

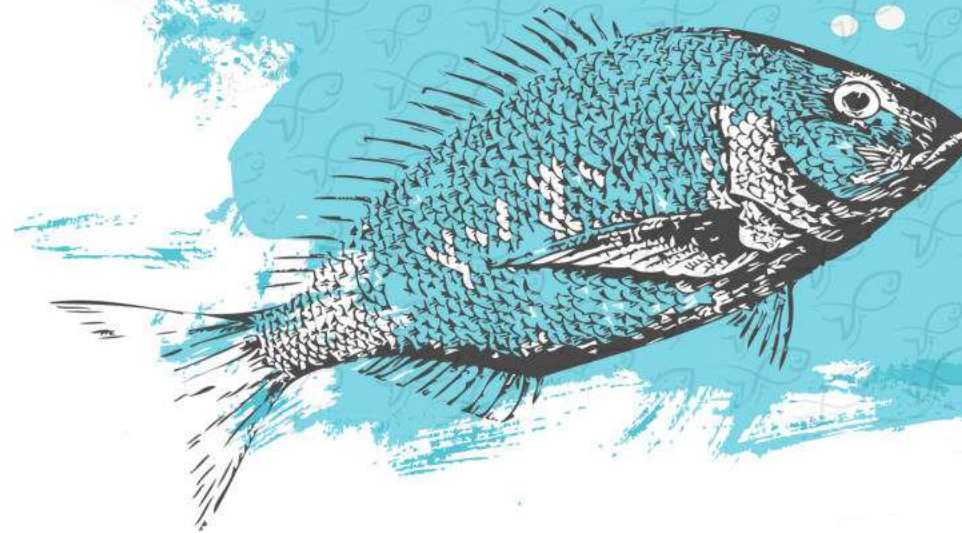
Kingdom of Morocco



Ministry of Agriculture
and Maritime Fisheries

The Moroccan White Fish

Consumer Brochure

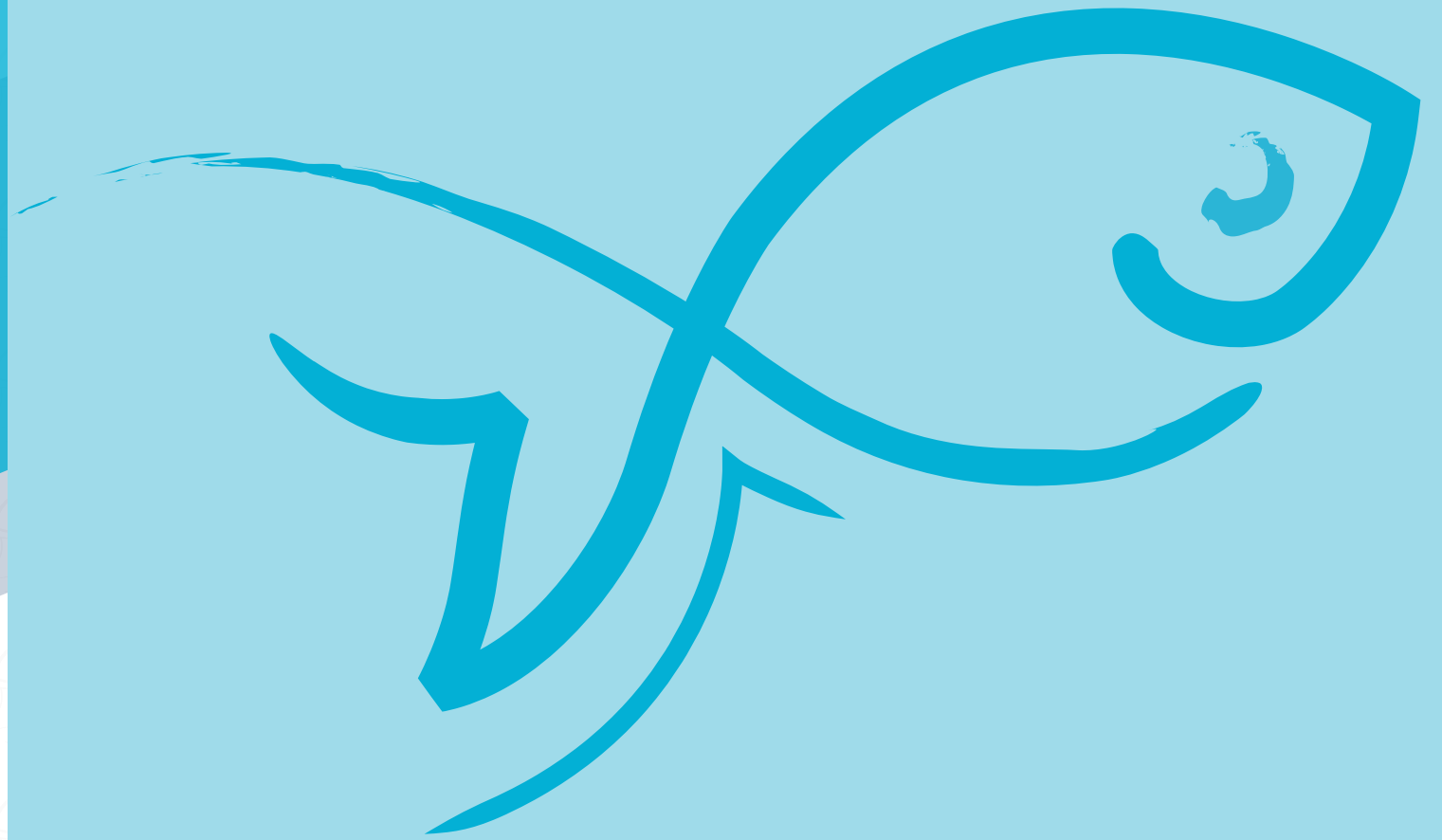


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MOROCCAN SEAFOOD
Naturally

THE MOROCCAN WHITE FISH

A great diversity
of species and flavours



