

# Trails Through The Caribbean: Regional Cooperation to Monitor Sea Turtles

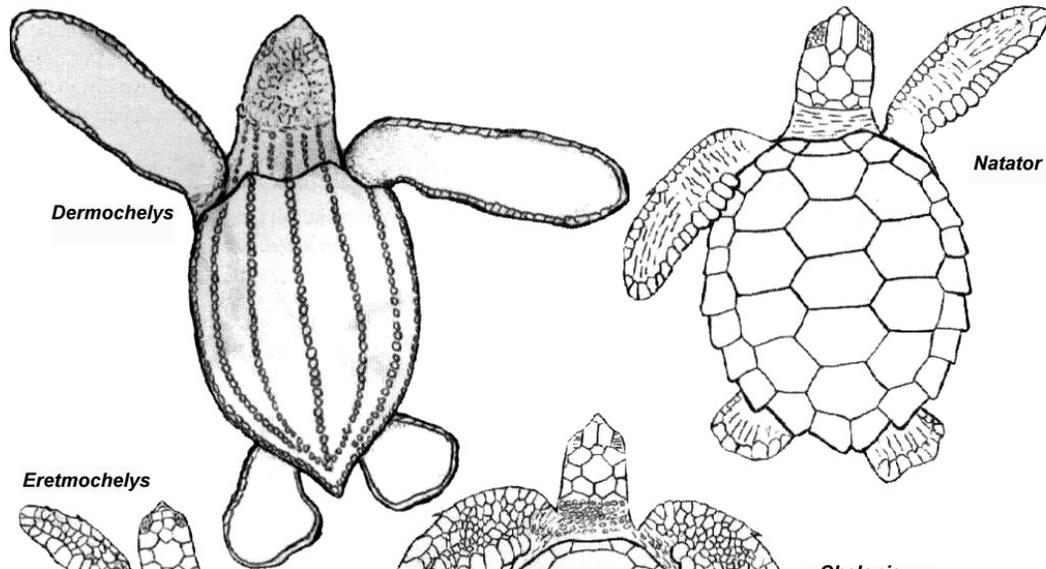
Dr. Darren C. Browne



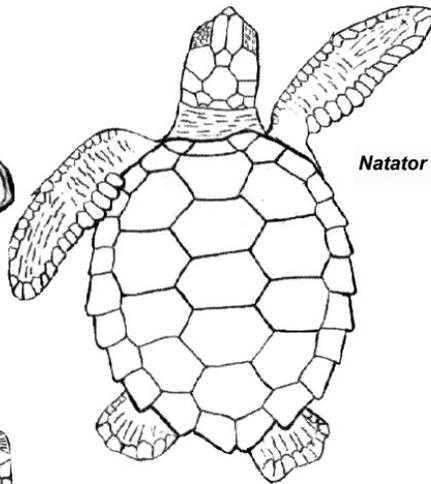


SEA TURTLES are gentle, ancient creatures that have traveled the World Ocean since before the dinosaurs ruled the earth.

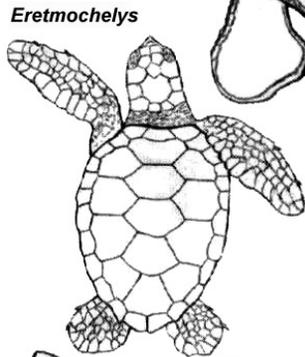
Sea turtles originated in the lower Mesozoic Era. The oldest sea turtle fossil (*Santanachelys*) dates to 112 million years ago.



