

# Re-evaluating the IUCN Red List status of Northwest Atlantic Leatherbacks



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on behalf of the Northwest Atlantic Leatherback Working Group

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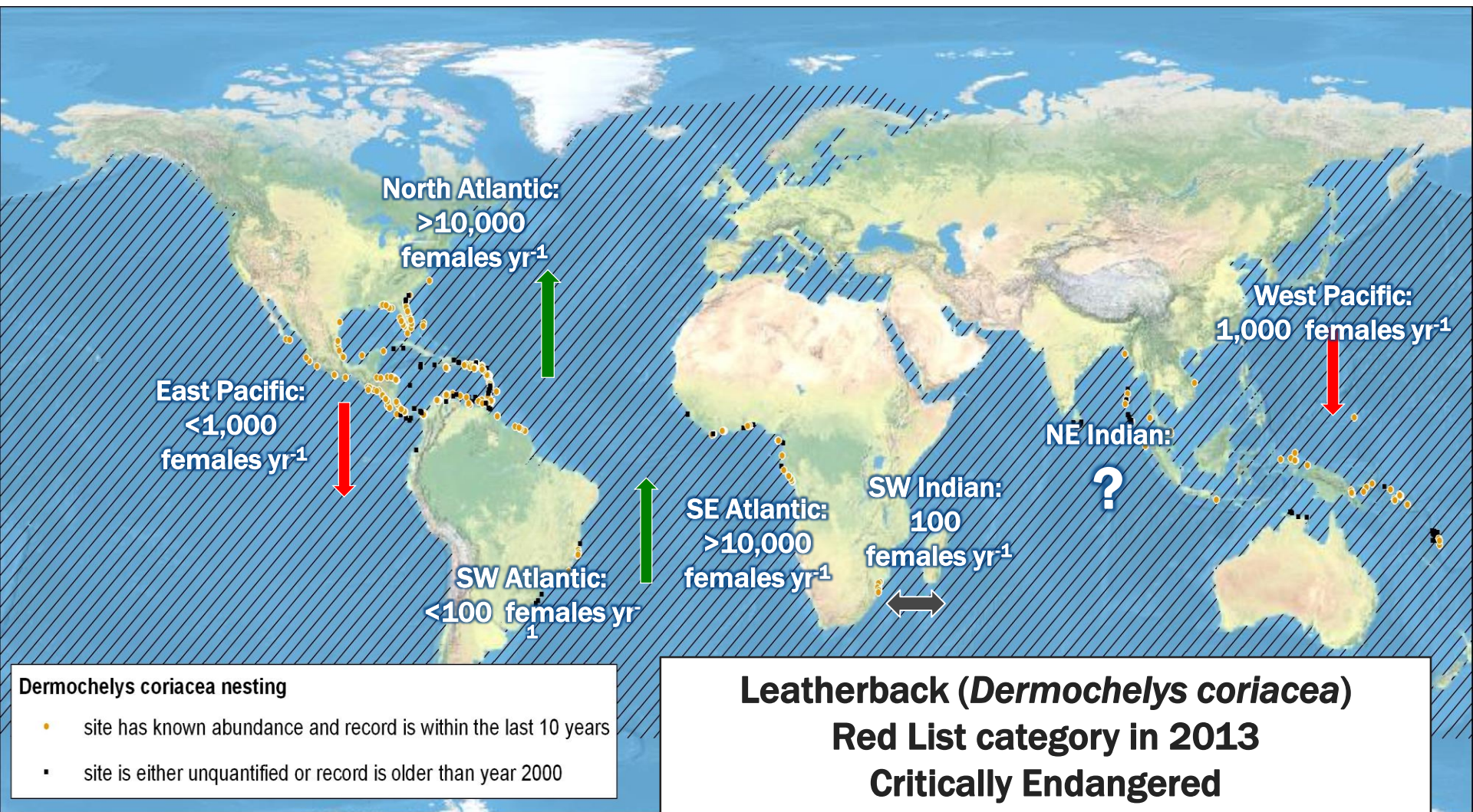
# Categories: Risk of imminent Extinction