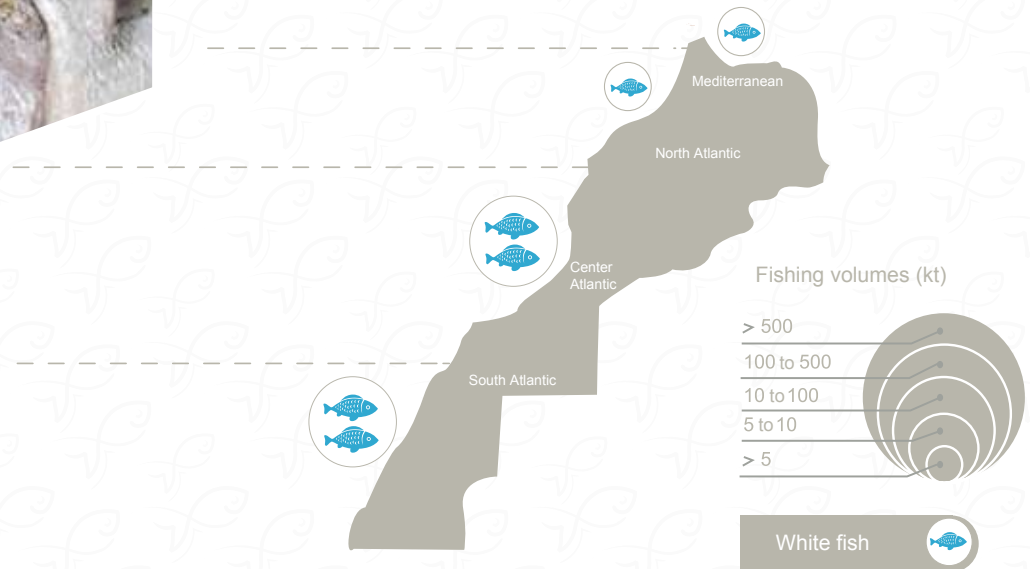




Discover moroccan white fish!

Morocco, which is a strategic intersection for many marine species, has a rare diversity of marine environments for a wide variety of white fish.

Moroccan white fish, a real wealth of the Moroccan fishing, is popular in the sea food market.



What is white fish ?