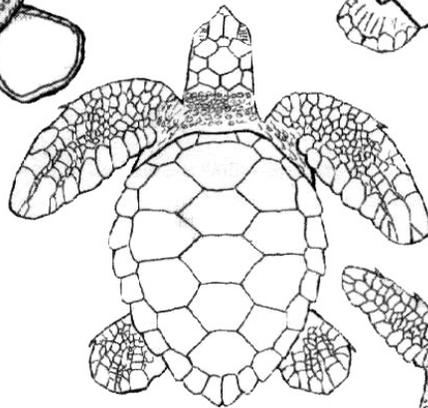
*Dermochelys*



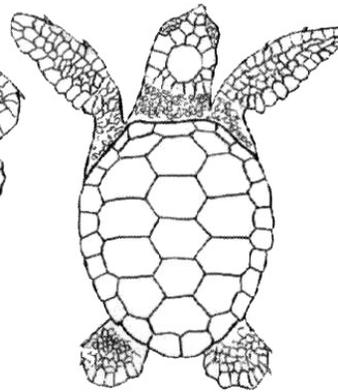
*Natator*



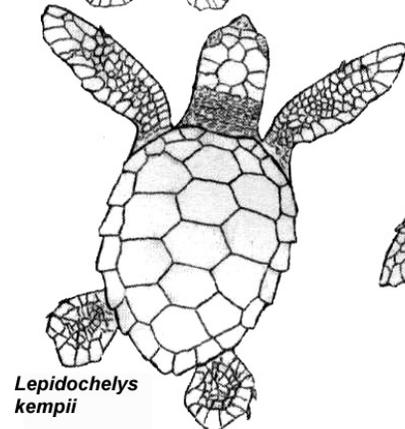
*Eretmochelys*



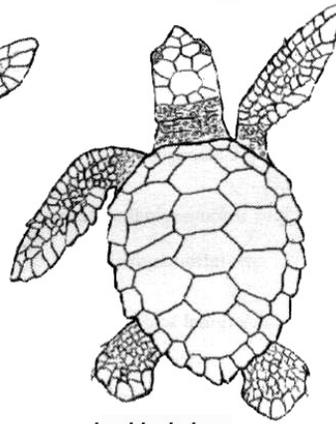
*Chelonia*



*Caretta*



*Lepidochelys kempii*



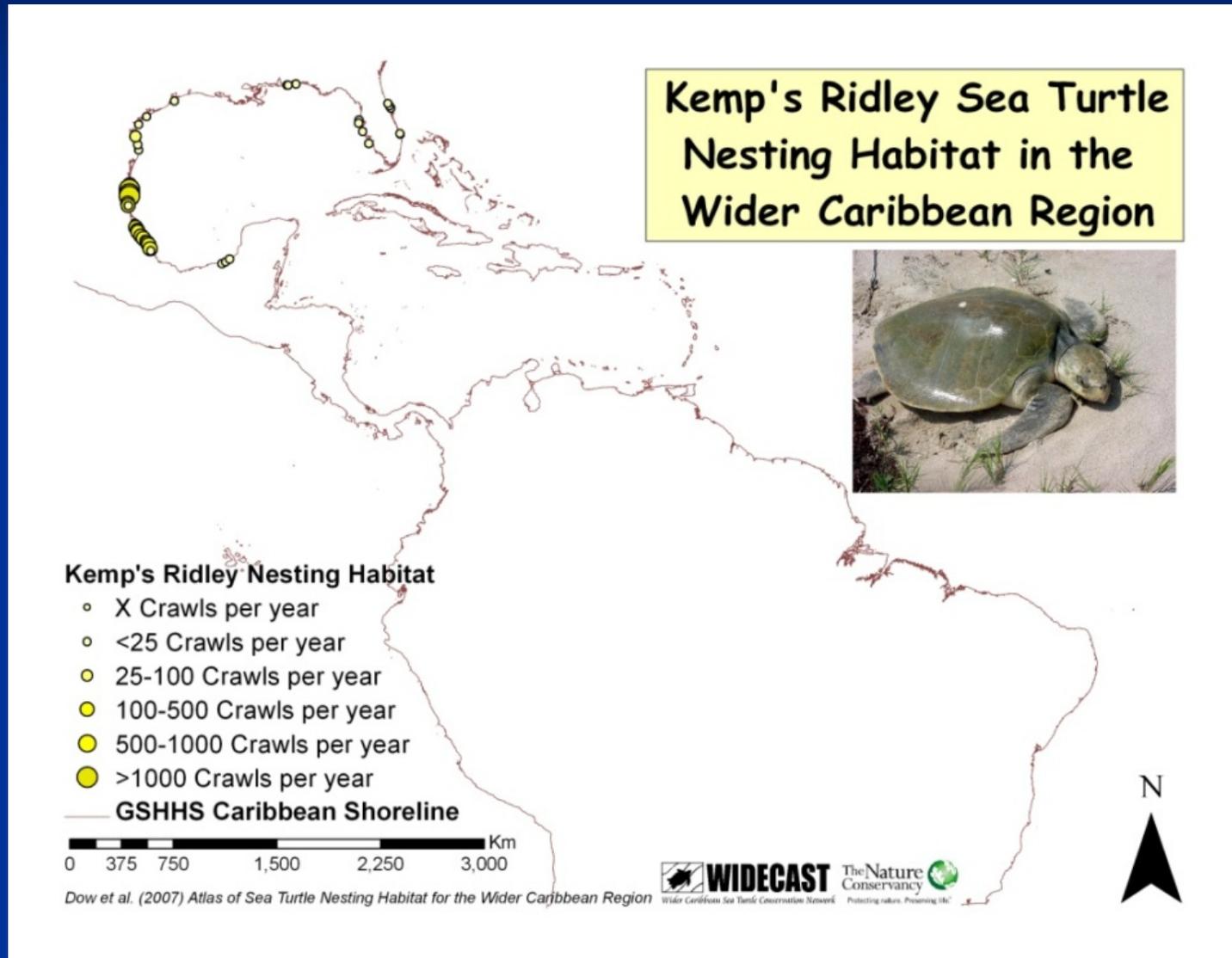
*Lepidochelys olivacea*



There are 7 modern species – 6 are found in the Caribbean Sea, which supports some of the largest remaining populations.

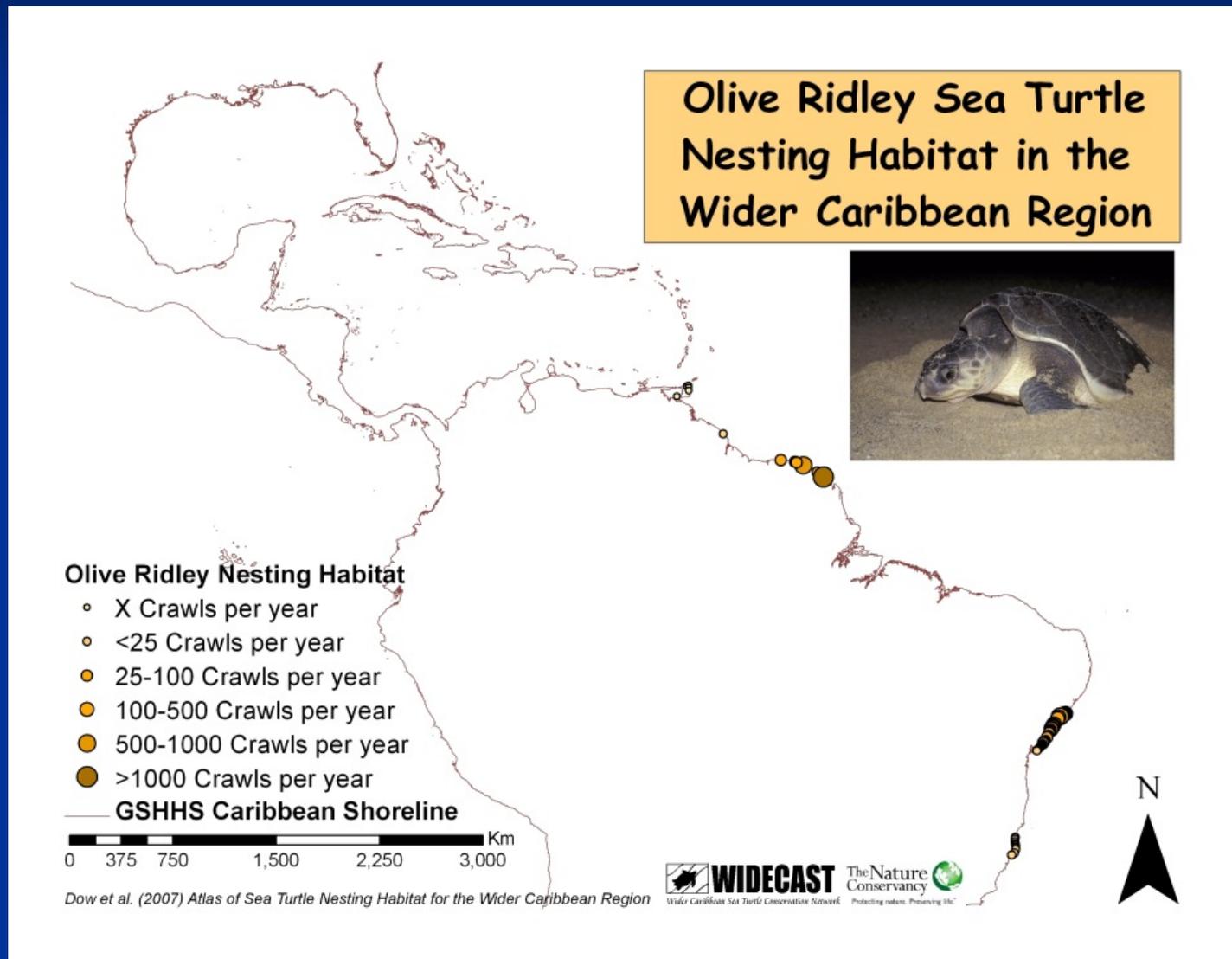
# Kemp's Ridley (*Lepidochelys kempii*)

Status: Critically Endangered



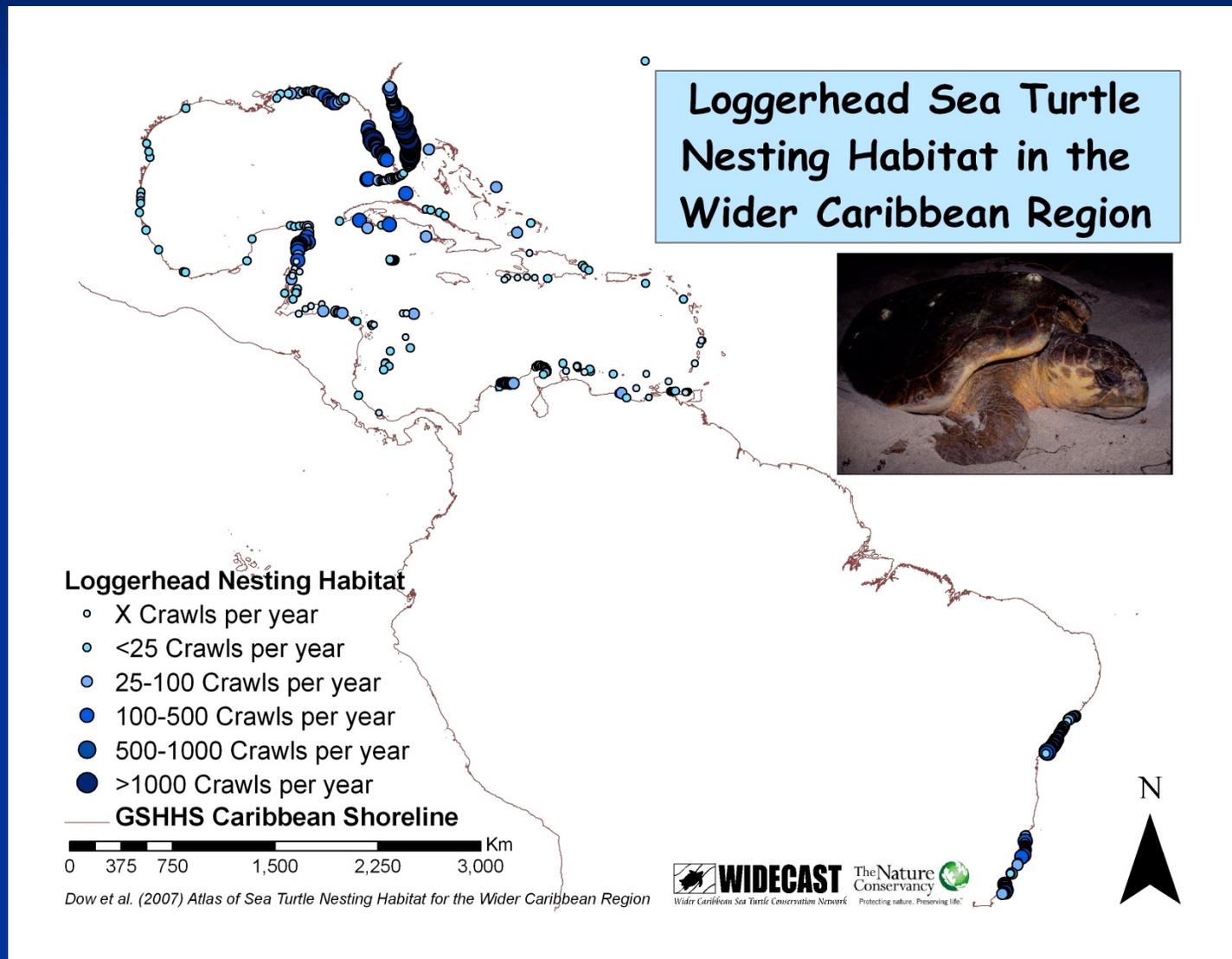
# Olive Ridley (*Lepidochelys olivacea*)

