species may presently be rare because they are overfished.
- The fishery that catches them may damage the environment through the method used and/or high bycatch.
- The biology of the species makes it vulnerable to overfishing, or it may not have been adequately studied, but it is suspected that it will be unable to sustain heavy fishing pressure based on information for related species.

Consumers are encouraged to consider the implications of these choices.

## RED

These species are illegal to buy or sell in South, Africa according to the Marine Living Resources Act. Some of these “no-sale” species are very important recreational species that cannot handle commercial fishing pressures, and may therefore only be caught for your own enjoyment and use, subject to the possession of a valid recreational fishing permit and other restrictions that may apply (such as daily bag limits, closed seasons and minimum sizes).

# How can you become a conscious seafood lover?

Be an informed seafood lover and make choices that will ensure a healthy seafood supply now and in the future. Not all types of seafood are equal. Use the list to choose fish from healthy populations, and relieve the pressure on overexploited species. By giving them a break their populations can recover and they can once again become more widely available. By saying "NO" to fish that are caught and sold illegally you can help to fight unsustainable environmental practice. Your choices can help ensure the sustainable use of our marine resources.

## Back to the fish counter



1. Kingklip is a valuable bycatch of the hake trawl and longline fisheries. It is currently overexploited. Orange. 
2. Geelbek (Cape Salmon) is an important linefish that is currently recovering from previous overexploitation. Orange. 
3. Atlantic salmon. Imported from the northern hemisphere where it is farmed. Not listed, but consider the impacts of mariculture.
4. East coast sole is caught by inshore trawlers off the southern Cape coast. Though the stock is well managed the fishery needs to reduce its significant bycatch of overexploited linefish, especially kob. Orange. 
5. Yellowfin tuna is caught using the pole-fishing method and stocks are healthy, with no bycatch issues. Green. 
6. Hake is mostly caught by bottom trawlers. The stock is strictly managed. Trawling does cause seafloor damage though hake is mostly trawled on a non-rocky bottom. Green. 

# Action!

Exercise your rights as a consumer by insisting on more information about the seafood that is offered for sale.

## 1. Ask questions:

- Where does your seafood come from?
- How was it caught?
- What species is it?



## 2. Look out for species on the Red list:

- Say “no” to species from the red list.
- Bring this under the attention of the restaurant manager or dealer.

## 3. If you have a choice, choose a species from the Green list:

- Good choices are Hake, Yellowtail, Snoek, Dorado and Calamari.
- Don't buy Musselcracker or Steenbras.
- Tell the retailer WHY you are choosing a particular species over another.

For more information on SASSI and the Consumer's Species List go to:

[www.wwf.org.za/sassi/](http://www.wwf.org.za/sassi/)



**Worldwide, unsustainable fishing has driven some fish populations to their lowest levels ever. This is no different in South Africa, where many well-known linefish species have been severely depleted. The Southern African Sustainable Seafood Initiative (SASSI) aims to inform you about how your eating choices can help determine the health and productivity of our oceans in the future. The information in this booklet will enable you to be a more conscious seafood lover and help you to make a more sustainable choice when next you want to enjoy seafood.**

The Southern African Sustainable Seafood Initiative (SASSI) is a collaborative initiative between WWF-South Africa, The Department: Environmental Affairs and Tourism, Ezemvelo KwaZulu-Natal Wildlife, Two Oceans Aquarium, TRAFFIC, The South African Association of Marine Biological Research (Sea World at uShaka).



Written by Jaco Barendse  
*October 2005*



This publication was funded by The Green Trust, a partnership between WWF-SA and Nedbank, made possible by Nedbank Green Affinity clients.