NOAA/NSTA Web Seminar:
Coral Ecosystems:
Impacts to Coral Reefs

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Impacts to Coral Reefs

Presented by:
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Impacts to Coral Reefs

Watersheds

We all live upstream!
Which watershed are you in?
Why should you care?

1. You live here

2. Coral reefs are here

3. What happens to the water in between is up to you!
Watershed Impacts

- Sedimentation
- Pollution
- Salinity
- Debris
After Hurricane Rita…
What Can You do?

- Keep soil anchored with vegetation
- Minimize use of fertilizers and pesticides
- Dispose of trash properly
- Conserve water
- Recycle
Let’s pause for two questions…
Impacts to Coral Reefs

Animal Influences

Let the Competition Begin!
What caused the damage to this coral?

Sea Urchin
Sea Turtle
Fish
Cheese Grater
Grazers & Farmers

- Parrotfish
- Damselfish

Photos: Joyce & Frank Burek
Munchers & Weeders

- Crown of Thorns Sea Star
- Sea Urchin

Photo: FGBNMS
Invasive Species

- Orange Cup Coral
- Pacific Thecacera
- Lionfish

Photos: Joyce & Frank Burek
Introduced Species

- Yellow Tail Snapper
- Sergeant Major

Photo: Joyce & Frank Burek
Photo: FKNMS
How Should Invasive Species be Managed?

1. 

2. 

3. 
Impacts to Coral Reefs

Recreation

Leave Only Bubbles!
Diving & Snorkeling

• Animal Contact
• Equipment
Sailing/Boating

- Anchoring
- Running Aground
- Discharge

Brown, brown, run aground,
White, white, you might,
Green, green, nice and clean,
Blue, blue, sail on through.

Images & Verse Courtesy of: FKNMS
Treasure Hunting

- Destruction
- Sedimentation

Bright Bank, NW Gulf of Mexico

Photos: IFE/URIAMO
What Can You Do?

• Be aware of your environment
• Don’t anchor on the reef
• Control your buoyancy
• Take only pictures
• Know the rules
• Don’t touch
Let’s pause for two questions…
Impacts to Coral Reefs

Industry

Cooperation & Collaboration
Fishing

• Methods
  – Nets/trawls
  – Cyanide
  – Dynamite

• Species Abundance

Photo: Joyce & Frank Burek
Fishing

• Derelict Nets and Ropes

NMFS PIFSC CRED
www.pifsc.noaa.gov/cred/
Shipping

- Groundings
- Anchoring
- Tow Lines
- Discharge
- Debris

Photos: FKNMS
Oil & Gas

• Spills
• Waste Materials
• Extraction
• Artificial Reefs

100
1500
3500
2000
What Can You Do?

• Report…
  • dumping or other illegal activities
  • oil slicks or spills
  • anchored vessels

• Make informed purchases
Impacts to Coral Reefs

Environmental Stress

What Next?
Storms

• Wind & Waves

Photos: Joyce & Frank Burek
Temperature

• Bleaching

Photos: Joyce & Frank Burek
Let’s check out how bleaching conditions are monitored...

http://coralreefwatch.noaa.gov/satellite/virtual_stations/greater_caribbean.html
Satellite Info...

TUTORIAL:  http://coralreefwatch.noaa.gov/satellite/education/tutorial/welcome.html
Satellite Info...

ED MATERIALS: http://coralreefwatch.noaa.gov/satellite/education/index.html
Unknown Pathogens

- Black Band Disease
- Yellow Band Disease

Photos: NOAA
What Can We Do?

Manage what we can control to reduce stressors on reefs so that they have a better chance to cope with whatever comes their way.
Natural Impacts

Animals
Watersheds
Weather
Disease

Human Impacts

Shipping
Oil & Gas
Recreation
Fishing

NOAA
National Marine Sanctuaries
From Impacts to Interventions: We all make a Difference!

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Flower Garden Banks National Marine Sanctuary
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