Status: Vulnerable



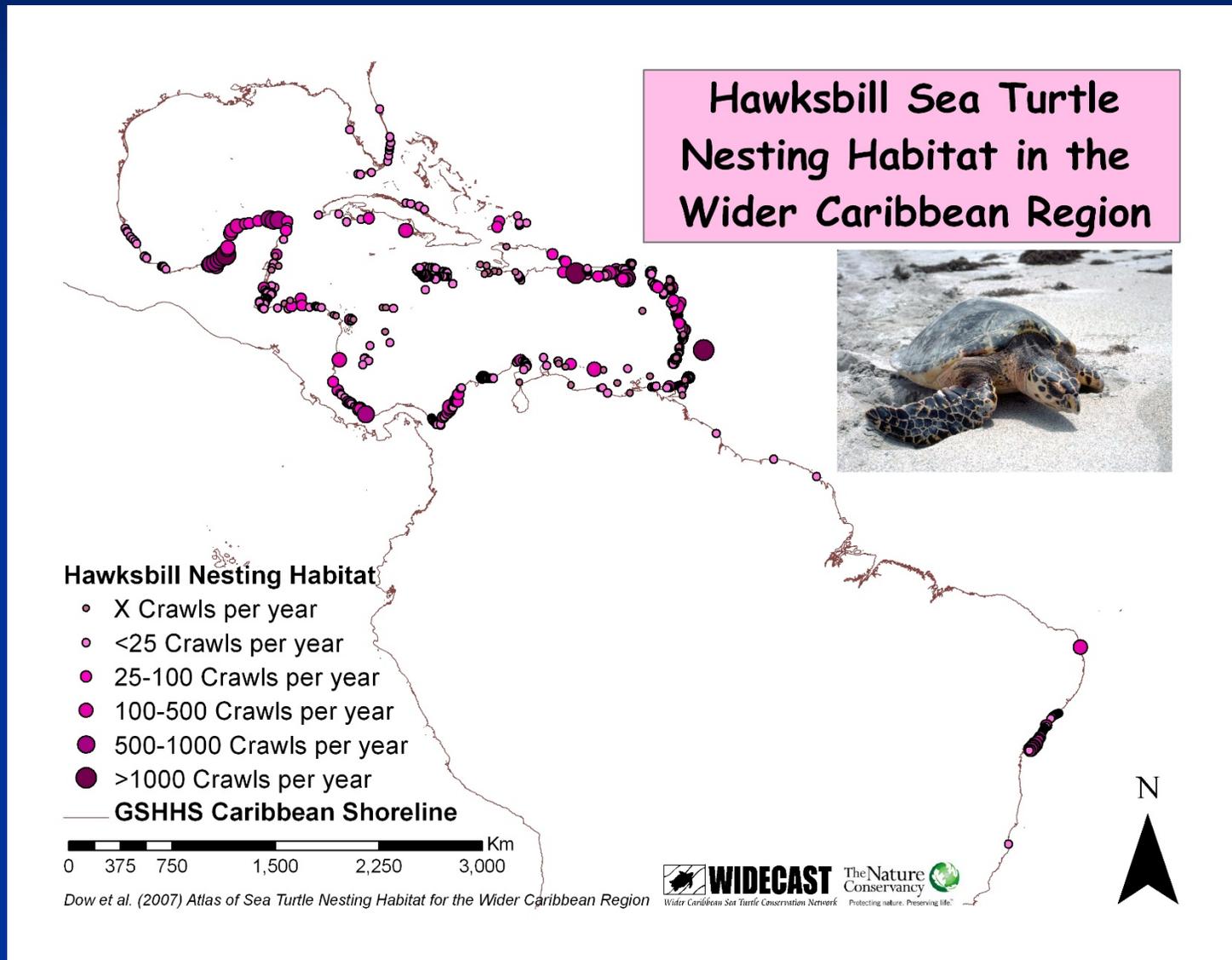
# Loggerhead (*Caretta caretta*)

Status: Vulnerable



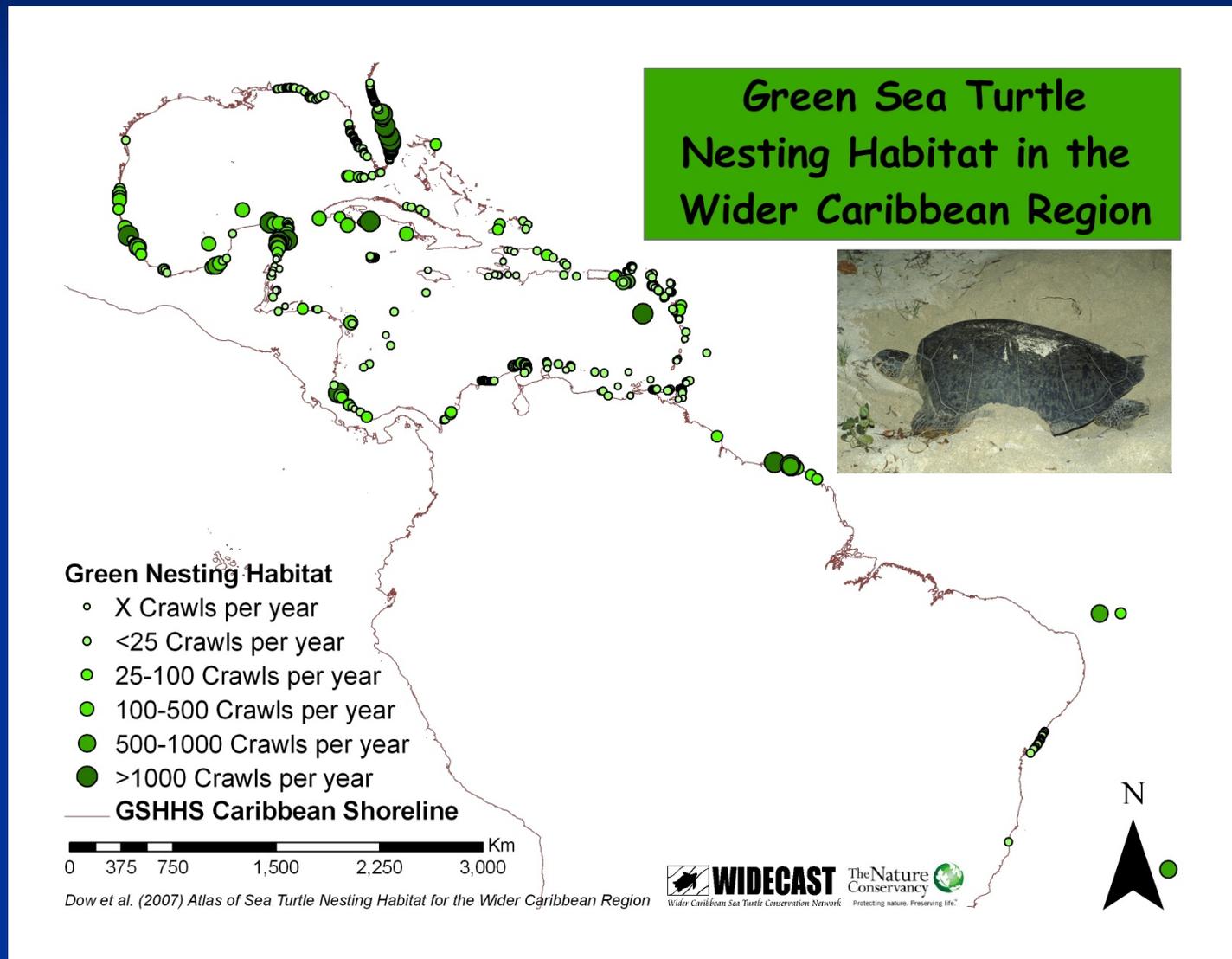
# Hawksbill (*Eretmochelys imbricata*)

