

Protecting Sea Turtles and their Habitats Through International Collaboration

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IAC Secretary



*Inter-American Convention for the Protection and
Conservation of Sea turtles*
Chesapeake Biological Laboratory October 15, 2019



Sea Turtles



- Inter-American Sea Turtle Convention (Summary)
- Meet the Turtles
- Life History & Migrations
- Sea turtles in History - Uses
- Threats
- Importance of Sea turtles
- Sea Turtle Convention
- Getting involved

What is IAC? Sea Turtle Convention

- ❖ Intergovernmental treaty
- ❖ 16 Member Countries
- ❖ Protection, conservation, and recovery of sea turtles and their habitats

Why is this necessary?

- ❖ Sea turtles are migratory species. During their life cycle they visit many countries.
- ❖ Shared resources protecting them is responsibility of all.



What do Sea Turtles and Giant Pandas have in Common?



- ❖ Charismatic species = Very likeable, they draw people in.....

WHY IS THIS IMPORTANT FOR CONSERVATION?

SEA TURTLES ARE KEYSTONE SPECIES

Meet the turtles!



About Sea Turtles

- ✓ Reptiles adapted to sea-life, spend their lives in water, using beaches only for nesting
- ✓ Breathe air, many drown as a result of getting caught in fishing nets or hooks
- ✓ Long distance migrations: one turtle can travel 10,000 km in a year
- ✓ The sex of turtle hatchlings depends on the temperature of the sand where the eggs are laid – Cooler = males Hotter = females
- ✓ Important for healthy marine ecosystems
- ✓ For their life-cycle , sea turtles need a wide range of habitats, including beaches, coastal waters, sea-grass meadows, coral reefs and open ocean



Sea Turtle Life Cycle

Return to same nesting beach every 2-4 years

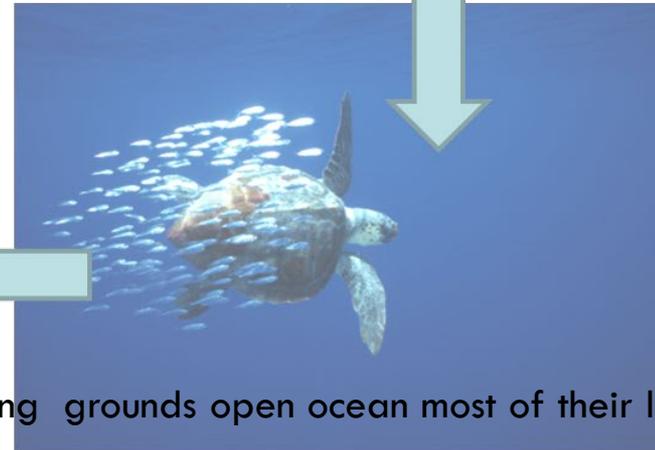
The journey begins! (6-8 years)



6-8 weeks



Reproduction off nesting beach



Feeding grounds open ocean most of their life

Did you know?



Lights in nesting beaches causes disorientation to sea turtle hatchlings , they can not find their way to the ocean, instead they are attracted to the light source coming from the street, hotels and houses

Take Action! Dark beaches protect sea turtles from several dangers. Keep lights off in beaches, ask your local hotels to change their lights to turtle friendly lights

Sea Turtle species in the Americas

Leatherbacks: The Biggest



Leatherback (*Dermochelys coriacea*)

- ❖ Largest living reptile (8 feet long and 2,000 lbs.)
- ❖ Soft- black carapace-Does not have hard shell
- ❖ Age to maturity ~ 15 yrs
- ❖ Highly migratory: trans-Atlantic and trans-Pacific crossings
- ❖ Diet: jellyfish
- ❖ East Pacific population 95 % decline
- **Critically Endangered -IUCN**

Green Turtle



© Caroline S. Rogers, USGS

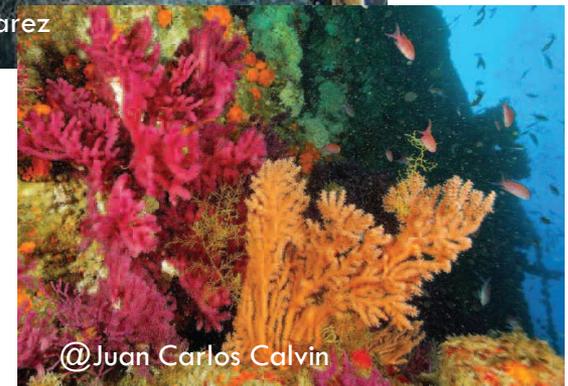
Green (*Chelonia mydas*)

- ❖ Second largest sea turtle (3 feet long and 145-440 lbs.)
- ❖ High value in Caribbean for meat and green fat/ calipee
- ❖ Age to maturity ~ 30 yrs.
- ❖ Diet: sea grass
- ❖ Tortuguero – Costa Rica the largest nesting colony
- Endangered -IUCN

Hawksbill Turtle

Hawksbill (*Eretmochelys imbricata*)

