Tanzania Sustainable Seafood Pocket Guide

Best practice for tourism operators

2024

SeRaTa — A SUSTAINABLE SEAFOOD RATING FOR TANZANIA

SeRaTa is a simple, colour-coded rating system to help you select seafood sustainably.

How Does it Work?

This Guide focuses on the 'Top 32' seafood choices commonly sourced by tourism providers in Tanzania and assigns them a 'SeRaTa' sustainability rating based on the species' status and vulnerability. SeRaTa's color coding helps you see at a glance the ratings of these key species, empowering you to make quick but informed decisions when purchasing and serving seafood.

For each type of seafood, you'll find common English names, as well as Kiswahili and Indigenous regional names used along the coastline of Tanzania.

AVOID EATING

Stay away: overfished, listed as endangered, and vital to remain in the oceans for the overall health of coral reefs and the marine environment (which is in turn vital to support fish breeding and ocean supply).

CHOOSE WITH CAUTION

Think twice: reasons for concern, e.g., the species' lifestyle makes it vulnerable to high fishing pressure, or is associated with environmental damage.

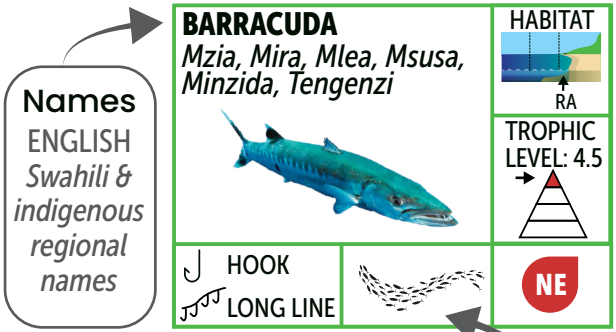
BEST CHOICE

Go ahead and buy: species that produce many eggs, grow fast and reach sexual maturity at an early age; minimal associated environmental concerns.

ALTERNATIVES

Try them out: less well-known species, lower on the trophic food chain; diversification helps reduce pressure on the usual suspects – and your customers may find a new 'favorite'.

SeRaTa – KEY TO THIS GUIDE



Names
ENGLISH
Swahili & indigenous regional names

Trophic Level
Lower is better
(see page 5)

IUCN* Red List Rating
- CR - Critically Endangered
- EN - Endangered
- VU - Vulnerable
- NT - Near Threatened
- LC - Least Concern
- DD - Data Deficient
- NE - Not Evaluated

Habitat
- N Upper layers of the ocean
- PO Pelagic oceanic, open water away from shore
- PN Pelagic neritic, shallow waters away from shore
- RA Reef associated
- MI Marine intertidal
- MC Marine coastal

Source: iucnredlist.org

Fishing methods
HOOK, LONG LINE, FARMING, GILLNET, SPEAR, TRAWLING, NET, BASKET TRAP, WOODEN STICK, BY HAND, PURSE SEINE, RINGNET, DEEP HAND LINE, AQUACULTURE

Reproduction
Abundance of eggs
(less vulnerable) → (more vulnerable)
Spawning aggregation
(most vulnerable)

**The International Union for Conservation of Nature (IUCN) Red List of Threatened Species is the world's most comprehensive inventory of the global extinction risk status of animal, fungus and plant species.*

AVOID EATING

SHARK
Papa

HABITAT: RA

TROPHIC LEVEL: 4

HOOK
LONG LINE

YOUNG
2–4

VU

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Tanzanian waters are vitally important shark and ray habitat. 99 species of sharks and rays seek refuge locally.

Sadly, more than half of these species are vulnerable to or nearing extinction.

RAY
Taa, Raa

HABITAT: RA

TROPHIC LEVEL: 3.7

LONG LINE

YOUNG
1-5

NT

Photo © Martin Grimm/iNaturalist under CC BY-NC 4.0

- Top predator and vulnerable to overfishing because they grow slowly, mature late, and produce few young.
- Legally protected in many parts of the world but targeted for fins and livers in Tanzania.
- Shark fin trade is global and widespread: every year more than 100 million sharks are killed in commercial fisheries.

