Reef Responsible: A Market-Driven Approach to a Sustainable Seafood Industry in the US Virgin Islands

What is Reef Responsible?
“Reef Responsible” is the use of coral reefs and other marine natural resources so as to not deplete stocks or otherwise cause harm or degradation to those natural resources.

What do we Hope to Achieve?
We hope to increase your understanding of how catching, purchasing, serving, and consuming locally harvested seafood can positively influence the future of the US Virgin Islands’ commercial fishery and coral reefs.
Purpose of This Guide

The Good Choice, Go Slow, and Don’t Eat seafood list for the US Virgin Islands was developed with USVI Department of Planning and Natural Resources Division of Fish and Wildlife and National Oceanic and Atmospheric Administration fisheries staff and based on current USVI local and US federal fisheries regulation.

This guide was developed to provide information on commercially important fish and invertebrate species caught in local US Virgin Islands and US federal waters.

We hope that it will be used to make informed decisions about the seafood that you purchase from local restaurants as well as the seafood that you purchase to prepare on your own.
These fish species are considered good choices because they mature quickly and reproduce rapidly, their populations are in a good state, or are sustainable alternatives to native species.

These fish species are considered good alternatives, however there are seasonal closures and size limits that are important to know.

These fish species are endangered or threatened, are protected by international, US federal, and/or USVI local law, and should never be harvested.
<table>
<thead>
<tr>
<th>Reefponsible List</th>
<th>Good Choice</th>
<th>Go Slow</th>
<th>Don’t Eat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dolphinfish</td>
<td>Groupers</td>
<td>Groupers</td>
</tr>
<tr>
<td></td>
<td>Lionfish</td>
<td>Grunts</td>
<td>Goliath</td>
</tr>
<tr>
<td></td>
<td>Tuna</td>
<td>Jacks</td>
<td>Nassau</td>
</tr>
<tr>
<td></td>
<td>Tilapia</td>
<td>Parrotfishes</td>
<td>Parrotfishes</td>
</tr>
<tr>
<td></td>
<td>Wahoo</td>
<td>Queen Conch</td>
<td>Blue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Snappers</td>
<td>Midnight</td>
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<td></td>
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<td>Surgeonfish</td>
<td>Rainbow</td>
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<td></td>
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<td>Spiny Lobster</td>
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<td></td>
<td></td>
<td>Swordfish</td>
<td></td>
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<td></td>
<td></td>
<td>Triggerfish</td>
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<td></td>
<td></td>
<td>Whelk</td>
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</tr>
</tbody>
</table>
Dolphinfish

Good Choice
Dolphinfish

Other Names: Coryphaena hippurus, Mahi Mahi

Identifying Characteristics: Large dorsal fin from above the eye to base of tail.

### Biology

- Max length: 5 ft
- Common length: 2-4 ft
- Found in small schools of a few males and many females. Feeds on fish and zooplankton. Fast growing, pelagic (open ocean), and highly migratory.

### Important Info

- Popular with recreational anglers and very important to commercial fisheries.

IUCN Red List Status: Least Concern
Lionfish
Red Lionfish

Other Names: *Pterois volitans*

Identifying Characteristics: Red and white zebra stripes, long, showy pectoral fins.

### Biology

- Max length: 17 in
- Common length: 8-16 in
- Feeds on fish, crustaceans and plankton. Fast reproduction rate. Native to the Pacific and Indian oceans, but have invaded the Atlantic/Caribbean.

### Important Info

- Have defensive venomous spines on dorsal, ventral, and anal fins.
- Invasive to Caribbean. Once spines are removed they can be safely eaten. Like some reef fish, they can cause ciguatera poisoning if taken from certain areas.

