

OneNC *Naturally*

3 Major Program Areas:



Stewardship of
Working Farms and Forests

**Working
Lands**



Conserving Natural Areas
for Future Generations

**Forever
Natural**

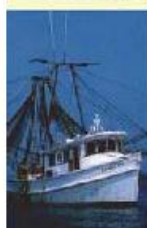


Protecting and Restoring
Coastal Habitats

**Working
on the
Water**

Working on the Water

Protecting and Restoring Coastal Habitats



North Carolina Coastal Habitat Protection Plan

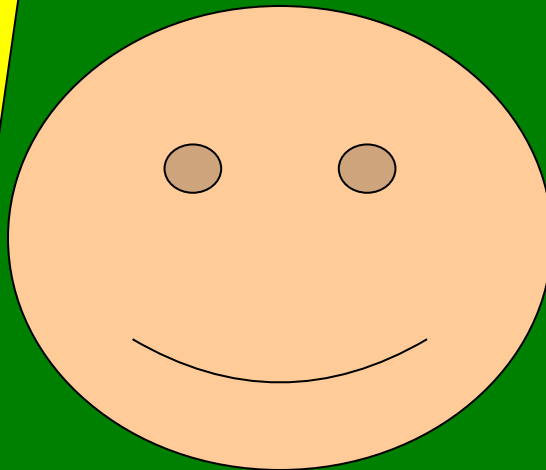
By
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N. C. Department of Environment and Natural Resources
Division of Marine Fisheries
Morehead City, NC 28557