The term “white fish” is a common designation for certain fish whose flesh is white or very pale. This name refers to species that are;

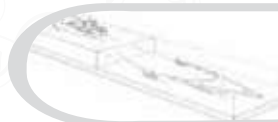
- Benthic: that live attached to the ground or move hugging the bottom as conger eel, mullet and sole,
- demersal: they live above the bottom as black bream, red gurnard, hake and sea bass.

The most traded species in Morocco are bream, sole, Pandora, hake and Saint Pierre.

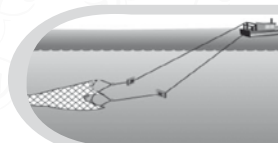


An arsenal of fishing techniques

Fishing techniques
used to targeting
these species are:



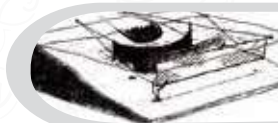
Bottom trawling : It is a cone-shaped net towed by a ship. It is connected to the boat by steel cables called warps. Other boards located in front of the trawl allow its horizontal opening. Cables called arms link the trawl panels.



Semi-pelagic trawl : trawl designed to operate at a distance from the bottom. In comparison with the bottom trawling, it is characterized by a more or less large part of its rigging which is not in contact with the bottom (forks, panels or bead) so that it is sometimes possible to get the trawl slightly above the bottom.



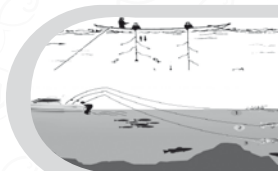
Gill net : The right mesh net is a rectangular fishing net propped vertically on the bottom or kept at a distance from it, using grappling hooks or weights sufficient weight to maintain the gear in place. It is reported to the surface by buoys connected to tether (strings).



Beach seine : This is a rectangular vertical net, pulled as an arc by a boat leaving the shore to return to it after bypassing the shoal. The seine shore hauling is done using two long arms.



Long-line : This is a long line which comprises a mother line on which numerous hooks are fixed through branch lines of variable length and spacing depending on the targeted species and the type of long lining.



Lines :

Handheld : Generally in monofilament and held directly by hand, weighted at the bottom and used for fishing close to the bottom or mid-water: mounted on one or two canes.

Trolling : Simple line provided with natural or artificial bait (lure) and dragged by a boat near the surface or at a certain depth.



Management and Sustainability, the priority of fishing

The Moroccan fisheries resource of white fish is extremely exceptional. This is why it's so important to exploit it in a sustainable way in order to ensure the protection and sustainability of these species for future generations.

Moroccan political management of this resource aims at:

- The establishment of the foundations for the long-term viability of the fishing for these species,
- The conservation and rational exploitation of white fish,
- Limiting the impact of fishing activities on the environment of this resource,
- The adaptation of fishing capacity.

For this, Morocco relies on :

- An efficient scientific research through the the National Institute of Fisheries Research "INRH",
- A strong and evolving regulatory framework,
- Monitoring and continuous monitoring of fishing activity (VMS tracking device satellite vessel by the Fishing Vessel Monitoring National Centre, catch certification procedure, ...),
- An adaptation and modernization of the fishing effort (modernization of the fleet, eliminating non-selective fishing techniques, ...),
- The development of aquaculture through the National Agency for Aquaculture Development "ANDA" (target species: bream, bass bar, ...).

Development plan for hake fishery

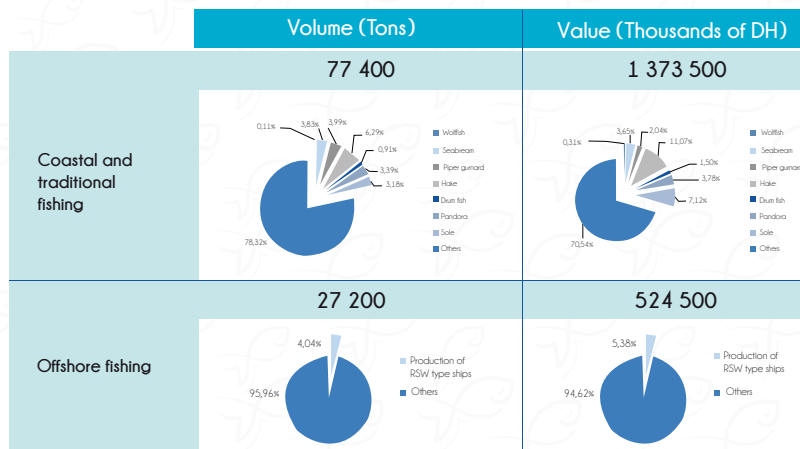
Set up since 2015, January the 1st, The development plan for hake species fishery proposes measures about the protection of hake laying and recruitment areas, through the implementation of quartering zones, development units...