IUCN Red List Status: Least Concern
Tilapia
Tilapia

Other Names: *Oreochromis mossambicus*, *O. niloticus*


<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 18 in</td>
<td>Freshwater tropical fish from Africa and Eurasia. Popular in aquaculture. Grown in several areas in the USVI.</td>
</tr>
<tr>
<td>Common length: 6-8 in</td>
<td></td>
</tr>
<tr>
<td>Feeds on phytoplankton and small quantities of zooplankton. Fast reproduction rate.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Near Threatened (Sustainable in USVI)
Tuna

Good Choice
### Tuna

Other Names: *Thunnus* (Yellowfin, Bigeye)
Large pelagic (open-water) fish.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
</table>
| Max length: 8 ft  
Common length: 4-6 ft  
This fish travels in schools with other species of similar size. Large fish sometimes school with dolphins. | Size Limit: Minimum curved fork length of 27 inches.  
Important: Requires additional federal permit for commercial and recreational take. |

IUCN Red List Status: Near Threatened (Sustainable in USVI)
Wahoo

Good Choice
Wahoo

Other Names: *Acanthocybium solandri*


### Biology

- Max length: 8 ft
- Common length: 4-5 ft
- Feeds on fish and squid.
- Pelagic (open ocean) and highly migratory.

### Important Info

- More common in the Pacific although occasionally harvested in the Atlantic/Caribbean.

IUCN Red List Status: Least Concern
Blue Tang
**Blue Tang**

Other Names: *Acanthurus coeruleus* (others in family: *Ocean Surgeonfish*, *Doctorfish*)

Identifying Characteristics: A scalpel like spine at the base of the tail.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 15 in</td>
<td>Important algae grazer, which helps to maintain healthy reefs, typically found in large school with Ocean Surgeonfish and Doctorfish.</td>
</tr>
<tr>
<td>Common length: 5-10 in</td>
<td></td>
</tr>
<tr>
<td>Travel in large schools.</td>
<td></td>
</tr>
<tr>
<td>Juveniles clean dead skin and parasites from sea turtles.</td>
<td></td>
</tr>
</tbody>
</table>

**IUCN Red List Status**: Least Concern
Caribbean Spiny Lobster

drawnbydawn.com
# Caribbean Spiny Lobster

**Other Names:** *Panulirus argus*

**Identifying Characteristics:** Spines on the carapace. Long antennae.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 24 in</td>
<td>Minimum 3 1/2 inch carapace length. No harvest of females with eggs. Illegal to spearfish lobster in territorial and federal waters.</td>
</tr>
<tr>
<td>Common length: 6-10 in</td>
<td></td>
</tr>
<tr>
<td>Feed on gastropods, bivalves and carrion.</td>
<td></td>
</tr>
</tbody>
</table>

**IUCN Red List Status:** Insufficient Data
Grouper
Other Names: *Epinephelus Mycteroperca* (Red, Tiger, Yellowfin, Yellowedge, Black)
Large reef dwellers.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 5 ft</td>
<td>May aggregate to spawn. Closed season February 1 - April 30. Like some reef fish, they can cause ciguatera poisoning if taken from certain areas.</td>
</tr>
<tr>
<td>Common length: 3-5 ft</td>
<td></td>
</tr>
<tr>
<td>Feeds on a wide variety of fishes and invertebrates. Can be found in coral and rocky reefs. Sex-reversal observed in some species.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Least Concern - Vulnerable
GrunT

Go Slow
Grunt

Other Names: *Haemulon* (French, White, Spanish, Bluestriped, etc.)
Nearshore/reef dwellers.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 15 in</td>
<td>May gather in small to large schools (often in the hundreds) on coral reefs.</td>
</tr>
<tr>
<td>Common length: 8 in</td>
<td></td>
</tr>
<tr>
<td>Feed on a wide variety of</td>
<td></td>
</tr>
<tr>
<td>invertebrates. Common</td>
<td></td>
</tr>
<tr>
<td>on coral/rocky reefs.</td>
<td></td>
</tr>
<tr>
<td>Named for pig-like grunts</td>
<td></td>
</tr>
<tr>
<td>produced by pharyngeal</td>
<td></td>
</tr>
<tr>
<td>(throat) teeth.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Not Evaluated
### Biology

- Max length: 5 ft
- Common length: 3 ft
- Feed on slow moving crustaceans and some fishes. Pelagic with juveniles near the shore.
- More than 150 species.