- ❖ Medium-size turtle
- ❖ Yellow and brown carapace with overlapping scales
- ❖ Beautiful shell has been used for decades for handcrafts
- ❖ Diet: sponges
- ❖ East Pacific Population deep decline
- **Critically Endangered - IUCN**





Hair ornament from Hawksbill shell used for jewelry

Hair ornament from Hawksbill shell

Peinetón

Carey moldeado y calado 31,5 x 55 cm

Col.: Museo de Arte Hispanoamericano Isaac Fernández Blanco

Loggerhead Turtle



Loggerhead (*Caretta caretta*)

- ❖ Oversized head and powerful jaws
- ❖ Heart-shape carapace
- ❖ Visits Chesapeake Bay May- Nov for feeding
- ❖ Diet: crustaceans, mollusks
- ❖ Mayor nesting areas: Florida, Oman (Middle East)
- ❖ Age to maturity ~ 32 yrs
- **Endangered -IUCN**



Olive Ridley & Kemp's Ridley

Kemp's Ridley (*Lepidochelys kempii*)

- ❖ Smallest turtle (38 in and 95 lbs.)
- ❖ Geographically restricted (Gulf of Mexico and eastern US) – Bay visitor
- ❖ Diet: crustaceans
- ❖ Population decline almost to extinction in the 70's , 80's
- ❖ Conservation success story!
- Critically Endangered -IUCN

Olive Ridley (*Lepidochelys olivacea*)

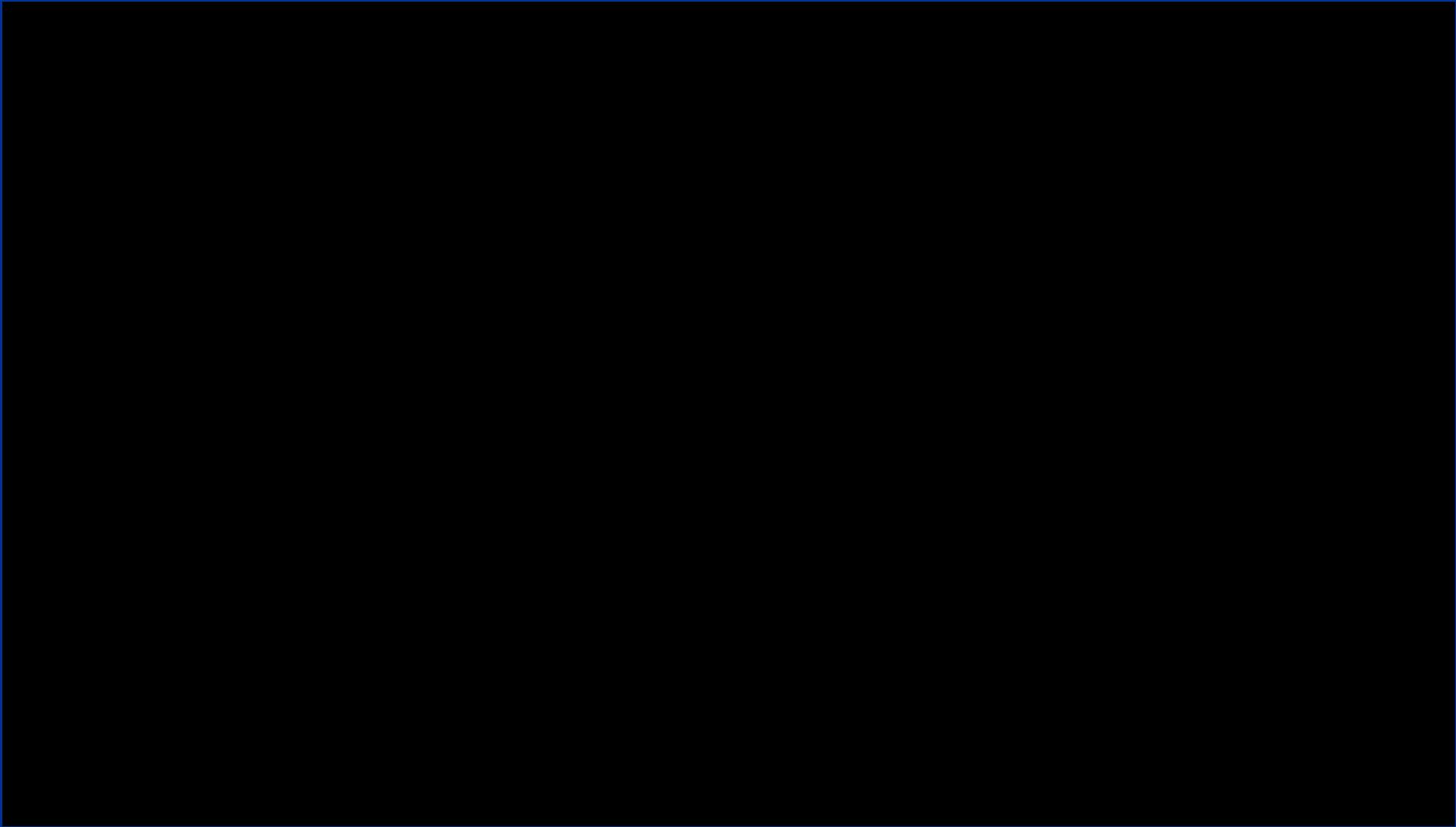
- ❖ Small turtle (25 inches and 75-95 lbs.)
- ❖ Arribadas or “arrivals”
- ❖ Diet: crustaceans, mollusks
- ❖ Egg harvest legal in some areas
- Vulnerable - IUCN



What is Arribada?