Status: Critically Endangered



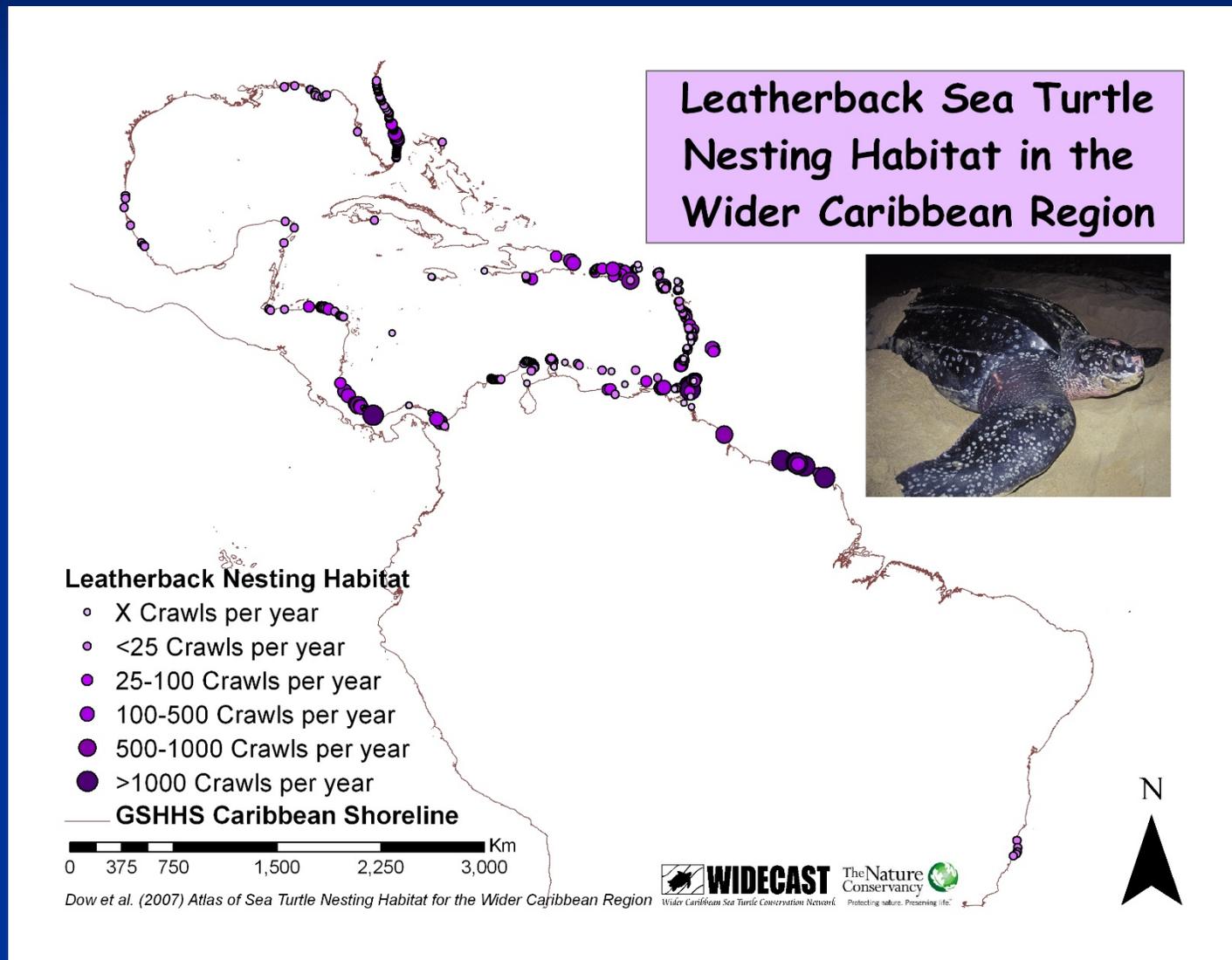
# Green (*Chelonia mydas*)

Status: Endangered

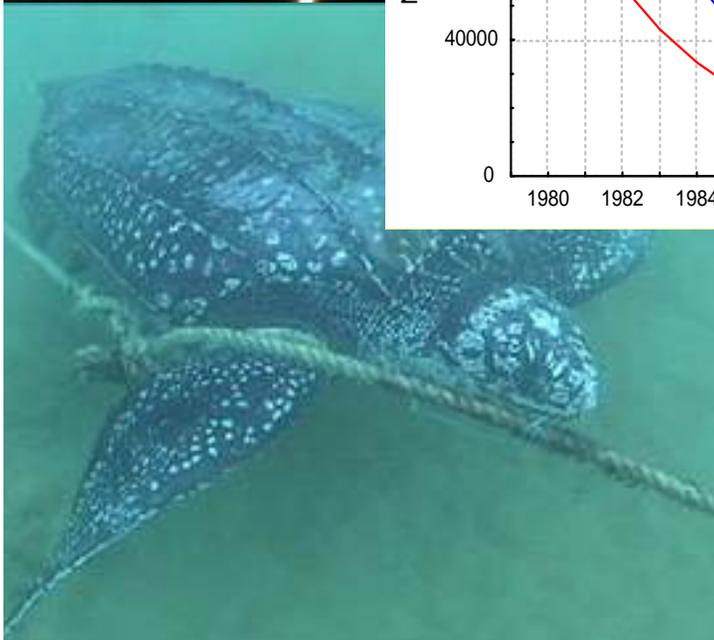
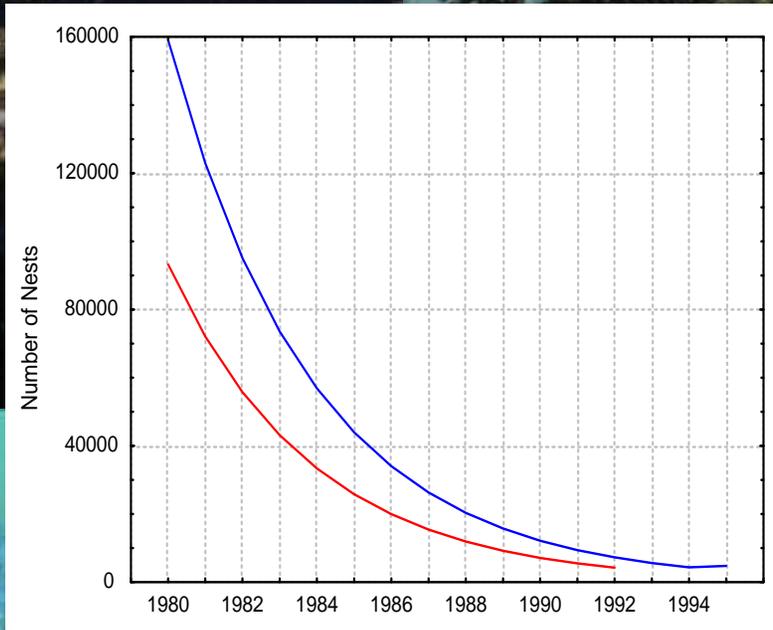


# Leatherback (*Dermochelys coriacea*)

Status: Vulnerable



The various threats to Caribbean sea turtles has resulted in steep population declines.