An important and diversified production

The production of white fish is around 105 000 tons, and it's worth almost 1.9 billion Dirhams, or nearly 19% of the total value of the national fish production, distributed as follows :



Reference year : 2014



Moroccan whitefish valued

With a good quality and diversified raw material, the Moroccan firms of whitefish valuating give great importance to the valuation process, from the receipt to the packaging of finished products, meeting the highest standards in safety and materials of security.

The whitefish valuation industry includes the activities of fresh fish packaging and freezing, along with few firms producing salted fish, dried fish or in brine.

All these firms are licensed by the Department of Maritime Fisheries and integrate the HACCP system in their manufacturing process. Some firms, beyond regulatory requirements, have aligned with other international standards to meet the demands of their customers including QMP, IFS, BRC, ISO Standards, FOS, ... etc.



Moroccan whitefish is really, *good for your health*

Thanks to its delicate, delicious and fragrant flesh, with its subtly salty taste, the Moroccan white fish wins the Award of Excellence from exceptional fish amateurs operating in an exceptional environment.

Moroccan white fish, with their low intake of fat, contain good levels of omega 3, which have a favourable impact on cardiovascular health, reducing blood pressure, blood triglycerides and blood clots, and promoting immune function, circulatory and hormonal.

Rich in proteins of high nutritional value, they offer good levels of B vitamins, including B12 and B3, and also provide vitamin D, and vitamin E. Its flesh is particularly well endowed with minerals and trace elements: selenium, potassium, phosphorus, magnesium.

A dream enhancing *variety*

Moroccan coasts offer a wide selection of white fish for a wide range of flavours. Operating in a protected marine environment, sea bream, hake, sole, gurnard, pandora, bream ... these Moroccan white fish, with their delicate texture and natural taste, transport you instantly to the Atlantic and Mediterranean seas of Morocco.