### Important Info

- Most species are found in small groups up to large schools.
- Occasionally a school will reside in one area.

IUCN Red List Status: Least Concern
Lane Snapper
Lane Snapper
Other Names: *Lutjanus synagris*
Identifying Characteristics: Diffused to dark vertical bars on back. 8 -10 horizontal yellow stripes on sides.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 2 ft</td>
<td>Closed season April 1 - June 30.</td>
</tr>
<tr>
<td>Common length: 10 in</td>
<td></td>
</tr>
<tr>
<td>Feeds at night on small fishes, crabs, shrimp, cephalapods.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Not Evaluated
Mutton Snapper
Mutton Snapper

Other Names: Lutjanus analis

Identifying Characteristics: Fine blue lines below the eye. A black spot on mid-body line, just below the rear dorsal fin.

**Biology**

- Max length: 2.5 ft
- Common length: 1-2 ft
- Found in small schools during the day. Feeds day and night on fish, crustaceans, cephalopods, and gastropods.

**Important Info**

- Closed season April 1 - June 30.
- Like some reef fish, they can cause ciguatera poisoning if taken from certain areas.

IUCN Red List Status: Vulnerable
Parrotfish

A. H. Baldwin

Go
Slow
# Parrotfish

Other Names: *Scaridae*, Stoplight, Red Band, Queen, Princess, etc. Local Names: Gutu

Identifying Characteristics: Beak-like mouth. Males can be brightly colored. Large scales.

### Biology

Max length: 18 in  
Common length: 6-16 in  
Primary algae grazers on coral reefs. Important bio-eroder. Some species spawn daily.

### Important Info

Important algae grazer, which helps to maintain healthy Caribbean reefs. Size Limits: Redband – 8 inches (fork length), Princess, Queen, Striped, Redtail, Stoplight, and Redfin – 9 inches (fork length).

IUCN Red List Status: Least Concern
Queen Conch
## Queen Conch

Other Names: *Strombus gigas*

Identifying Characteristics: Large spiral shell with a wide flared lip pink in color.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
</table>
| Max shell length: 12 in  
Common length: 7-9 in  
Found on sandy and hard-bottomed lagoons, coral rubble fields, and occasionally seagrass beds, at depths ranging from 3 to 250 ft. | Minimum shell length of 9 inches from tip of spire to distal end of shell or 3/8 inch lip thickness at its widest point. Closed season June 1 - October 31. Harvest prohibited in federal waters except Lang Bank, St. Croix during open season. |

IUCN Red List Status: Not Evaluated
Queen Triggerfish
# Queen Triggerfish

Other Names: *Balistes vetula*, Ole Wife

Identifying Characteristics: Streaming tips on rear dorsal and tail fin. Two blue stripes on face.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 2 ft</td>
<td>The trigger spine of the Queen Triggerfish locks in place to</td>
</tr>
<tr>
<td>Common length: 8-16 in</td>
<td>prevent being swallowed by their predators.</td>
</tr>
<tr>
<td>Feeds on crustaceans and</td>
<td></td>
</tr>
<tr>
<td>sea urchins.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Vulnerable
Red Hind

Duane Raver
Red Hind
Other Names: *Epinephelus guttatus*
Identifying Characteristics: Grouper with red spots and black bars along the edge of the tail and back fins.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 2 ft</td>
<td>At spawning aggregation site, closed season December 1 – February 28. <em>Closure during spawning season appear to have increased the average size of this fish and led to the return of a healthy, growing population in St. Thomas.</em></td>
</tr>
<tr>
<td>Common length: 10-15 in</td>
<td></td>
</tr>
<tr>
<td>Feeds mainly on crabs, other crustaceans, and small fishes. Spawns in aggregations. Territorial.</td>
<td></td>
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</tbody>
</table>

IUCN Red List Status: Least Concern
Silk Snapper
Silk Snapper
Other Names: *Lutjanus vivanus*
Identifying Characteristics: Long pectoral fins, back and upper sides pink to red.