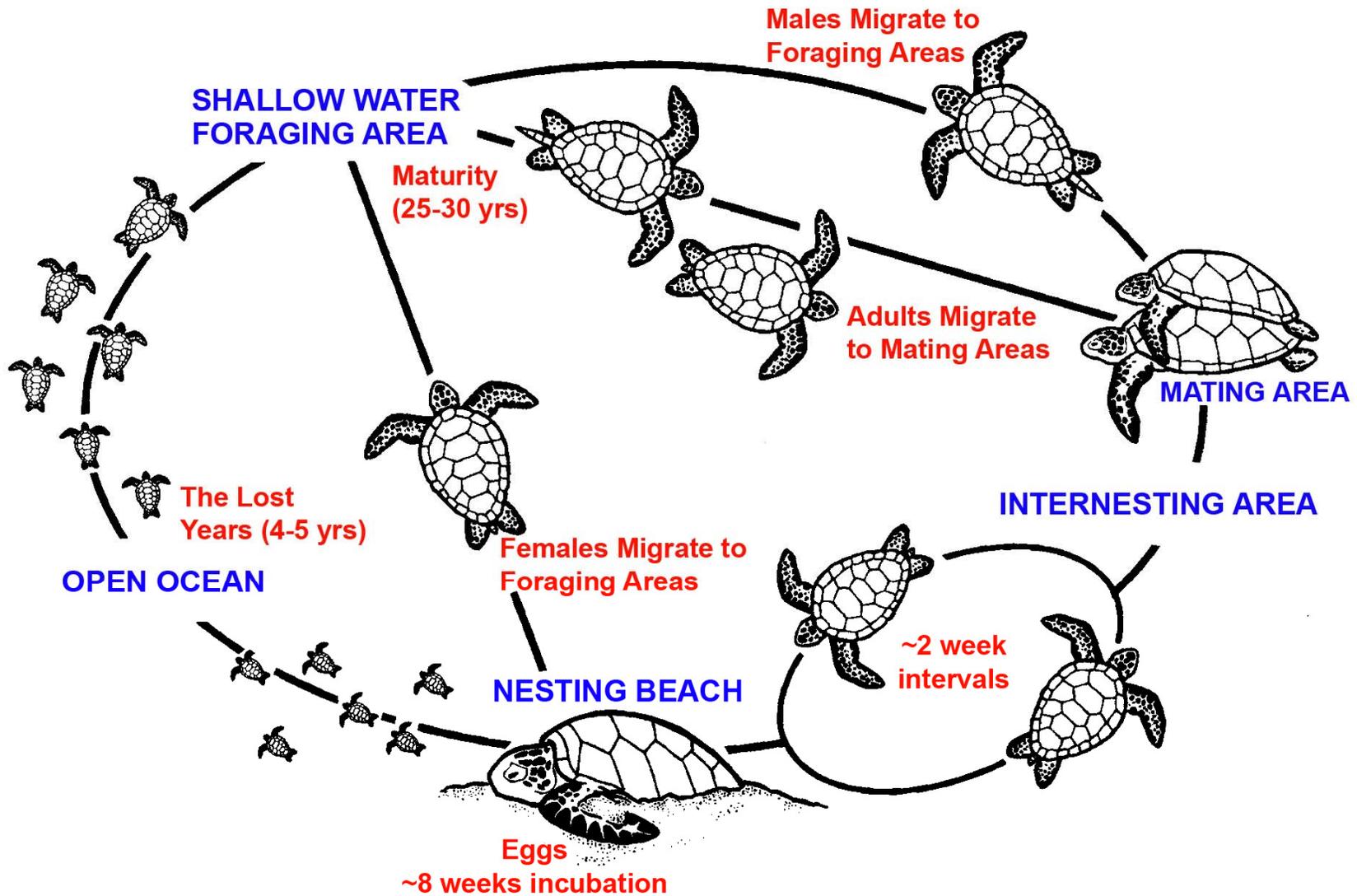








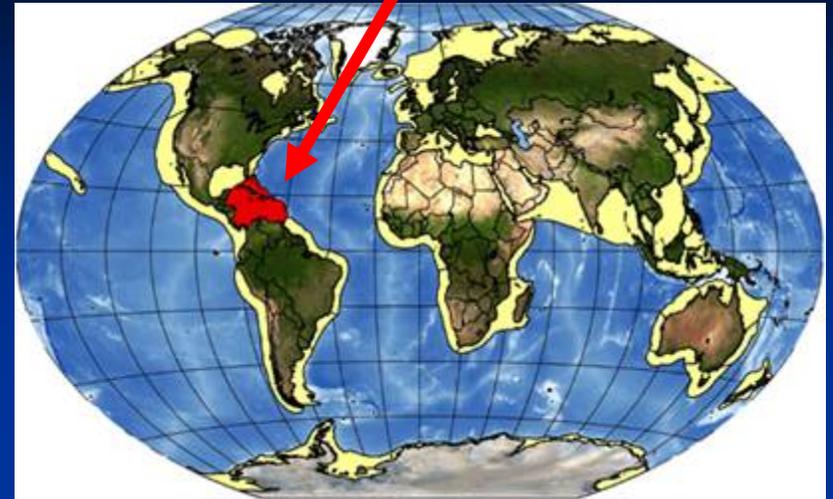
# Reversing population declines is complicated....