February 2005



**Why are the
coastal fish habitats
so important to North
Carolina?**





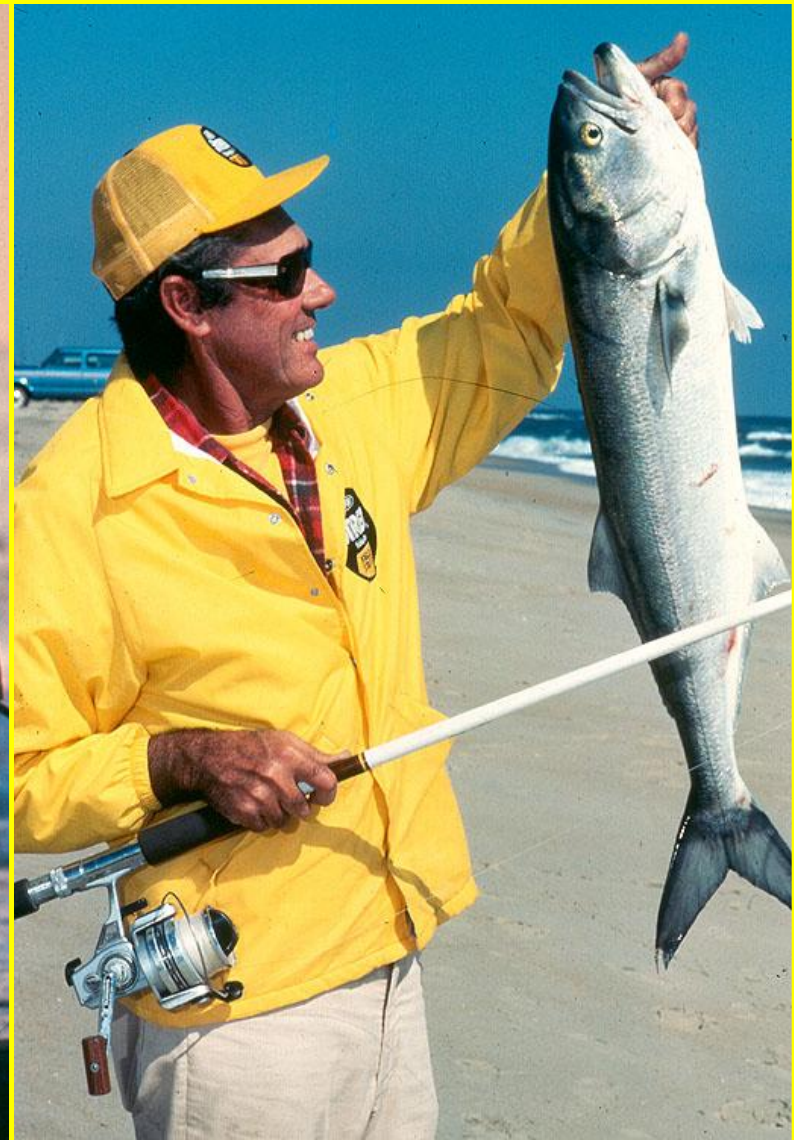
#1

**Largest system
of estuaries &
ocean waters
on the
Atlantic Coast**

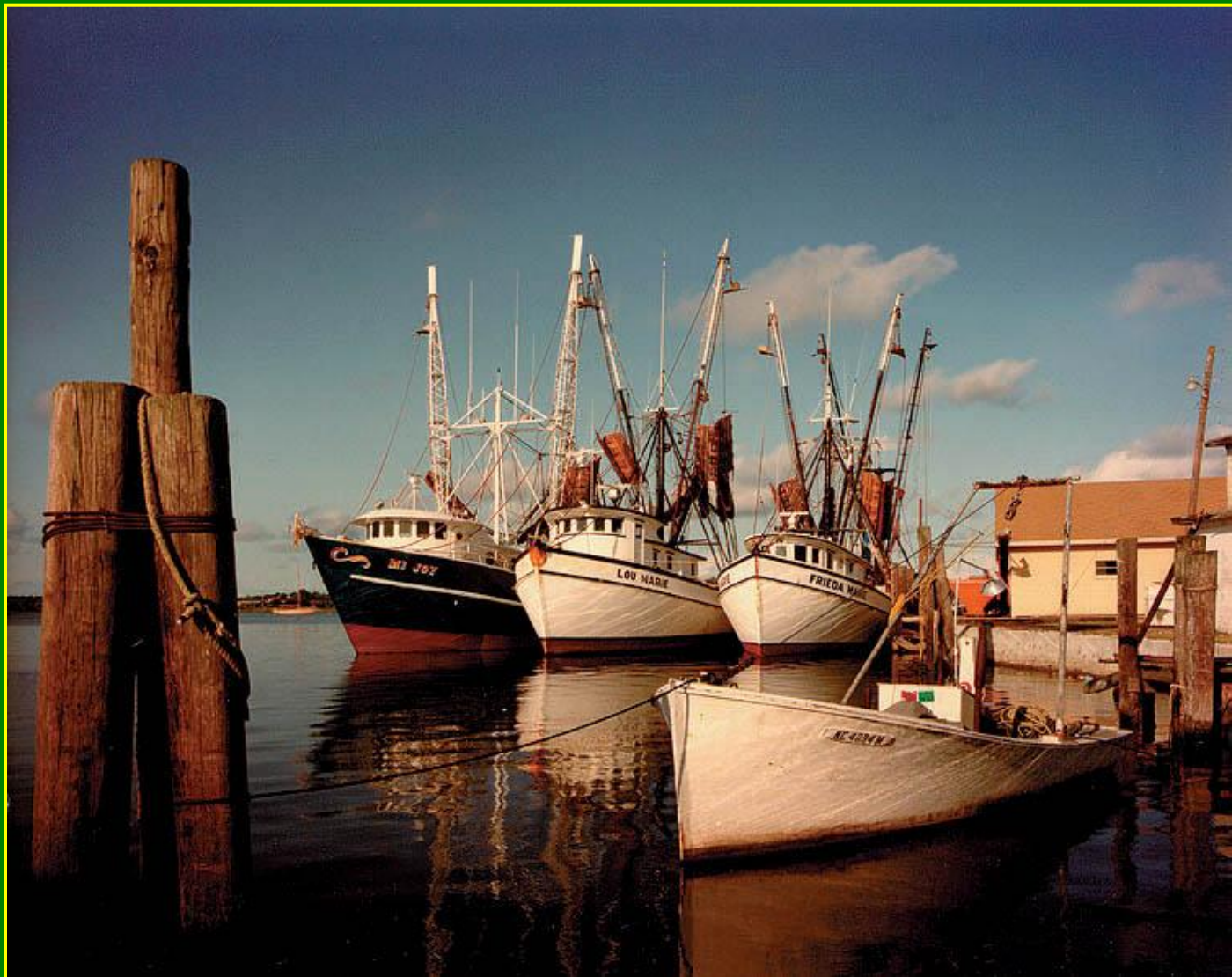
Strong Heritage of Commercial Fishing



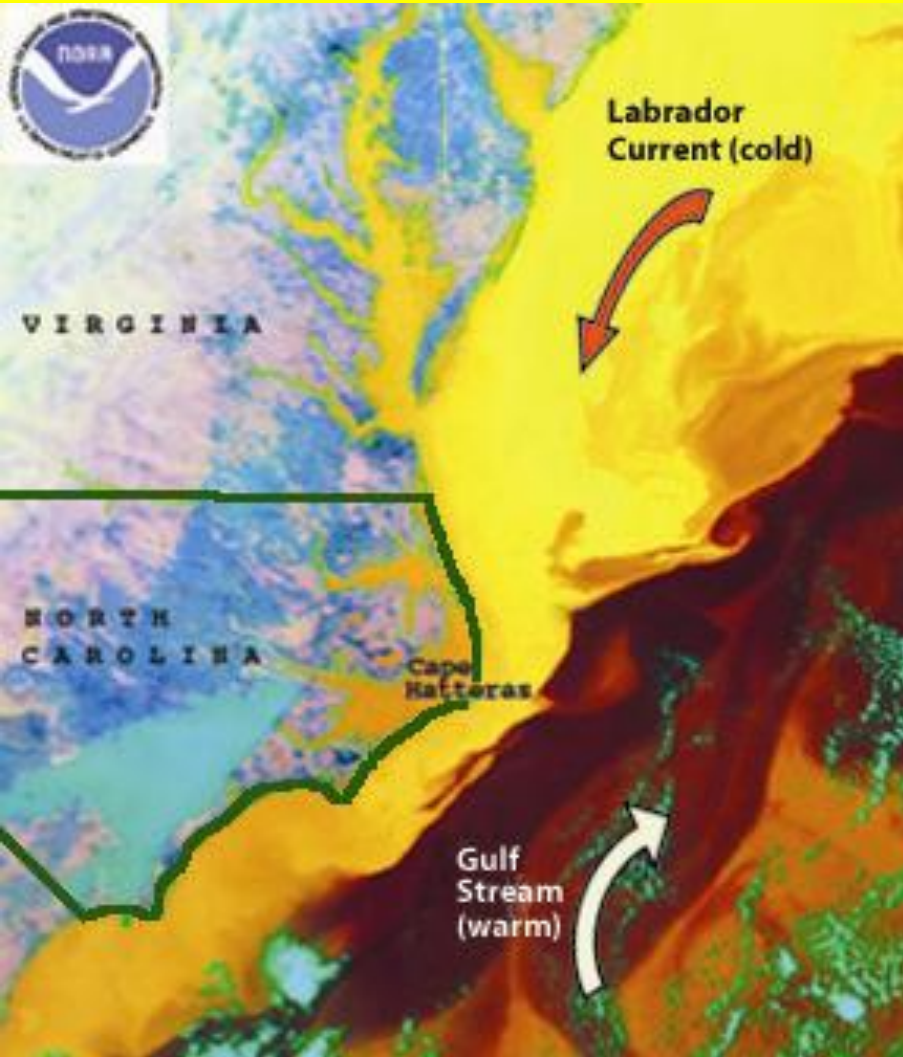
Strong Heritage of Recreational Fishing