### Biology
- Max length: 33 in
- Common length: 18 in
- Feeds on fish, shrimp, crabs, cephalopods.

### Important Info
- In Federal waters around St. Croix and St. Thomas/St. John territorial and federal waters, closed season October 1 - December 31.

IUCN Red List Status: Not Evaluated
Swordfish
# Swordfish

**Other Names:** *Xiphias gladius*

**Identifying Characteristics:** Long, flat, sword-like bill. No pelvic fins.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 15 ft</td>
<td>Size Limit: Minimum 47 inches lower jaw fork length.</td>
</tr>
<tr>
<td>Common length: 10 ft</td>
<td>Important: Requires additional federal permit for</td>
</tr>
<tr>
<td>Feed mainly on fish but</td>
<td>commercial and recreational take.</td>
</tr>
<tr>
<td>also crustaceans and</td>
<td></td>
</tr>
<tr>
<td>squid. Use their sword</td>
<td></td>
</tr>
<tr>
<td>to kill their prey.</td>
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</tr>
<tr>
<td>Migrate to cool waters</td>
<td></td>
</tr>
<tr>
<td>in the summer and warm</td>
<td></td>
</tr>
<tr>
<td>waters in the winter.</td>
<td></td>
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</tbody>
</table>

**IUCN Red List Status:** Least Concern
Whelk  (West Indian Top Shell)
# Whelk

Other Names: *Cittarium pica*, West Indian Top Shell, Whilk

Identifying Characteristics: Black and white shell.

## Biology

<table>
<thead>
<tr>
<th>Max shell diameter: 4 in</th>
<th>Found on rocky shores in the intertidal zone. Feed on filamentous algae.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common diameter: 0-4 in</td>
<td></td>
</tr>
</tbody>
</table>

## Important Info

| Minimum shell size must be > 2 7/16 inch diameter. Closed season April 1 - September 30. |

IUCN Red List Status: Not Evaluated
Yellowtail Snapper
Yellowtail Snapper
Other Names: *Ocyurus chrysurus*
Identifying Characteristics: Bright yellow mid-body stripe and tail.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 2.5 ft</td>
<td>For federal waters, size limit: minimum 12 inches total length.</td>
</tr>
<tr>
<td>Common length: 1-2 ft</td>
<td></td>
</tr>
<tr>
<td>Feed at night on plankton</td>
<td></td>
</tr>
<tr>
<td>and bottom animals (fish</td>
<td></td>
</tr>
<tr>
<td>and crustaceans). Swim</td>
<td></td>
</tr>
<tr>
<td>alone or in loose schools.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Not Evaluated
Blue Parrotfish

Don't Eat!
# Blue Parrotfish

**Other Names:** *Scarus coeruleus*

**Identifying Characteristics:** Squared off head.

## Biology
- Max length: 4 ft
- Common length: 1-2.5 ft
- Feed on algae over sand and reefs.

## Important Info
- Illegal to harvest this species in local and federal waters around the USVI.

**IUCN Red List Status:** Least Concern (Not Sustainable in USVI)
Goliath Grouper

Don’t Eat!
Goliath Grouper
Other Names: *Epinephelus itajara*, Jewfish
Identifying Characteristics: Large body size. Small dark spots on body and fins.

**Biology**
- Max length: 8 ft
- Common length: 4-6 ft
- Solitary with small home ranges. Feeds on crustaceans, spiny lobster, fish and turtles.