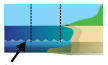
- Very important for healthy oceans from coastal coral reefs to the deep sea.
- Increasingly threatened by unsustainable fishing—including both targeted catch for their meat and fins as well as bycatch.
- Grow slowly and have few babies, which makes them more likely to face population collapse.
- Legally protected in many parts of the world. Better conservation is urgently needed.

AVOID EATING

SPINY LOBSTER / ROCK LOBSTER

Kamba, Kamba mti, Kambakoche

HABITAT



TROPHIC LEVEL: 3.5

SPEAR NET

50,000–100,000

LC

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GROUPER

Chewa, Tembo, Kivungwi

HABITAT

TROPHIC LEVEL: 4.1

HOOK LONG LINE

950,000–3,300,000

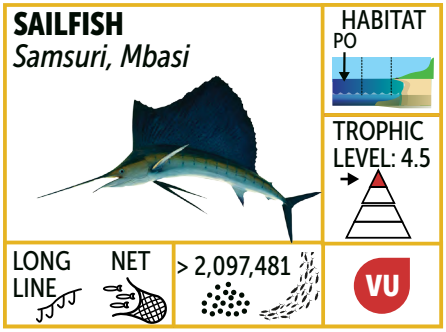
VU

Photo © Rucha Karkarey/Wikimedia under CC BY-NC 4.0

- High price due to high demand for live animals which are exported to Asia.
- Harvesting during spawning season and egg production can harm the population by reducing the number of breeding lobsters and offspring, increasing the risk of population collapse.
- **Avoid purchasing females that carry eggs.**

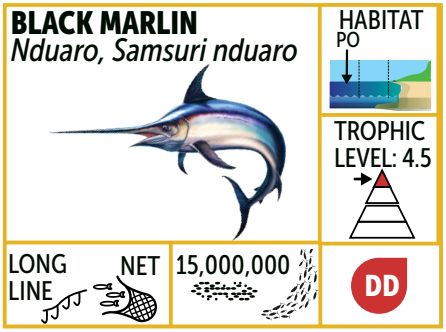
- High fishing pressure because of prices offered by the international market (including live export to Asia).
- Some species are listed as Threatened or Near Threatened by the IUCN.
- Their life traits—slow growth, late reproduction, large size, gathering in groups to spawn, and long lifespan—make them vulnerable to overfishing.

CHOOSE WITH CAUTION



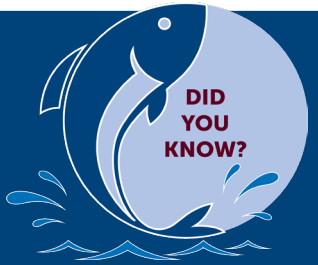
- Top predator.
- One of the fastest fish in the sea (up to 70 miles / 113 km per hour).
- Recent increase in coastal gillnet catch and fishing effort in the Indian Ocean is highly concerning.

[Indian Ocean Tuna Commission (IOTC) stock rating (2020) = Overfished]



- One of the largest bony fish in the South West Indian Ocean, once they reach maturity, they have no known predators.
- Torpedo-like hunters that use their 'sword' to stun prey.
- Highly migratory and as a result little is known about how many there are.
- Banned in other parts of the world due to potentially high mercury content.

[IOTC stock rating (2020) = Overfished]



Black marlin females can carry up to 40 million eggs!

A sailfish at top speed moves as fast as a cheetah, the fastest land animal in the world!

CHOOSE WITH CAUTION

YELLOWFIN TUNA
Jodari

HABITAT: PO

TROPHIC LEVEL: 4.4

GILLNET, HOOK

395,005–11,100,000

LC

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- Migratory, known to travel in schools with skipjack tuna.
- The South West Indian Ocean stock is in critical condition due to overexploitation by the industrial fishing sector, therefore improved conservation and stock management systems required to reduce impact and target benefits locally.
- Choose from artisanal fishing sector to support the local economy.

[IOTC stock rating (2020) = Overfished]

DEEPWATER RED SNAPPER
Changu, Fatundu

HABITAT: N

TROPHIC LEVEL: 4.4

DEEP HAND LINE

LC

Photo © Huet Jerome/fremer under CC BY-NC 4.0

- Live up to 18 years, grow slow and produce few offspring.
- Occur in depths greater than 90 m which restricts fishing pressure, but the deep nets often result in considerable bycatch of non-target species.
- Has a similar name to their shallow water reef cousins, which can cause confusion when purchasing.
- Suggested limits: length at maturity 67.5–72.5 cm and catch size limitation of 1 pound / 454 grams.