- ❖ **Mass nesting** -occurs in very few places around the world.
- ❖ Thousands of females, thousands of nests
- ❖ Arribada sites: Mexico, Nicaragua, Costa Rica, and Panama
- ❖ Strategy to avoid predation?



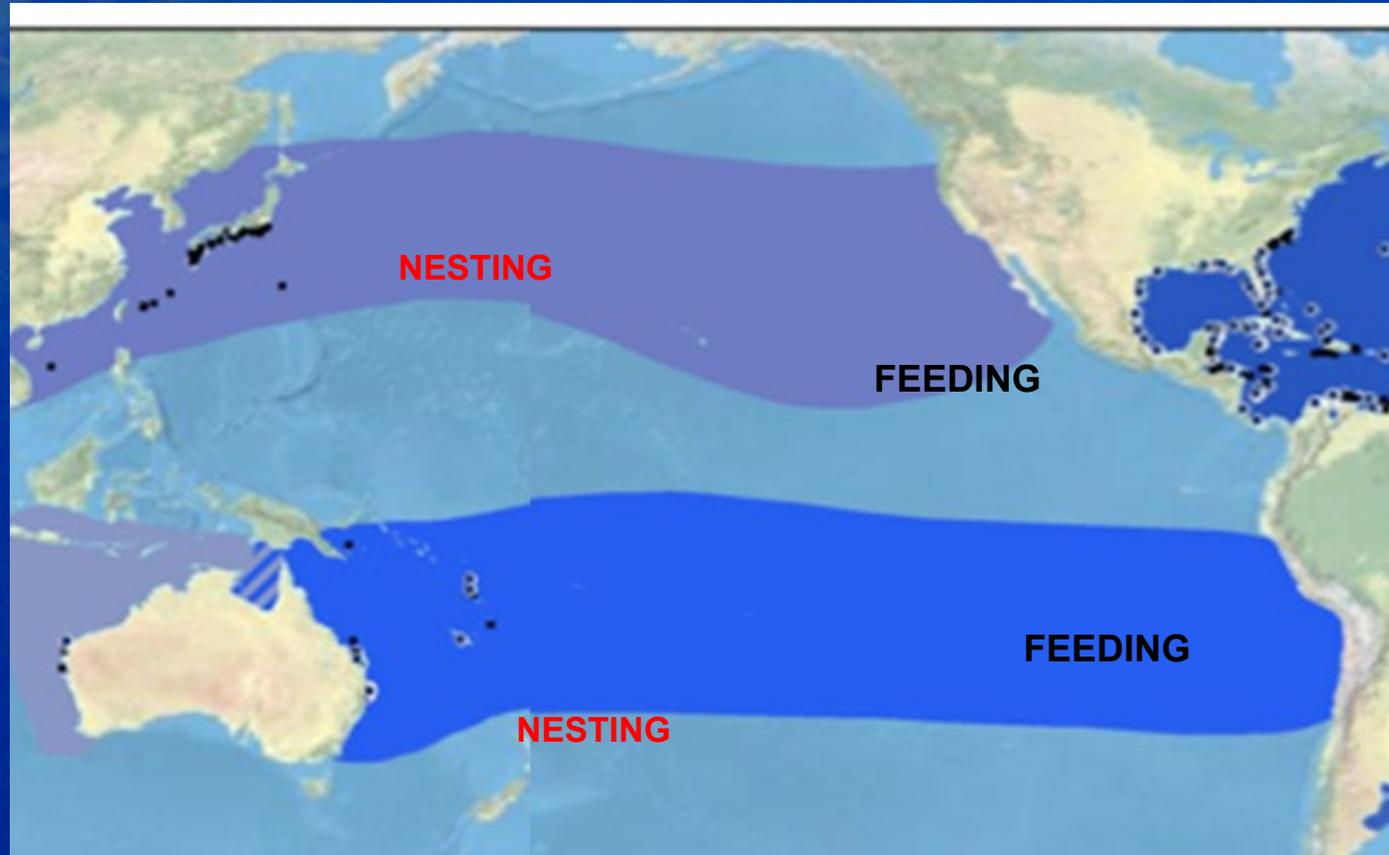


Florida Sea Turtles

- ❖ 5 species
- ❖ Loggerheads, greens, leatherbacks, a few kemps and a few hawksbill
- ❖ Loggerheads: South East USA hosts the **largest loggerhead nesting population in the world**
- ❖ Florida hosts 90% of all the loggerhead nests in the United States. In 2012 ~60,000 nests!