\$1 Billion Commercial & Recreational Fishing

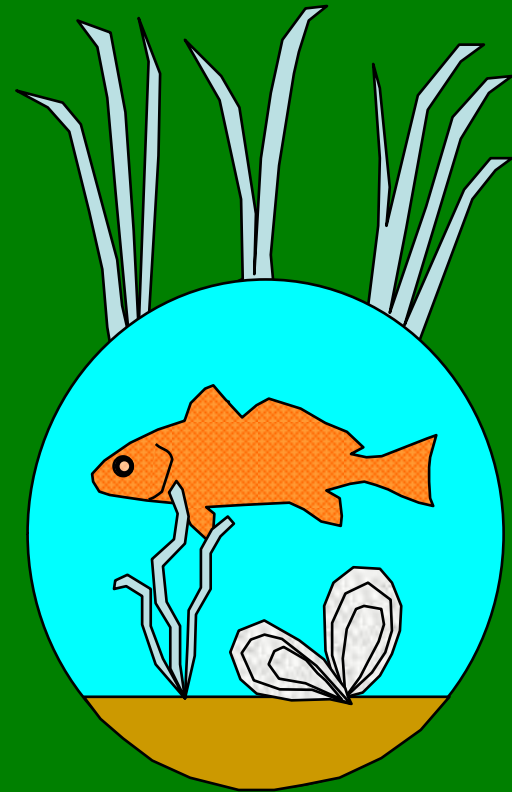


Cold Northern Current



Bring many
different species
to N.C. waters

Warm Southern Current



6

**interdependent
fish habitats**

support

North Carolina's
coastal fisheries.

6 Interdependent Fish Habitats



WETLANDS



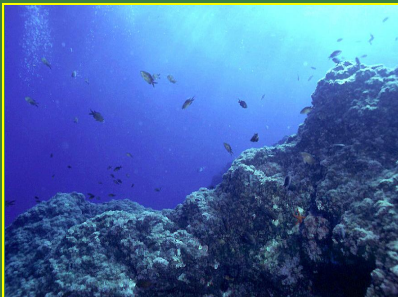