# Approaches to Conservation

**Coordination of efforts at the national and international levels**

**Caribbean Sea (LME #12)**



**Inclusive networking throughout the Wider Caribbean Region**

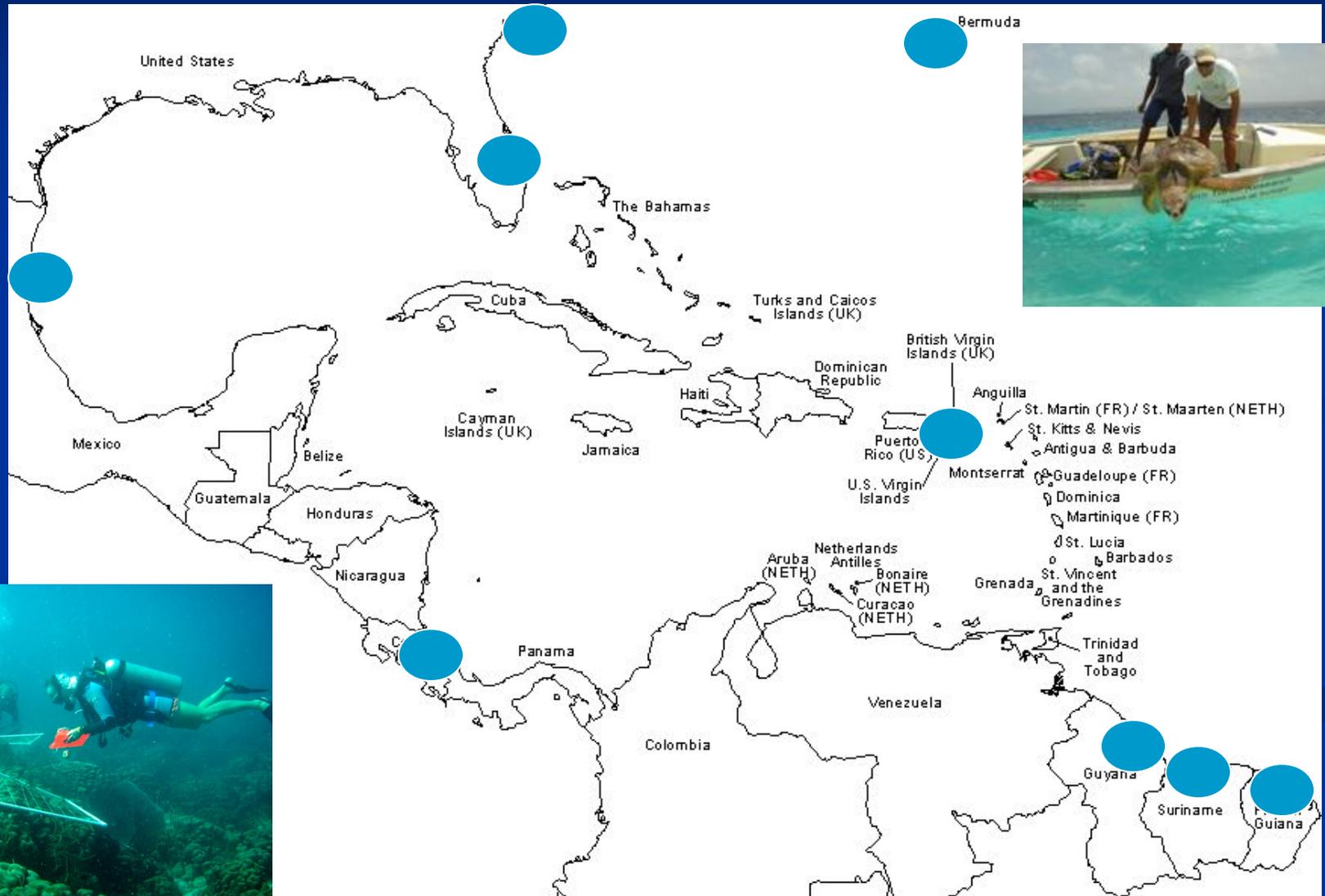


# The Wider Caribbean Sea Turtle Conservation Network (WIDECAST)

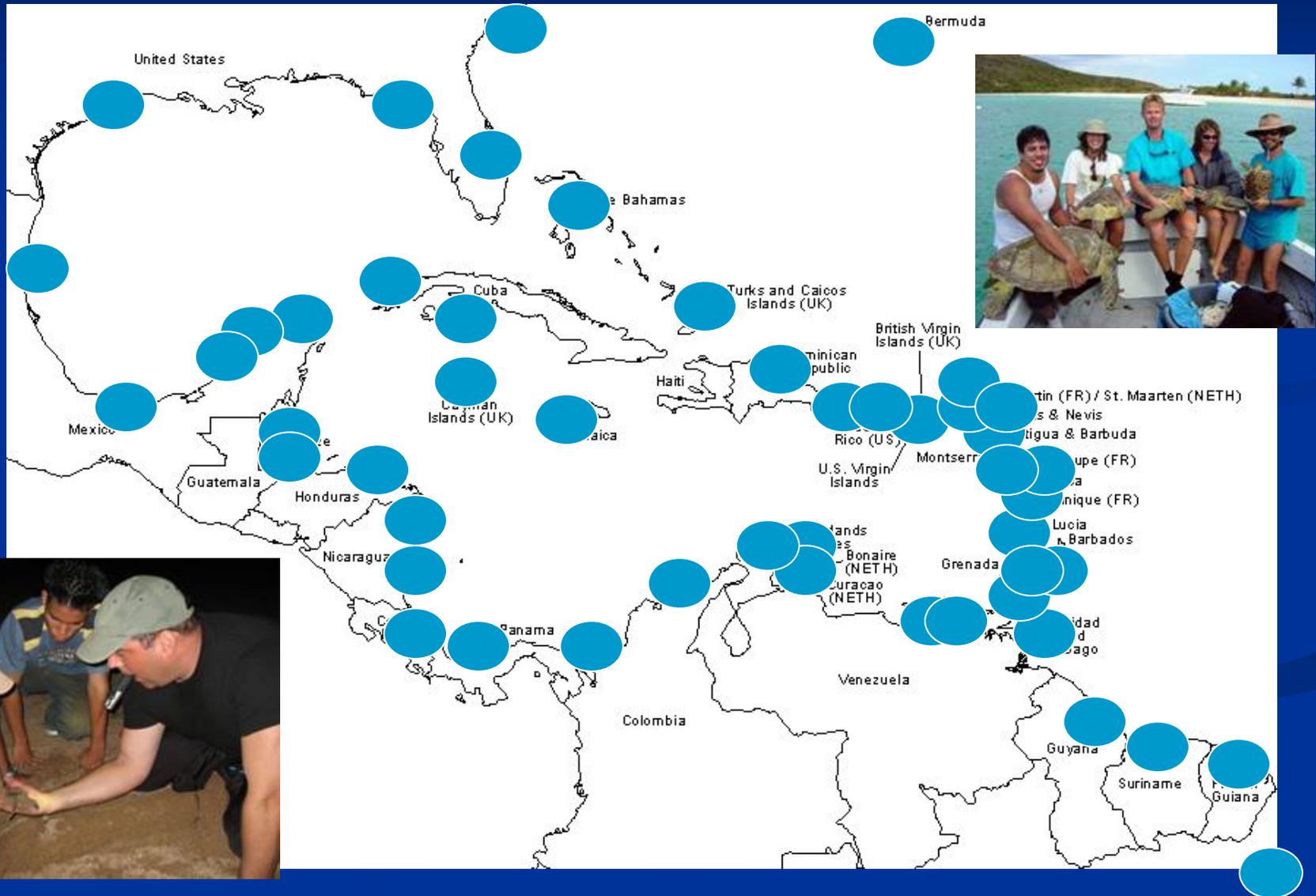
- An international coalition of experts
- Works from the premise that conservation must be **nurtured from within**, it cannot be commanded from outside
- Partner Organization (“Regional Activity Network”) to the United Nations Environment Programme’s (UNEP) Caribbean Environment Programme (Kingston, Jamaica)



# 25 years ago



# Today





Leadership Training & Capacity Building



Emphasizing Shared Goals

### TURTLE WATCHING

**ON THE BEACH**  
During breeding seasons, some special considerations apply to turtle-watching beaches.

- Avoid damage to incubating nests - for example, avoid driving on a turtle-watching beach or using these beaches for sports items or barbecues
- Do not leave large items (such as chairs, umbrellas or recreational vehicles) on watching beaches at night - these can obstruct a turtle's path and prevent egg laying
- Keep pets, especially dogs, away as they can endanger eggs and hatchlings
- Keep beach lighting to a minimum - artificial lighting attracts turtles
- Shield or switch off lighting which is visible from the beach

**Watching nesting turtles**  
Seeing an adult turtle come ashore to lay her eggs is an unforgettable experience. However, not land turtles are very vulnerable and if startled, a female turtle may return to the sea before her eggs can be successfully laid. Please follow these simple rules when watching nesting turtles.

- Do not approach turtles as they come from the sea they are easily frightened
- Turtles that have not yet laid their eggs must be left alone
- Make minimal use of flashlights, never shine lights directly into a turtle's face
- Do not take photographs before a turtle has laid her eggs
- Move away if the turtle shows signs of distress
- Turtle eggs and hatchlings should be left undisturbed
- Consider leaving watching to 30 minutes at a time

**Photography**  
Flash photography of nesting turtles is a controversial topic. In some places this is completely forbidden and in others, if using a camera flash, do so sparingly and only take photographs before a turtle has laid her eggs.