Migrations

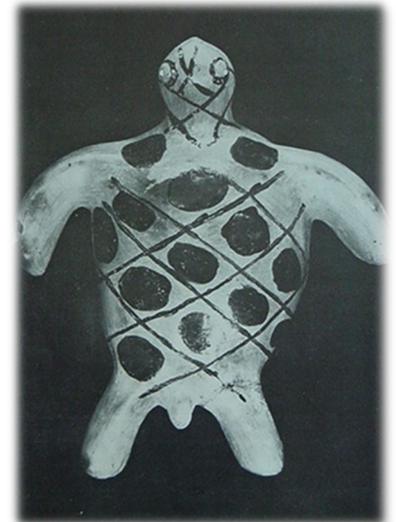
- Sea turtles can travel long distances
- Ambassadors of the oceans - Connect many nations



Loggerheads nesting in Japan and Australia
Feeding grounds Mexico , Chile, Peru and Ecuador

Historical uses of Sea Turtles

- ❖ Population decline around the world due to historical threats
- ❖ Medical use in oils and creams (turtle fat)
- ❖ Eggs consumed for longevity and virility (still believed!!)
- ❖ Hawksbills' shells used for jewelry
- ❖ Turtle meat consumed as a delicacy
- ❖ Cultural value- sacred

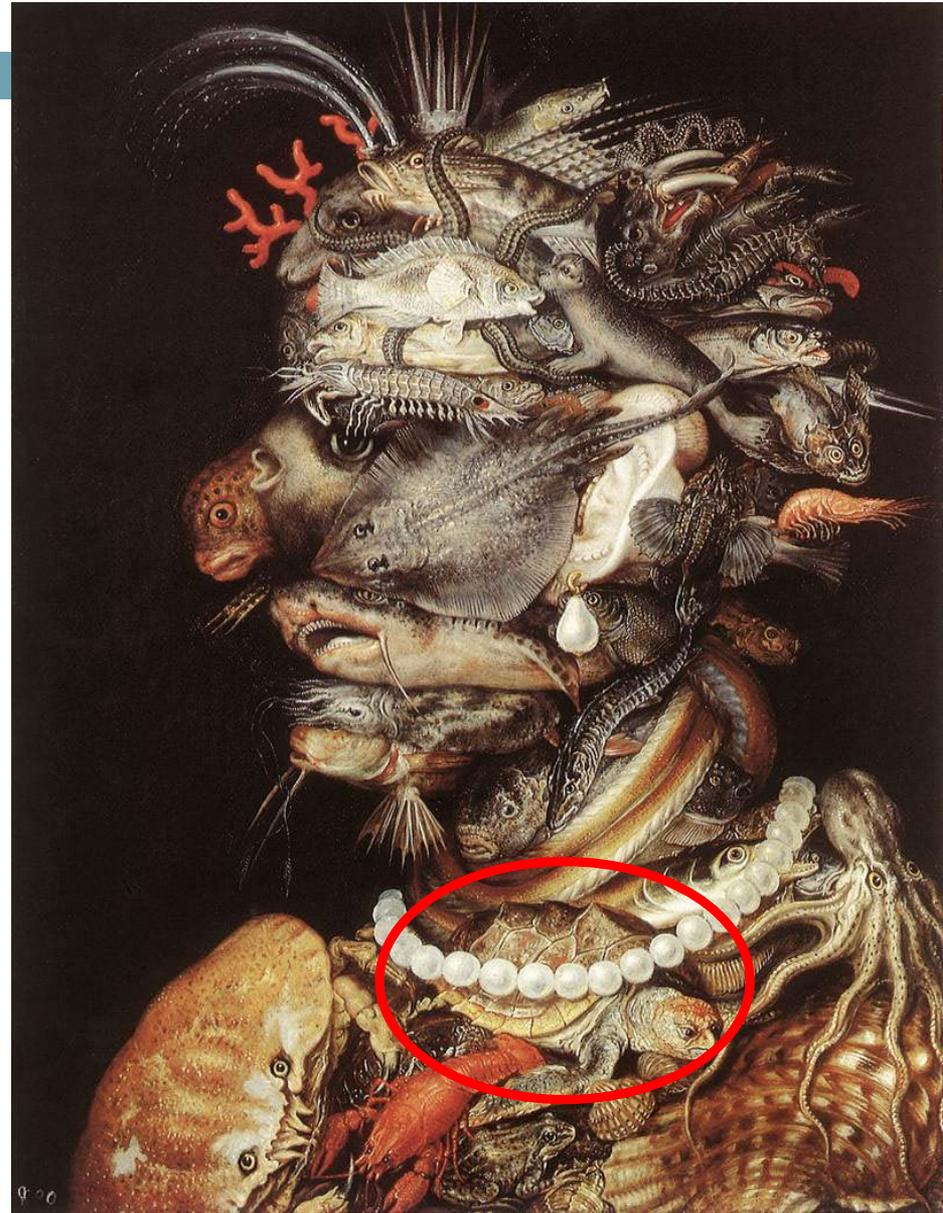


Sea Turtles used in Art

Can you find the turtle?