**Important Info**
- Illegal to harvest this species in local and federal waters around the USVI. Overharvesting severely reduced their numbers.

*IUCN Red List Status: Critically Endangered*
Midnight Parrotfish
Midnight Parrotfish

Other Names: *Scarus coelestinus*
Identifying Characteristics: Bright blue markings on head. Navy blue color.

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 3 ft</td>
<td>Illegal to harvest this species in local and federal waters around the USVI.</td>
</tr>
<tr>
<td>Common length: 1-2 ft</td>
<td></td>
</tr>
<tr>
<td>Algae scraper.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Insufficient Data (Not Sustainable in USVI)
Nassau Grouper

Don’t Eat!
Nassau Grouper

Other Names: *Epinephelus striatus*

<table>
<thead>
<tr>
<th>Biology</th>
<th>Important Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max length: 4 ft</td>
<td>Illegal to harvest this species in local and federal waters around the <strong>USVI</strong>. Overharvesting at spawning aggregations severely reduced their numbers.</td>
</tr>
<tr>
<td>Common length: 1-2 ft</td>
<td></td>
</tr>
<tr>
<td>Feeds on fish, crabs and other crustaceans. Very curious.</td>
<td></td>
</tr>
</tbody>
</table>

IUCN Red List Status: Endangered
Rainbow Parrotfish

Don’t Eat!

J. E. Randall
# Rainbow Parrotfish

Other Names: *Scarus guacamaia*

Identifying Characteristics: Orange head, bright green body. Squared tail.

## Biology

| Max length: 5.5 ft | Illegal to harvest this species in local and federal waters around the USVI. |
| Common length: 1-3 ft | |
| One of the largest grazers on the reef. Juveniles dependent on mangroves. | |

## Important Info

IUCN Red List Status: Near Threatened
Reefponsible Size Limits

- **Redband Parrotfish**: 8 inches (fork length)
- **Princess, Queen, Striped, Redtail, Stoplight, and Redfin Parrotfishes**: 9 inches (fork length)
- **Yellowtail Snapper**: 12 inches (total length)
- **Yellowfin, Bigeye Tuna**: 27 inches (fork length)
- **Swordfish**: 47 inches (lower jaw fork length)
- **Caribbean Spiny Lobster**: 3.5 inches (carapace length)
- **Queen Conch**: 9 inches shell tip to end or 3/8 inch lip width
- **Whelk**: 2 7/16 inches (shell width)

*USVI local waters only*  
*US federal waters only*
Importantly Links and Resources

Reef Responsible Program
http://www.facebook.com/reefsponsible

USVI Division of Fish and Wildlife
(340) 772-1955 (STX) | (340) 775-6762 (STT)

Caribbean Fishery Management Council
http://caribbeannfmc.com/

NOAA’s National Marine Fisheries Service
http://www.nmfs.noaa.gov/

International Union for Conservation of Nature
http://www.iucnredlist.org/
How this Initiative Impacts Coral Reefs

Coral reefs provide important juvenile nursery habitat for a number of fish and invertebrate species. Many of these fishes are herbivores and remove algae from reefs, providing space for corals to settle and grow. The relationship between these fishes and coral reefs is symbiotic (both benefit from their interactions).

Excessive removal of these fishes, along with many other stressors have lead to a decline in Caribbean coral reefs. Once dominated by corals, these reefs are now smothered by algae, which outcompetes the corals for space.

Consuming seafood with the future in mind is just one way we can help to sustain our local fishery and protect our corals reefs.
The Reef Responsible Program is a collaborative effort among The Nature Conservancy US Virgin Islands, the National Oceanic and Atmospheric Administration Coral Reef Conservation Program, NOAA Fisheries, the USVI Division of Fish and Wildlife, The Marine Education and Outreach USVI Style’s Initiative - Don’t Stop Talking Fish Project, the Virgin Islands Marine Advisory Service, and St. Croix Reef Jam.