**SOFT
BOTTOM**



**SHELL
BOTTOM**



**SUBMERGED
AQUATIC
VEGETATION**

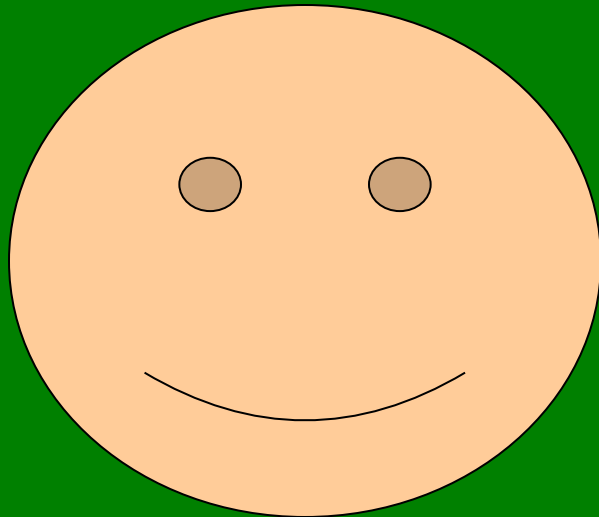


**HARD
BOTTOM**



**WATER
COLUMN**

**Why should these
6 coastal habitats
matter to me?**





95% of fish
depend on
**coastal
wetlands
habitat**
during their life
cycle.

WETLANDS habitat –

- Protect the shoreline from waves.
- Slowly release floodwaters.