REEF SNAPPER
Tembo, Fatundu, Changu mwekundu

HABITAT: RA

TROPHIC LEVEL: 4.4

SPEAR, HOOK

LC

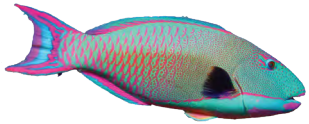
Photo © Richard Zarpe/Flickr under CC BY-NC 4.0

- Status of small-scale snapper fisheries in developing countries largely unknown.
- Studies indicate that number of overexploited fisheries has been increasing over the years.
- Important species for local nutritional needs, therefore caution urged when purchasing for the tourism market.
- Check out ‘Green Jobfish’ as an alternative.

CHOOSE WITH CAUTION

PARROTFISH, BLUE FISH

Pono, Kangu



HABITAT: RA

TROPHIC LEVEL: 2

BASKET TRAP NET SPEAR

LC

- Important species for local nutrition; caution urged when purchasing for the tourism market.
- Play important role in ecosystem. They feed on algae that grow on coral surfaces and protect corals from algae overgrowth, as well as create space for new coral to grow. They also support sand production, as inedible coral is ground down in their guts and then excreted as sand.
- Removing them on a large scale can badly harm coral reefs.

RABBITFISH

Tasi, Chafi, Tsaji

HABITAT: MC

TROPHIC LEVEL: 2.9

BASKET TRAP NET

240,000–608,000

LC

- Locally popular food fish.
- Feeds on algae, grows fast, mass spawning occurs in large numbers.
- Fisheries need better management to prevent population decline caused by overfishing and the destruction of seagrass meadows.

EMPEROR

Changu, Changu tufe, Tsangu, Changu mololo, Changu doa, Changu karamamba

HABITAT: RA

TROPHIC LEVEL: 3.9

HOOK LONG LINE

26,000–166,000

LC

- As predators, they help control the populations of smaller fish and invertebrates, keeping the reef's food chain balanced.
- Very popular fish in Tanzanian restaurants and hotels which puts pressure on the population.
- Although several species are found along the coastline, their large size and long lifespan make them vulnerable to overfishing.

CHOOSE WITH CAUTION

KINGFISH

Narrow-barred Spanish Mackerel, Nguru, Nguu

HABITAT PN

TROPHIC LEVEL: 4.3

LONG LINE NET

590,000–1,500,000

NT

- Very popular in Tanzania's restaurants and hotels.
- Globally stocks are decreasing.
- Check for 'Queen Mackerel' as an alternative.

PRAWN

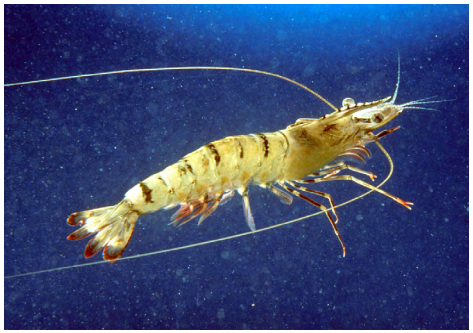
Kamba, Kamba mti, Prawn

HABITAT MC

TROPHIC LEVEL: 3

TRAWLING

NE



Green tiger prawn

- Also called King prawns, Jumbo prawns or Tiger prawns, names often used interchangeably.
- Correct species identification not easy in the field.

Indian white prawn

- Short-lived, life cycle ranging from 12 to 18 months.
- In Tanzania prawn fishing is done in brackish water, which is feeding and breeding ground for many fish species.
- Existing gears do not select the type and size of the targeted species.

Giant prawn

- World's most commercially important prawn species.
- Prawns spawn offshore, and their young move into estuaries to grow before migrating back offshore as adults.
- Spawning throughout the year with peaks observed during the rainy season.