Black seabream :
Spondyliosoma cantharus



Gilthead seabream :
Sparus aurata



Blackspot seabream :
Pagellus bogaraveo



European hake :
Merluccius merluccius



John dory : *Zeus faber*



European conger :
Conger conger



Common sole :
Solea vulgaris



Thickback sole :
Microchirus variegatus



Sand sole : *Pegusa lascaris*



Canary tonguesole :
Cynoglossus canariensis



Bogue : *Boops boops*



Brown meagre :
Sciaena umbra



Common pandora :
Pagellus erythrinus



Red pandora : *Pagellus bellottii bellottii*



Ayllary seabream :
Pagellus acarne



White seabream :
Diplodus sargus sargus



Zebra seabream : *Diplodus cervinus cervinus*



Sharpsnout seabream
puntazzo



Moroccan white seabream :
Diplodus sargus typicus cadenat



Common two-banded seabream :
Diplodus vulgaris



Angler :
Lophius piscatorius



Piper gurnard : *Trigla lyra*



Red gurnard :
Aspitrigla cuculus



Tub gurnard :
Chelidonichthys lucerna



Red scorpion fish :
Scorpaena scrofa



Blackbelly rosefish :
Helicolenus dactylopterus



Small red scorpionfish :
Scorpaena notata



Slender rockfish :
Scorpaena elongata



Offshore rockfish :
Pontinus kuhlii



Meagre : *Argyrosomus regius*



Morocco dentex :
Dentex maroccanus



Common dentex :
Dentex dentex



Sand steenbras : *Lithognathus mormyrus*



Undulate ray :
Raja undulata



Blonde ray : *Raja brachyura*



Cuckoo ray : *Raja naevus*



Red mullet : *Mullus barbatus*



Surmullet : *Mullus surmuletus*



West African goatfish :
Pseudupeneus prayensis



Canary drum :
Umbrina canariensis



Shi drum : *Umbrina cirrosa*



Turbot :
Psetta maxima maxima



Red porgy : *Pagrus pagrus*



Bluespotted seabream :
Pagrus caeruleostictus



Redbanded seabream :
Pagrus auriga



European seabass :
Dicentrarchus labrax



Spotted seabass :
Dicentrarchus punctatus



Whiting :
Merlangius merlangus

Blue whiting :
Micromesistius poutassou



Focus on *the leading white fish*

Let's discover some emblematic representatives of the Moroccan white fish



European hake : *Merluccius merluccius*

With its very slim shape, large head and relatively large eye, it has two dorsal fins that include only soft rays. The back is bluish gray, the sides lighter and the belly silvery white. It has a common size of 12 to 60cm and up to 130cm.

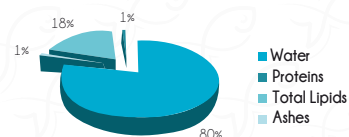
It is a demersal species found in depths of 70 to 370m, up to 800m in the Mediterranean sea, it is well known on the edges of the continental slope.

The health side : Source of high quality protein, the Moroccan hake contains all nine essential amino acids for our body. These proteins play a key role in the formation of digestive enzymes, hormones and tissues, such as skin and bones.

The nutritional side :

For 100g of Hake

Energy intake : 90 Kcal



Common pandora : *Pagellus erythrinus*

Well appreciated on the local market. Its body is moderately high and laterally compressed, its common size is 20 to 50cm, with some specimen reaching the size of 90cm

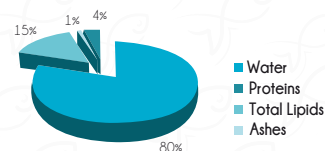
The head is quite large and rather pointed with well developed pectoral fins. The back and sides are pink to reddish, the head has got purple reflections, the belly is white. During breeding, the body of the bream is iridescent with blue pigments.

The health side : Source of protein and rich in iron, Moroccan pandora has excellent energy and digests very well.

The nutritional side :

For 100g of Pandora

Energy intake : 73 Kcal





Gilthead seabream : *Sparus aurata*

The royal Sea-bream has a silver-gray body, high and laterally compressed with a large black spot behind the lateral line and a golden band between the eyes (hence the nickname "Beauty with golden eyebrows").

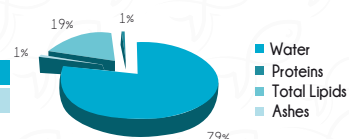
This species becomes a female after a male life in the beginning, it is 20 to 50cm long, and may reach 75cm maximum.

It is a demersal, living on sea-grass depths, sandy and rocky depths and in areas of breakers. The habitat of adults is near the coast and up to 200m depth, and juveniles up to 30m.

The health side : Rich in minerals, the Moroccan sea bream is a good source of B vitamins, including B12. It also brings the antioxidant vitamin E. Its flesh is particularly well endowed with minerals and trace elements: potassium, phosphorus, iron, calcium.

The nutritional side :

For 100g of Seabream
Energy intake : 76 Kcal



Common sole : *Solea vulgaris*

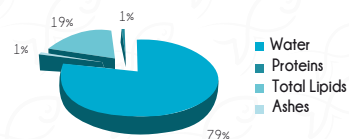
It is a queen among flatfish. With a flat, elongated and oval body, her eyes are located on one side, which is brown face with dark spots and bright spots, spread all over the body. The blind side is white. Its common size is 15 to 45cm and can reach 70cm.

It is a species "benthic" (moving on the seabed) of sandy and muddy bottoms. She lives in coastal waters, up to over 200m depth where their colour makes them difficult to detect.

The health side : Moroccan sole has a lean meat rich in vitamins and minerals essential to your well-being. The fish contains a significant amount of omega-3 fatty acids and protein.

The nutritional side :

For 100g of Sole
Energy intake : 91 Kcal





John dory : *Zeus faber*

John dory, noble fish whose body is high and strongly compressed laterally, has a common length between 10 and 50cm and maximum up to 68cm.

The body is gray brown and golden hues and a large black spot encircled adorning the mid flanks. The dorsal and caudal fins are equipped with a double row of bony shapes on their base.