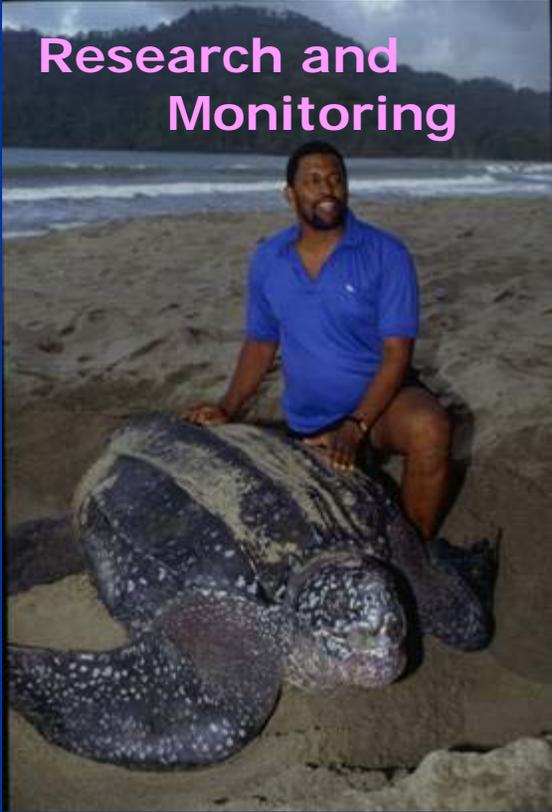
- Only take photographs from behind the turtle - the flash will temporarily "blind" her and complicate her return to the sea

**Hatchling turtles**

- Do not disturb hatchlings if they appear disoriented by beachfront lighting - place yourself between the hatchlings and the light source, and ask that others do the same. If you are observing the hatchlings, each one should be marked with a small number.

**Sustainable Policies**

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Research and Monitoring



Public Awareness



Alternative Livelihoods

- Best available science to management, conservation, and governance
- Empower stakeholders to make effective use of science in the policy process
- Promote leadership training for Caribbean scientists, managers and policy-makers
- Secure funding to achieve shared goals and promote the "mainstreaming" of environmental concerns into other sectors
- Demonstrate and replicate the best models for successful community-based programs

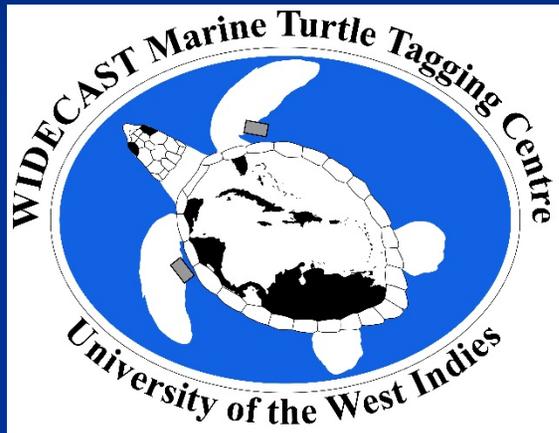


# Tagged Turtles

The tagging of turtles enables monitoring of different life stages over an extended period



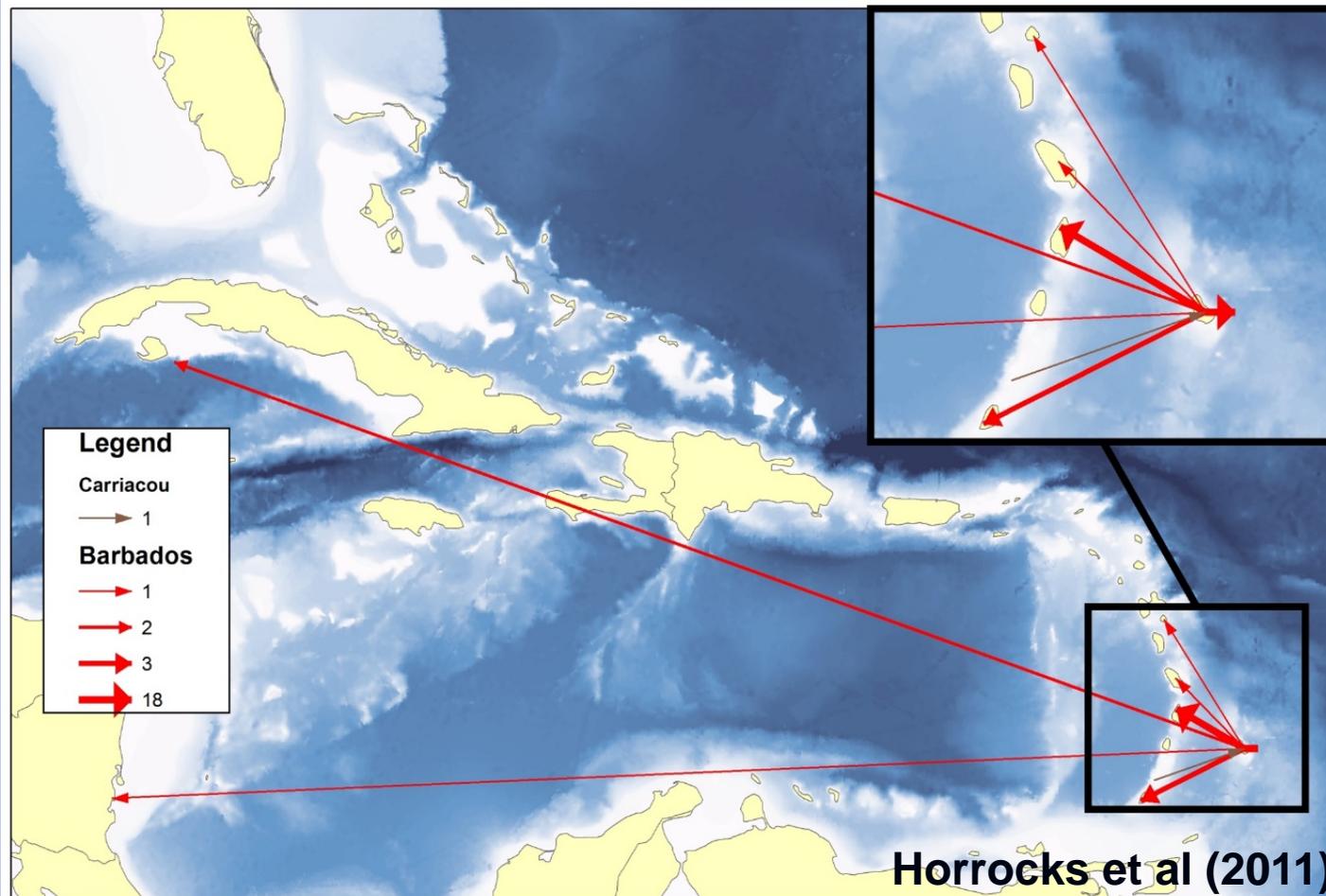
# The Marine Turtle Tagging Centre



- Provides up to 200 tags per year
- Maintains a record of tag distribution
- Maintains a record of deployed tags
- Receives all tag returns
- Rewards tag returns
- Notifies relevant projects