We HARM Wetland habitat by –

- Filling for development
- Building docks and marinas



- Hardening the shoreline

We CAN HELP

Wetland habitat by –

- Preserving wetland areas
- Establishing buffers
- Restoring wetlands




SOFT BOTTOM habitat—



**Stores & recycles nutrients
& sediments**

SOFT BOTTOM habitat



**N.C. has about 2.3 million acres
of estuarine & ocean bottom
habitat.**

We HARM

Soft Bottom habitat by –

- Disturbance by fishing gear



- Docks and jetties

- Beach nourishment

We CAN HELP

Soft Bottom habitat by –

- Minimizing dredging
- Managing beach nourishment
- Modifying shoreline stabilization methods



SHELL BOTTOM habitat –



Living oyster reefs filter pollutants from water.

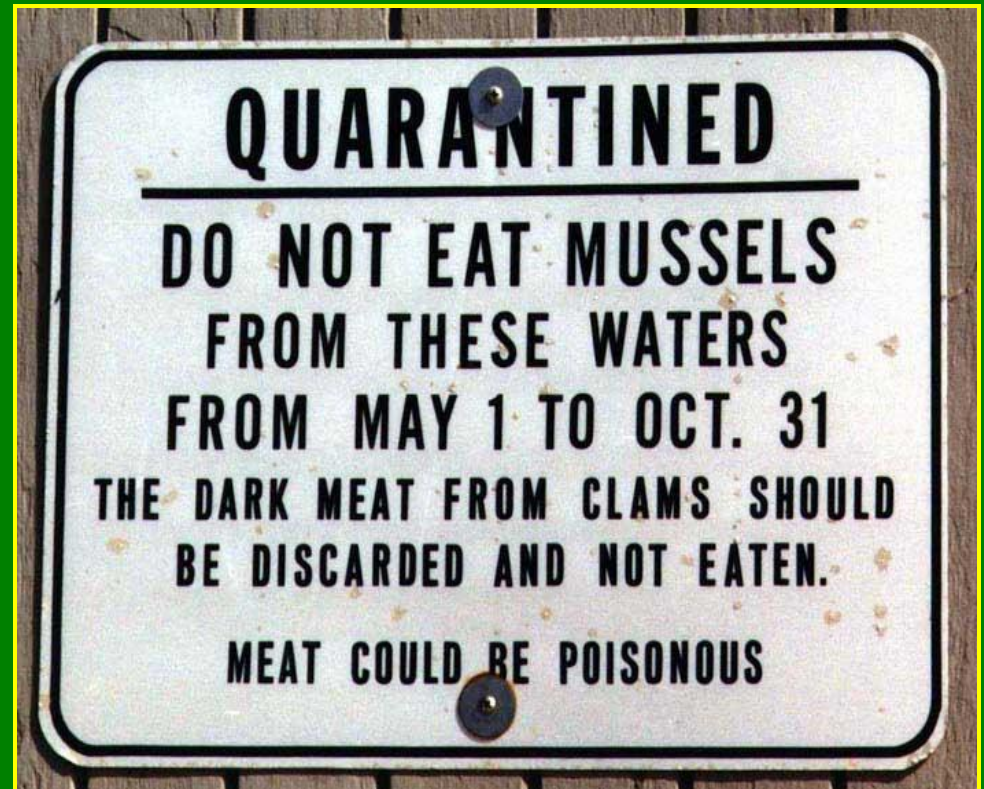
SHELL BOTTOM habitat –

North
Carolina
has lost
90%
of our
original
oyster
reefs.



We HARM Shell Bottom habitat by –

- Excessive oyster harvest
- Runoff carrying toxic chemicals & sediment



- Excess nutrients & freshwater

We CAN HELP Shell Bottom habitat by –



- Rebuilding reefs using discarded shells.
- Planting native oyster larvae.

SUBMERGED AQUATIC VEGETATION (SAV) habitat –



Underwater
garden that
supplies food,
oxygen
& shelter
for young fish



More than 40 fish species use
SAV habitat
at some stage in their life.