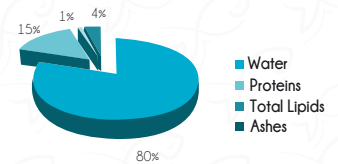
This is a species that lives alone or in small groups for juveniles. She attended the coastal waters of northern Morocco and can go down to 400m.

The health side : One of the best sources of protein: lean fish this Moroccan contains all nine essential amino acids our body.

The nutritional side :

For 100g of John dory

Energy intake : 74Kcal



European seabass : *Dicentrarchus labrax*

It is also called common Bar, Wolf, Darii, Lahrach or Bouchouk. It is a species of the Moronidae family. It has an elongated body, slightly compressed, silvery on the coasts and silver-gray to bluish on the back.

Characterized by two distinct dorsal fins, the first is equipped with spines, by its forked tail fin and his head covered on the top and side scales say cycloids.

Its common size is 20 to 55cm and maximum up to 100cm.

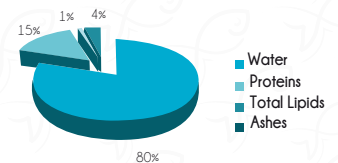
This is a fish that lives in coastal waters to about 200m depth, it often enters estuaries and rivers sometimes back.

The health side : Moroccan bar is a lean fish, but brings beneficial fatty acids to health. Rich in protein, it offers good levels of vitamins, minerals and trace elements.

The nutritional side :

For 100g of Seabass

Energy intake : 124 Kcal





Red scorpion fish : *Scorpaena scrofa*

Also called Capon, this species, like other lionfish has a stocky body, large head, covered with many strips of skin, the eyes are big, its mouth is very wide and the tail has three dark stripes.

This species is characterized by the presence of skin flaps under the lower jaw and a black spot on the dorsal fin.

The back and sides are orange red with big plates of different shades that provides excellent camouflage.

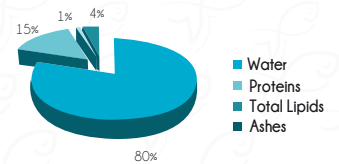
The red scorpion fish can reach up to 66cm, its common size is 20 to 30cm. It is a benthic species of rocky or muddy bottoms of the continental shelf and Posidonia meadows. She lives on the surface to 370m depth but is most abundant between 20 and 100m.

The Health side : A concentration of vitamin D, which is particularly essential for healthy bones and teeth, this Moroccan fish with tasty, firm flesh, is also an excellent representative of marine protein.

The nutrition side :

For 100g of Scorpion fish

Energy intake : 89 Kcal



How to select *your Moroccan white fish ?*

To fully enjoy the white fish fresh, you must:

Buy a quality fresh fish, which includes the freshness criteria;

Odour : Pleasant reminiscent of the sea and no foul odour.

Overall Appearance :

- Steep Corps shiny and slightly moist,
- Flesh firm and elastic to the touch,
- Viscous, shiny surface,
- Clear, bright and sparkling eyes with black pupils and opaque,
- Gill, bright red or pink, moist and shiny, but not slimy or spotted,
- brilliant and highly adherent Scales (some white fish do not have scales; Ex: Hake),
- Abdomen not distended and no presence of greenish spots.



Respect the cold chain ;

Your fish must comply scrupulously with :

- The good presentation and sale practises of seafood,
- The hygiene and safety of fish,
- The optimum temperature for preservation of fresh seafood (between 0 and 2 ° C).
- Use a cooler bag when buying your white fish.

Well packaged :

- Use plastic wrap to preserve your white fish, or better, vacuum pack,
- Preserve the fridge in an ideal temperature of 4 ° C.

Consume the product the same day or, at the latest, 48 hours after your purchase.

Minimal commercial size

Hake	20cm	Red mullet	11cm
Common pandora	14cm	Dentex	12cm
Gilthead seabream	15cm	Porgy	14cm
Sole	14cm	Annular seabream	14cm
Seabass	17cm	Langue	14cm
White seabream	14cm	Turbot	23cm
Conger	55cm	Gurnard	14cm
Mullet	14cm		