BEST CHOICE

REEF OCTOPUS
Pweza

HABITAT: RA

TROPHIC LEVEL: 3

WOODEN STICK SPEAR

1,000–400,000

LC

Photo@AdobeStock

- Octopus fisheries can be highly sustainable if managed effectively.
- Support octopus sourced from temporary fishing ground closures.
- **Follow the recommended 0.5 kg minimum size limit when purchasing.**

SQUID
Ngisi

HABITAT: PN

TROPHIC LEVEL: 3.6

RINGNET SPEAR

680

DD

Photo@AdobeStock

- Complete their life cycle within 4-6 months.
- Produce more than 600 young, more than one time.
- Not seasonal, can be fished throughout the year.
- Important species for Tanzania's fisheries, also for export.

SLIPPER LOBSTER /CIGALE
Kamba, Kambakochi

HABITAT: N

TROPHIC LEVEL: 2.5

NET SPEAR

26,000–76,000

LC

Photo © SEFSC Pascagoula Laboratory Collection of Brandi Noble, NOAA/NMFS/SEFSC

- Commonly mistaken for its cousins the lobsters.
- Wide geographic distribution, lives in sand or mud at 10–50 m depth.
- Move long distances by swimming.
- Matures in 1 year and produces up to 60,000 eggs.
- **Only buy mature animals, more than 14 cm / 5.5 inch (from eye to start of tail).**
- **Avoid purchasing females carrying eggs.**

BEST CHOICE

BARRACUDA
Mzia, Mira, Mlea, Msusa, Minzida, Tengenzi

HABITAT: RA

TROPHIC LEVEL: 4.5

HOOK
LONG LINE

NE

- Common along East African coast.
- Several different species are popular in Tanzania (reflected by the range of Kiswahili names).
- Avoid purchasing only large individuals because they can build up toxins such as ciguatera in their flesh.

TREVALLY/JACKS
Kolekole, Karambizi

HABITAT: RA

TROPHIC LEVEL: 4.5

HOOK
NET

49,700–4,300,000

LC

- Distributed throughout the world´s tropical and subtropical marine environments.
- Live in schools and produce a large number of eggs during spawning.
- Globally, there have been no signs or suspicions of population decline.

DORADO/DOLPHINFISH/ MAHI-MAHI
Panje, Fulusi

HABITAT: PN

TROPHIC LEVEL: 4.2

NET
LONG LINE

500,000

LC

- English name is misleading (not related to dolphins at all!).
- Fast-growing, widely distributed and short lifespan.
- Can handle being fished without a major drop in its population.
- Global population currently stable.

BEST CHOICE

SKIPJACK TUNA/BONITO
Sehewa, Kiranga, Zanuba

HABITAT
N

TROPHIC LEVEL: 4.4

HOOK
PURSE SEINE

205,000–1,750,00

LC

Photo@AdobeStock

- Smallest and most abundant of the major commercial tuna species.
- Can live up to 10 years, matures early and breeds all year-round.
- Fished at moderate to sustainable levels in the South West Indian Ocean.

COBIA
Songoro

HABITAT
PN

TROPHIC LEVEL: 4

HOOK
NET

1,900,000–5,400,00

LC

Photo © NOAA Photo Library

- Powerful swimmer.
- Able to reproduce when it is young.
- Travels long distances throughout its lifespan in search of food and warmer waters.
- Not fished commercially and can handle fishing pressure.

GREEN JOBFISH
Changu kifimbo, Kifimbo

HABITAT
PN

TROPHIC LEVEL: 4.3

GILLNET
HOOK

LC

Photo © Taquet March/Ifremer under CC BY 4.0

- Occurs in open waters of deep lagoons and channels e.g. in Pemba.
- Only seasonally available for fishing.
- **Recommended minimum size for sale is 0.4kg.**

ALTERNATIVES

INDIAN MACKEREL
Kibua, Kibua macho, Kibua ngozi, Mkizi

HABITAT MC

TROPHIC LEVEL: 3.2

NET

56,000

DD

Photo@AdobeStock

- Prefers shallow and coastal waters.
- A significant part of the local community diet.
- Little evidence of significant, widespread decline.
- **Buy only mature individuals (more than 20cm / 8 inch) to ensure they have already had a chance to reproduce.**

QUEEN MACKEREL
Pandu, Kanadi

HABITAT PN

TROPHIC LEVEL: 4.2

DRIFT NET

DD

Photo © Said Koya KP & Maheah V/FishBase under CC BY 4.0

- Seasonally important in Tanzania: forms large schools in the Zanzibar Channel from March to September.
- Stocks appear more resilient to fishing pressure than Kingfish.