We HARM the SAV habitat by –

- Uprooting with boat props & fishing gear
- Pollution from excess nutrients
- Burying under excess sediment



We CAN HELP the SAV habitat by –

- Using boat props & fishing gear with care
- Using less lawn chemicals
- Reducing sediment in stormwater runoff

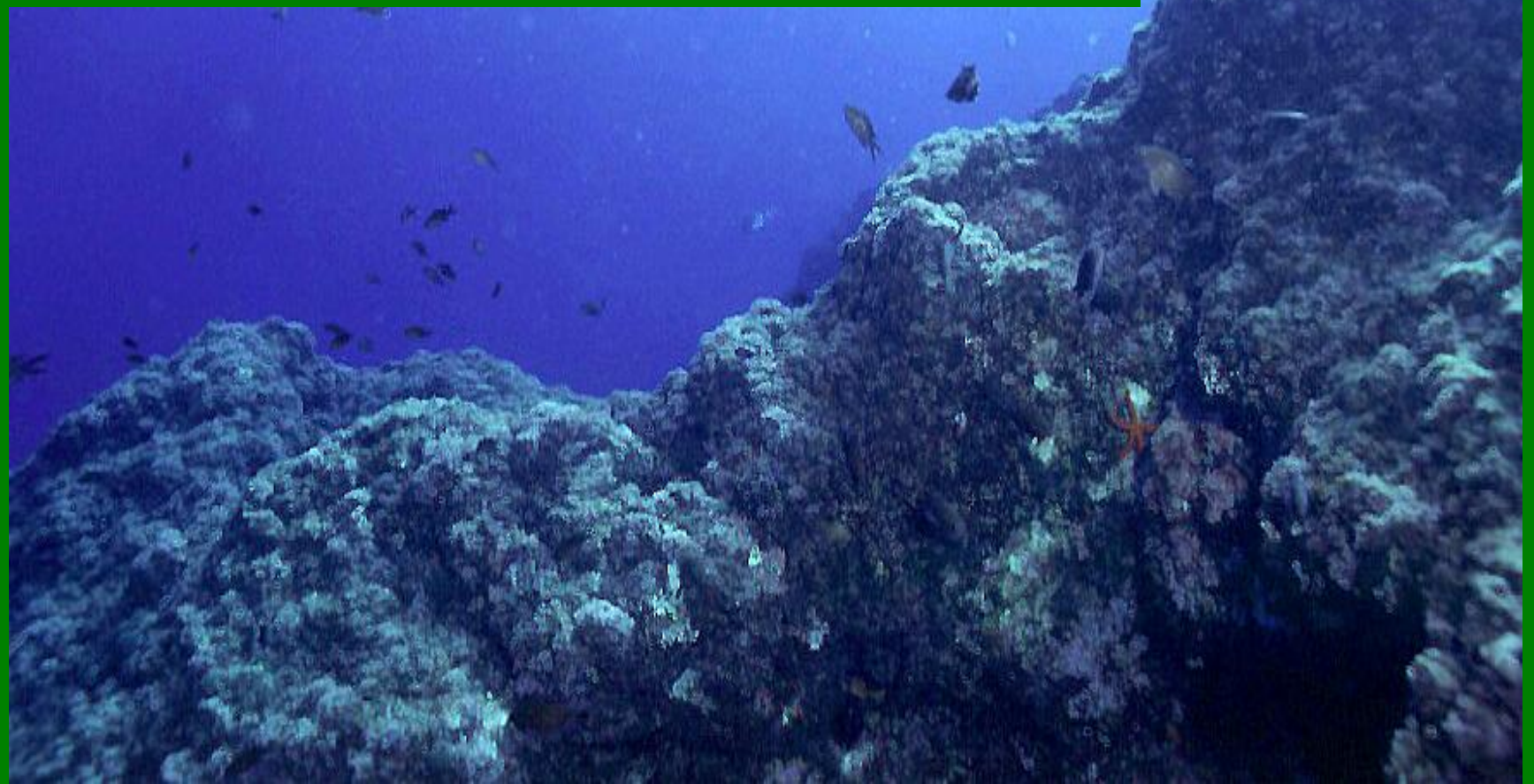




HARD BOTTOM habitat –

Rocks, wrecks
& reefs where
coral, algae &
sponges can
attach

Hard bottom habitat structure provides crucial spawning habitat for snapper and grouper.