Guiseppe Acrimboldo

“The water the water” 1564



Main threats to Sea Turtles

➤ Natural Threats

- predation and disease

➤ Man-made Threats

- Eggs and turtle poaching
- Incidental by-catch in fisheries
- Changes in habitat (oil / plastic pollution, beach development, climate change)



Sea turtle tracks could not nest

Can you see the difference?



Imagine-You are a hungry sea turtle that cannot tell the difference between a real jellyfish — Fooled by the illusion, you swallow the plastic bag — a deadly mistake.

Importance of Sea turtles to Healthy Oceans

Maintaining Habitat

- Green turtles contribute to healthy sea grass beds (gardeners of the ocean).
- Hawksbills improve coral reefs by eating sponges

Maintaining a Balance food web

- Sea turtles keep jelly fish populations under control = reduction of predation on fish larvae = more commercial fish available



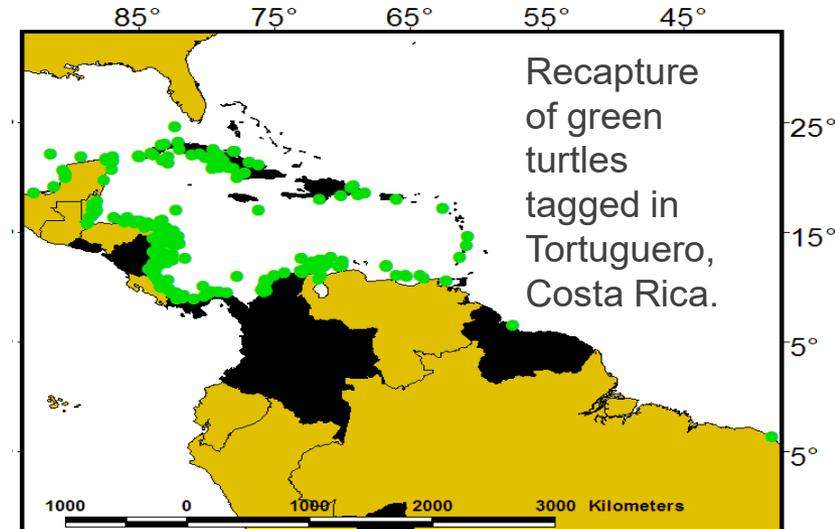
Green turtle eating sea grass



Sea Turtle hatchling eating jelly fish

Inter-American Sea Turtle Convention

- ▶ Sea turtles use the waters of more than one country during their life cycles
- ▶ Conservation initiatives in one nation can be positively or negatively affected by activities in other nations.
- ▶ International cooperation necessary for the successful conservation of sea turtles.
- ▶ IAC Legally binding intergovernmental treaty entered into force in 2001.
- ▶ Provides legal framework for countries in the Americas to take actions for the benefit of 6 species of sea turtles.
- ▶ Implementation of IAC requires dialogue amongst several government agencies (environment, agriculture-fisheries and foreign relations ministries), NGOs, fisheries industry, scientists and civil society.



Source: www.cccturtle.org

IAC Objective

Protection, conservation and recovery of the populations of sea turtles and those habitats on which they depend, on the basis of the best available scientific information and taking into consideration the environmental, socioeconomic and cultural characteristics of the Parties.

- These actions should be effective in both nesting beaches and the Parties' territorial waters.

Member Countries: 16

- **Argentina**
- **Belize**
- **Brasil**
- **Costa Rica**
- **Chile**
- **Ecuador**
- **Guatemala**
- **Honduras**
- **Mexico**
- **Dominican Republic**
- **Caribbean Netherlands**
- **Panamá**
- **Peru**
- **The United States**
- **Uruguay**
- **Venezuela**



Country Commitments



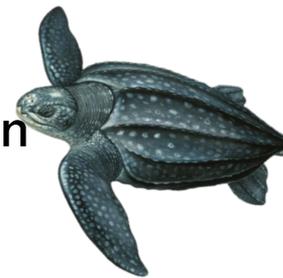
- Protect populations of sea turtles and their habitats
- Reduce incidental capture, and mortality of sea turtles in fishing activities
- Prohibit intentional domestic capture and international trade of sea turtles, their eggs, parts and products
- Promote local and international cooperation for sea turtle research
- Manage their exceptions under the IAC for the use of sea turtles to fulfill economic subsistence needs of traditional communities

IAC Structure



IAC Resolutions

- Among the achievements of the IAC are a number of Resolutions that guide the conservation actions of the IAC Member countries.
- Resolutions address the most endangered sea turtle species and urgent threats.
 - Conservation of the Hawksbill Turtle
 - Conservation of the Leatherback Turtle - East Pacific Ocean and North West Atlantic
 - Conservation of the Loggerhead Turtle
 - Reduction of the adverse impacts of fisheries on sea turtles
 - Adaptation of sea turtles habitats to climate change



Are we being effective?