LOOK CLOSELY!

Queen mackerel are often confused with other mackerel species such as Kingfish.

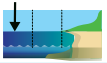
ALTERNATIVES

DAGAA

Dagaa mchele, Uono Dagaa, Dagaa mchele uchi, Dagaa upapa, Tonge kwa tonge

HABITAT

PO

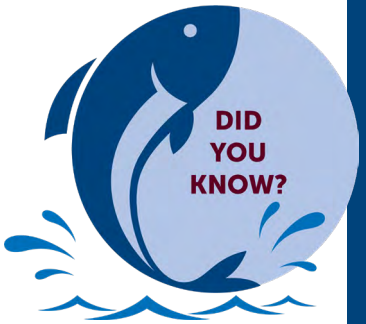


TROPHIC LEVEL: 3

RINGNET

LC

Photo@AdobeStock



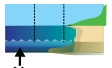
In Tanzania one of the priority fisheries with social, economic and cultural relevance in the country is the marine small pelagic fishery, locally known as 'dagaa'. It involves artisanal fishing of small sardine, herring and anchovy species using a ring net which is set according to the moon's cycle. Once the catches are landed, they are processed and traded, destined for regional markets in the Democratic Republic of Congo, Zambia and Kenya.

Surprisingly, around 90% of herring species globally are processed into fish meal for agricultural use, which is a shame, as they have excellent nutritional value for consumption. In Tanzania they are a tasty and affordable way to add variety to your menu—try it, get creative, and don't let it go to waste!

ALTERNATIVES

MANGROVE/MUD CRAB
Kaa koko, Ngadu

HABITAT



N

TROPHIC LEVEL: 3

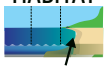
AQUACULTURE

BASKET TRAP

NE

COCKLES & MUSSELS
Korobwe, Chaza, Kombe

HABITAT



MI

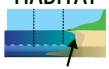
TROPHIC LEVEL: 2

BY HAND

NE

SEAWEED
Mwani, Mtimbi, Mwani mjane, Mwani mnene, Mwani kikarafuu

HABITAT



MI

TROPHIC LEVEL: 1

FARMING

NE

- Sustainable alternative to reef lobsters.
- Fairly abundant in mangrove swamps and estuaries.
- Fishing methods differ between regions.
- Support crab fattening projects: small cages built by local communities protect young crabs from predators and allow them to grow quickly to marketable size.
- **Avoid purchasing females that carry eggs and young individuals (less than 15 cm width shell).**

- While globally 90% of cockles and mussels are farmed, in Tanzania cockles and other mussels are hand-picked from seagrass meadows mainly during spring low tide.
- A long tradition carried out mainly by women and their children, for food consumption in their communities.
- Support this tradition by buying directly from these women and remember to campaign for the protection and sustainable use of seagrass meadows.

- More than 200 species can be found in Tanzania.
- Some are farmed on ropes in shallow water lagoons, often managed by women.
- Nutrient rich and used in many dishes around the world.
- Support local seaweed initiatives and incorporate their products into your menu in salads, juices, smoothies, jam, and flavored salt.

DID YOU KNOW?

Tilapia is a freshwater alternative to seafood. It was introduced to Lake Victoria in the 1950s to increase fish production but because it reproduces quickly, began dominating the lake's fishery and impacting native fish populations. These days, despite signs of overexploitation, Tilapia remains an important protein source.

Avoid wild-caught fish from Lake Victoria and support small-scale pond farmers in Tanzania. Stay away from industrial aquaculture products from Asia.

Tilapia is sometimes called Ngege, Michangu, Chungu tukwana, Changu koye, and is distinct from Nile Perch (different species).

USAID
FROM THE AMERICAN PEOPLE

CHUMBE ISLAND
CORAL PARK

This Guide was produced by Chumbe Island Coral Park with the support of the USAID Heshimu Bahari (Respect the Ocean) Project.

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This guide takes best practice approaches. Certain seafood can be more sustainable in various scenarios, and a sustainable fish caught with unsustainable methods would still be unsustainable. As populations and conditions change, what is advisable at the time of writing this guide may not be appropriate in the future.

Scan here for an electronic version of the full Tanzania Sustainable Seafood Guide!