We HARM the Hard Bottom habitat by –

- Dredging for beach nourishment
- Damage from fishing gear and anchors
- Coral harvesting



We CAN HELP the Hard Bottom habitat by –

- **Improve water quality flowing from estuaries**
- **Protect from fishing gear and anchors**



- **Install artificial reefs**

WATER COLUMN habitat



All coastal habitats are connected by water.

WATER COLUMN habitat

Clean water
is essential
to all
aquatic life.



We HARM the Water Column habitat by –

- Paving large amounts of land
- Excess runoff after rainfall
- Pollution from toxic chemicals, nutrients & sediments



We CAN HELP the Water Column habitat by –

- Reducing paved areas
- Reducing pollution from multiple sources
- Controlling runoff after rainfall



Because these habitats
are interdependent,
all fish depend on the
total habitat system.

Our Coastal Habitats Depend on You





North Carolina Coastal Habitat Protection Plan

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Coastal Habitat Protection Plan Goal

***"...long-term enhancement
of coastal fisheries
associated with each
habitat"***

(G.S. 143B-279.8)

CHPP Requirements

[G.S. 143B-279.8.]

- 1. Describe and classify biological systems in the habitat.**
- 2. Evaluate the function, value to coastal fisheries and trends in habitat.**

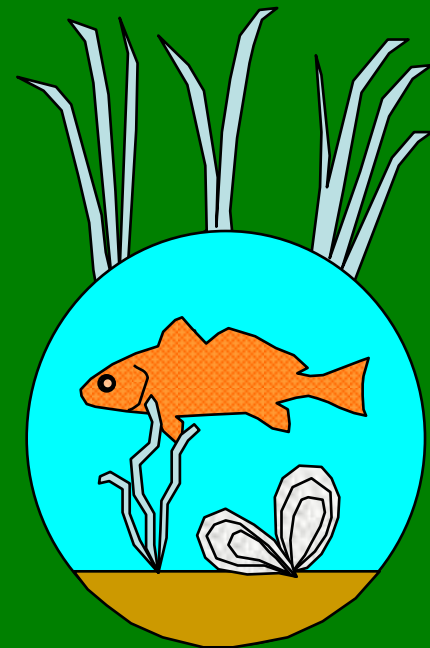
CHPP IS A SCIENCE-BASED DOCUMENT.

CHPP Requirements (cont.)

- 3. Identify existing and potential threats to the habitat and impact on coastal fishing.**
- 4. Recommend actions to protect and restore the habitats.**

Fish Habitat Defined

“Freshwater, estuarine and marine areas that support any of the various life stages of commercial and recreationally important fish species, as well as those forage species important in the food chain.”



Major Accomplishments

- **Broken down barriers among regulatory commissions and agencies**
- **Major improvements in commissions' and agencies' communication and cooperation**
 - **Mutual support for programs**
 - **Cooperative programs**
- **Strong support from General Assembly, regulatory commissions and DENR agencies**

CHPP Implementation

- **Enhance oyster reef sanctuary program**
- **Delineate Strategic Habitat Areas**
- **Enhance estuarine bottom habitat mapping:
shell bottom & SAV**
- **Address challenges of Sea Level Rise**
- **Enhance oyster reef sanctuary program**

CHPP Implementation

- **Adopt Coastal Stormwater Rules**
- **Develop Beach and Inlet Management Plan**
- **Refine shoreline stabilization rules**
- **Marina and dock siting practices**
- **Provide 19 new state-funded CHPP positions in DENR**

What are we striving for?



Clean Water ...



Thriving Commercial Fisheries...



Thriving Recreational Fisheries...



Healthy Coastal Economy...



Healthy Environment...



A healthy North Carolina – it's up to all of us!