- **Development / use of new fishing technology in IAC member countries**

- TED Bycatch reduction in trawl fisheries

- Bycatch reduction using large circle hooks in long line fisheries

- Bycatch reduction using net illumination on gillnets

- Fisherman training on turtle safe-release and dehooking techniques

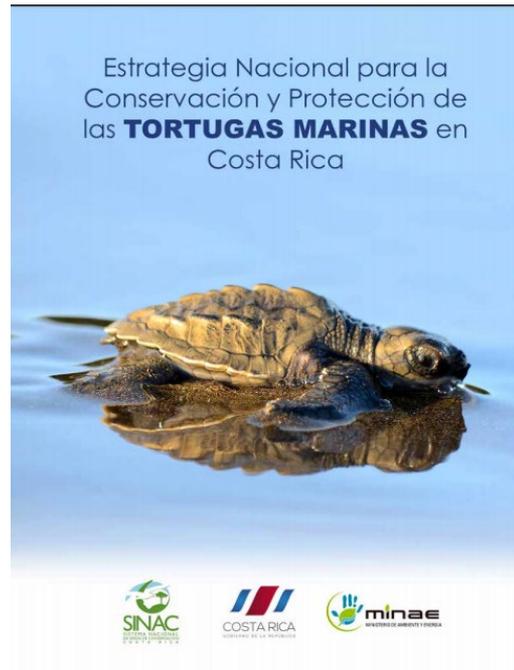
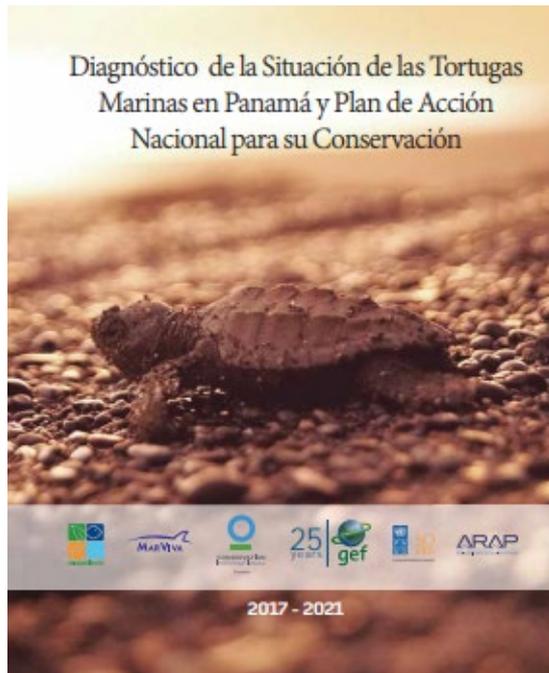
- **Community outreach**