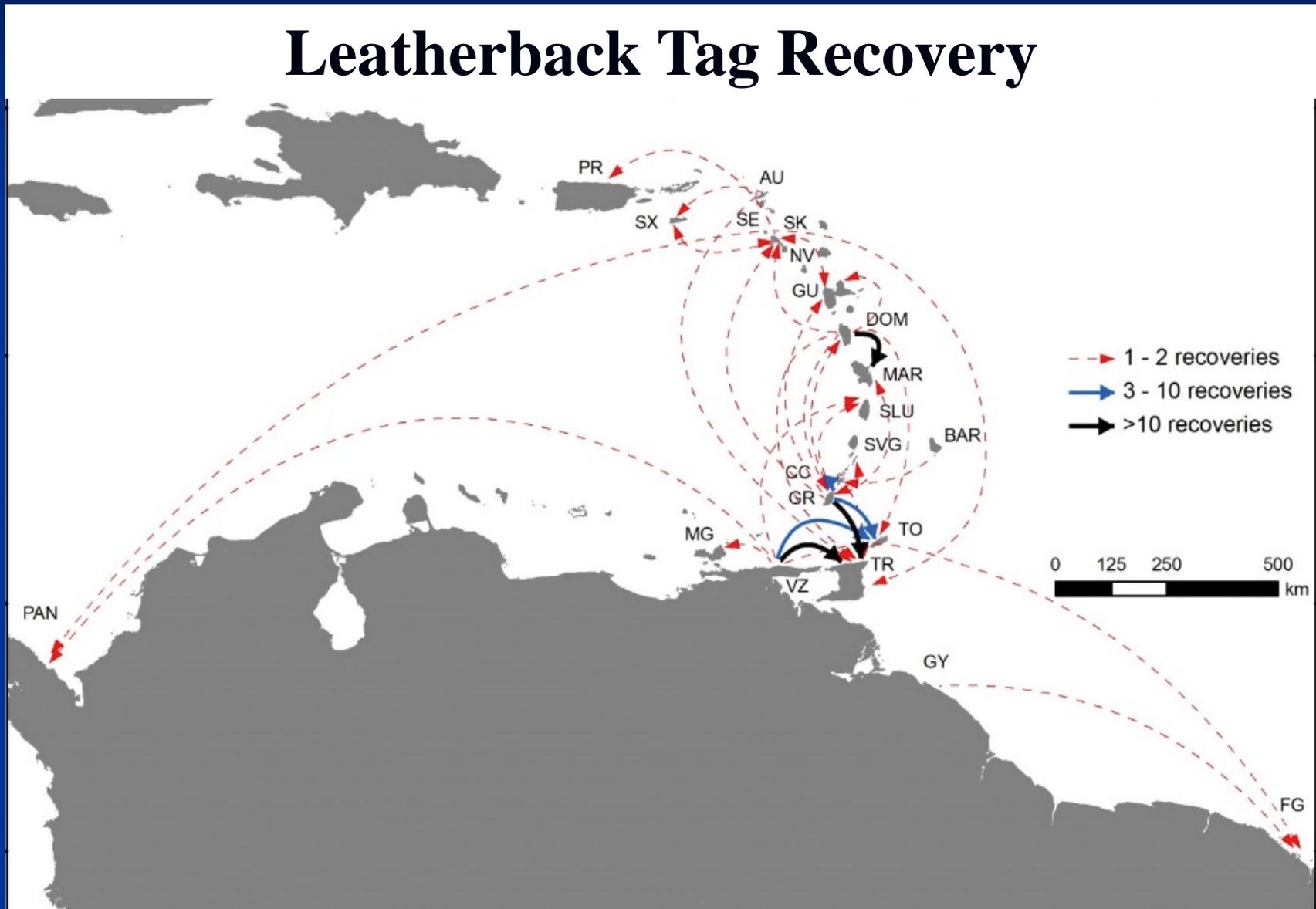
# MTTC Tag-Return Results

## Hawksbill Tag Returns



# MTTC Tag-Return Results

## Leatherback Tag Recovery



# WIDECAST Training in Satellite Telemetry



# Movements of Barbadian Turtles





**Tobago Cays  
team training in  
Barbados, 2010**

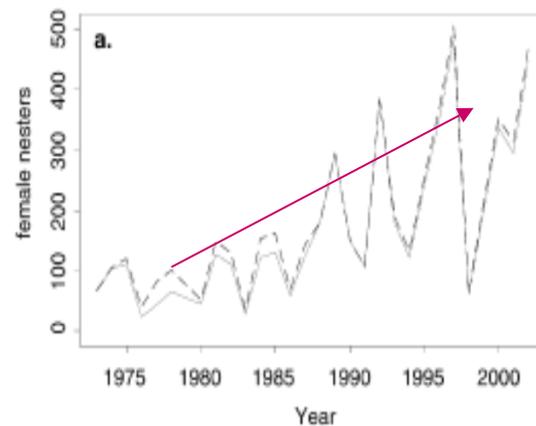
**Martinique team  
training, 2011**



**Outcomes:  
Are Populations Increasing?**

# For all six Caribbean-occurring species, there are examples of rising populations

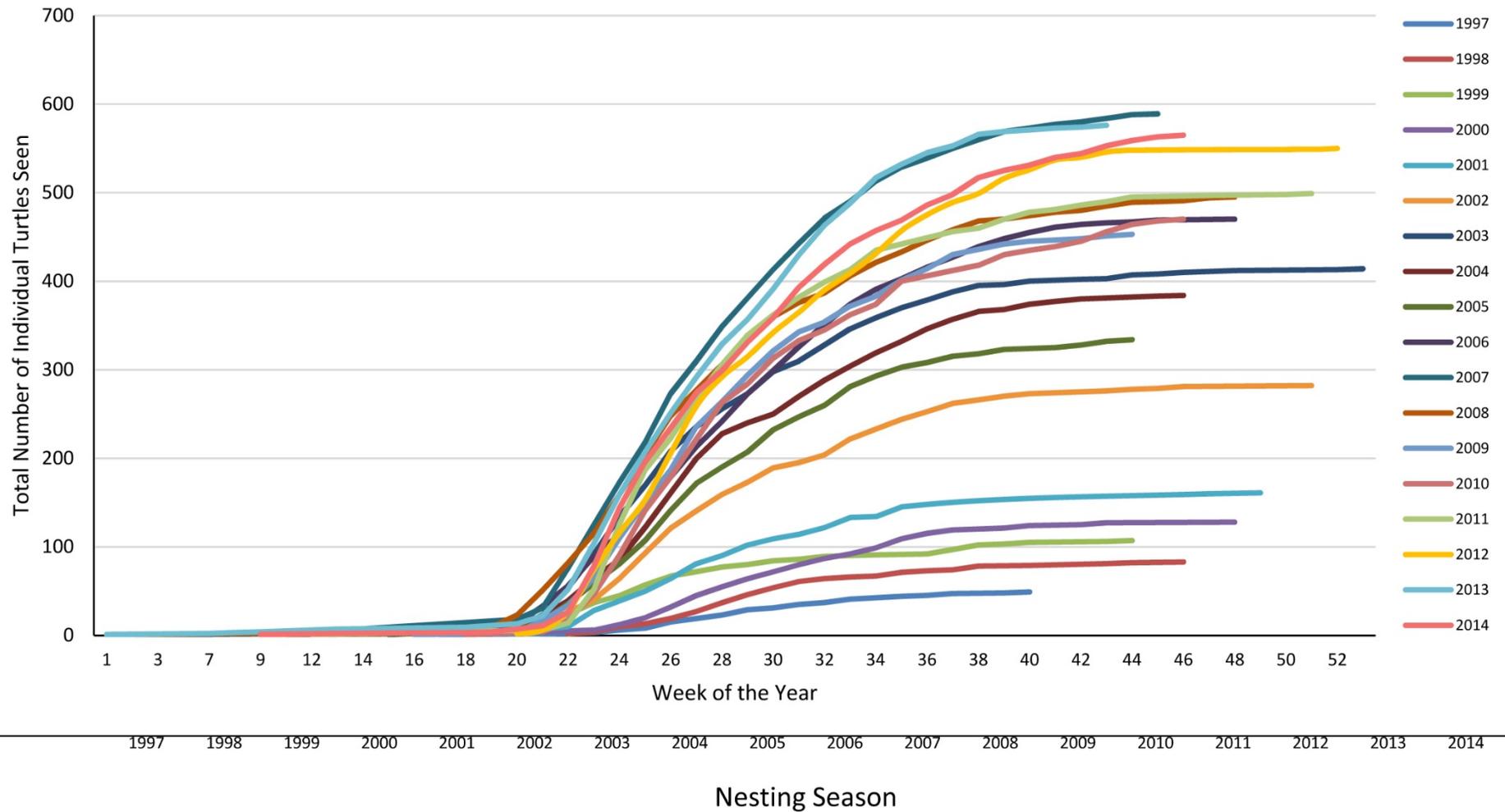
Success is a reflection of unity, of **working together to meet challenges** that would otherwise overwhelm us if we were working alone



# Barbados: A success Story

Annual Hawksbill Turtle Totals for Barbados

Cumulative Total of Individual Turtles Recorded for the First Time in Each Season



# "QUESTIONS?"