- Beach clean up campaigns

- Environmental education



IAC Countries Sea Turtle Action Plans

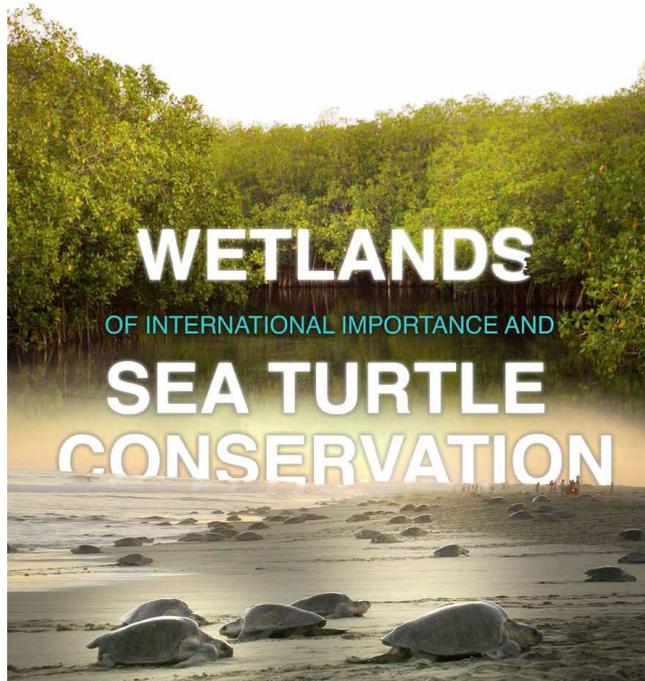


IAC Technical Documents



CIT-CC10-2013-Tec.6

INTER-AMERICAN CONVENTION
FOR THE PROTECTION AND
CONSERVATION OF SEA TURTLES

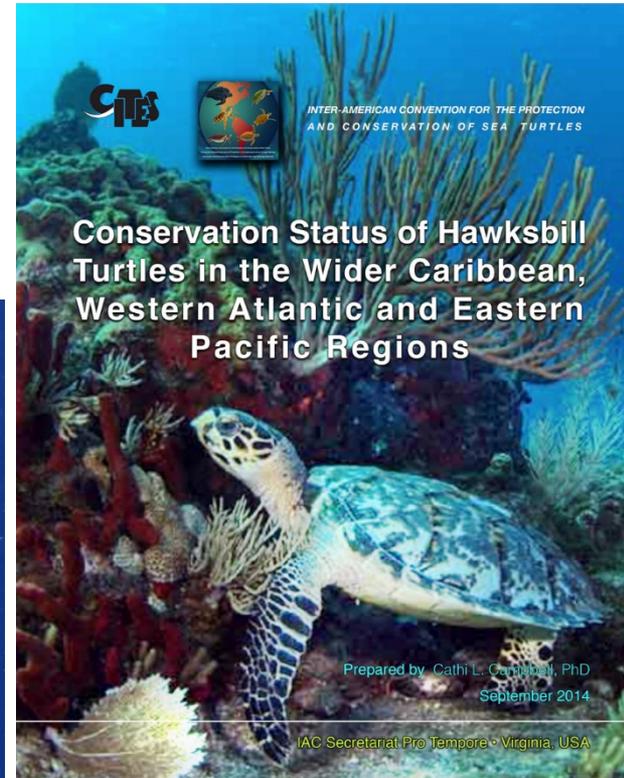


CIT-CCE7-2014-Tec.9
SSC/2014/1/Doc. 2

Concept Note on the Importance of Sargassum
and the Sargasso Sea for Atlantic Sea Turtles



INTER-AMERICAN CONVENTION FOR THE
PROTECTION AND CONSERVATION OF SEA TURTLES



**Conservation Status of Hawksbill
Turtles in the Wider Caribbean,
Western Atlantic and Eastern
Pacific Regions**

Prepared by Cathi L. Campbell, PhD
September 2014

IAC Secretariat Pro Tempore • Virginia, USA

February 2015

www.iacseaturtle.org

Success Story - Kemp's ridley sea turtle

1947

Andres Herrera films an “arribada” of an estimated 40,000 -1 day-nesting Kemp's ridley sea turtles near Rancho Nuevo



Success stories Kemp's Ridley

Kemp's ridley Habitat Gulf of Mexico

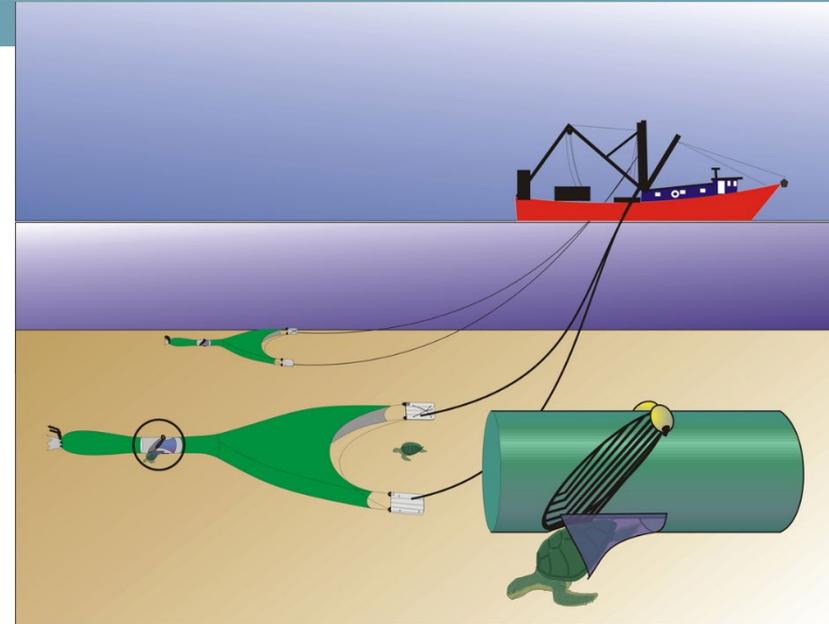
Populations were declining in the 70's until 90's

Pressure in nesting beaches lack of protection of eggs

Intense pressure in the ocean with trawl nets

Mexico and USA united

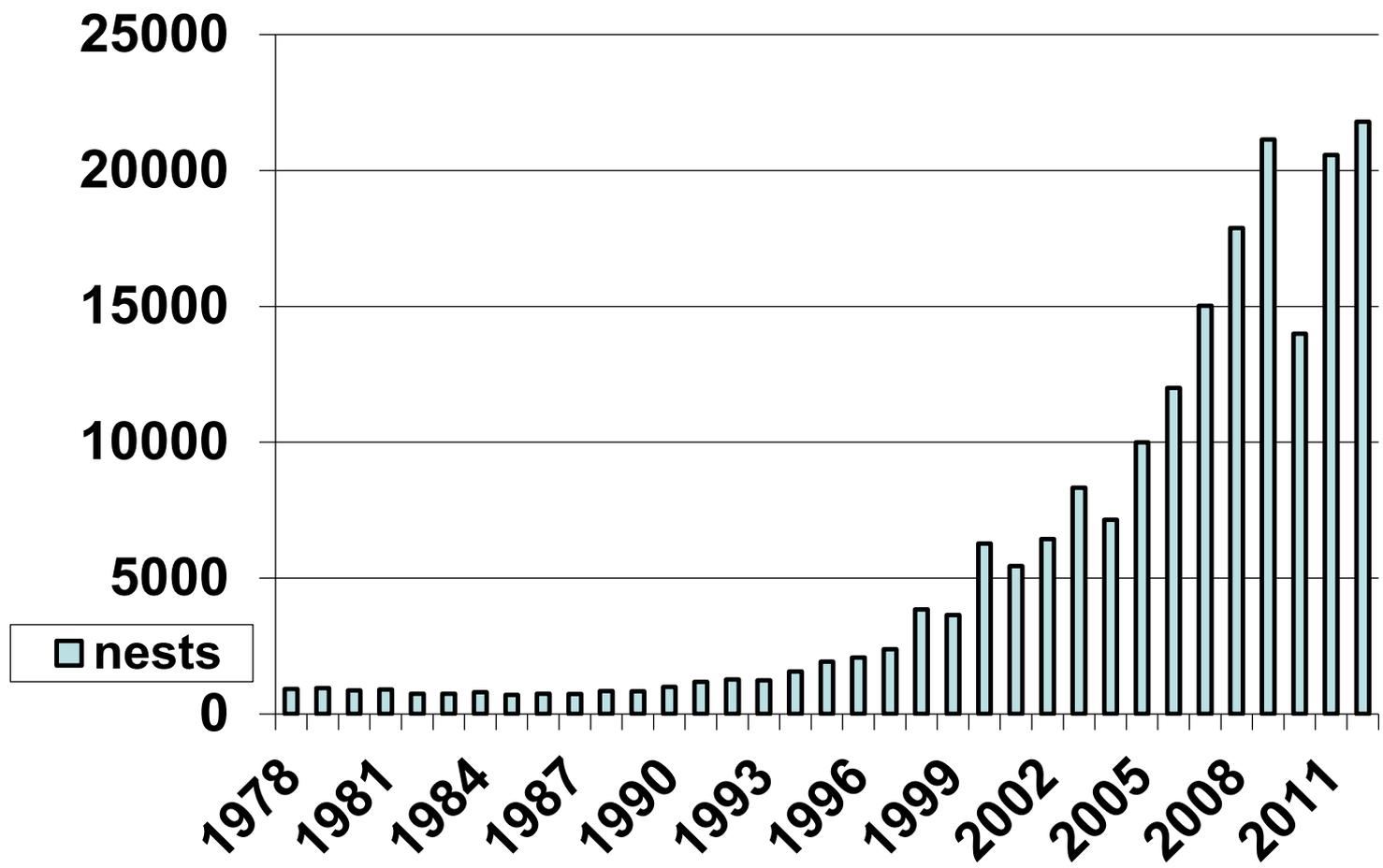
Solutions: Developed fishing technology TEDs, and strong campaign to protect the nests



Turtle Excluder Device TED



Kemp's Ridley Nesting in Mexico 1978 to 2012 Conservation Success Story



Kemp's Ridley Arribada in 2011



Monitoring / Protecting Nesting Beaches

- 8:00 p.m. -5:00a.m (walk on the beach looking for nesting turtles)
- Measure and tag turtles
- Keep it dark (red light)
- Always stay behind their front flippers and away from her head.
- 11:00 am-3:00 pm

Look for hatchlings

Data entry

Prepare night patrol



IAC Continues Promoting Regional Conservation Efforts



- In water research
- Nesting beach protection
- Fisheries technology
- Capacity building in coastal communities
- Developing new policies

Stronger connections and collaboration among nations

What can I do to help?

- ❖ Be aware of the importance of sea turtles to our oceans ecosystems, and tell others
- ❖ Reduce, reuse and recycle plastic
- ❖ Share your sea turtle knowledge with others
- ❖ Protect sea turtles' homes, organize beach clean ups

- ❖ Volunteer: Find sea turtle conservation and research programs and get involved!!
- ❖ For information near you go to:
NOAA and USFWS Sea Turtle Conservation Programs



How can I help? At the beach

- ❖ If you see a turtle nesting enjoy it! Do not use flash photography- turtles get disoriented with white light.
- ❖ Keep beach lighting at minimum use turtle friendly lights.
- ❖ Remove beach furniture at night.



@conserveturtle.org

Before



After



How can I help? Daily basis

- ❖ Reduce, Reuse and Recycle: Minimize plastic consumption so less ends in the ocean.
- ❖ Consider using a reusable shopping bag.
- ❖ When traveling do not buy souvenirs made of endangered animal parts.



Jewelry made of sea turtle shell

Join the Celebration!



Gracias!

Thank you for inviting me
back!

Chesapeake Biological
Laboratory

Dr. Thomas Miller

Solomon Island Community

www.iacseaturtle.org

secretario@iacseaturtle.org