Standard Criteria: all taxa



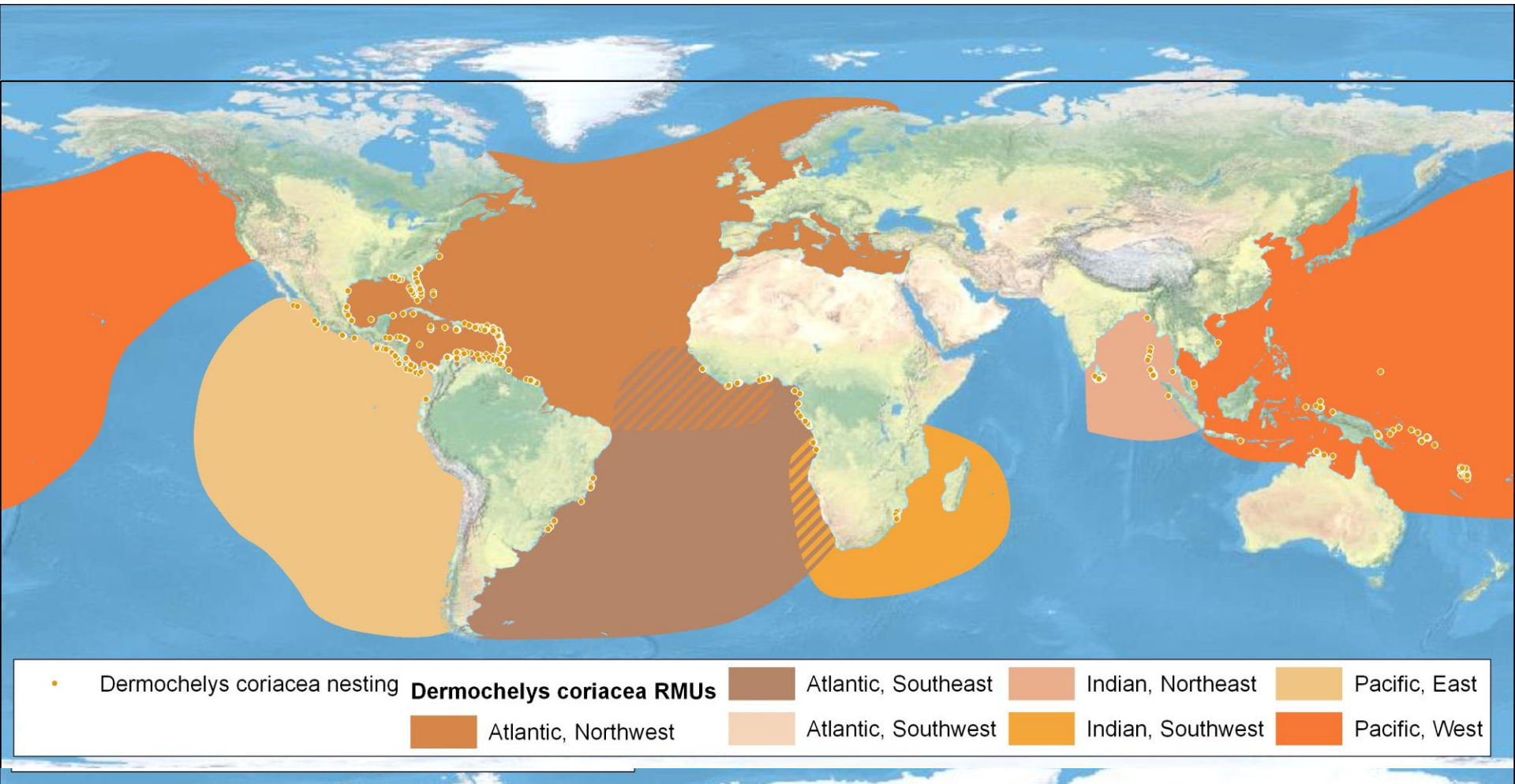


# Leatherbacks: global distribution



***How to ensure that Red List assessments reflect regional variation?***





GLOBAL distributions  
and variation

→ Regional Management Units

# IUCN MTSG approach to Red List assessments

**IUCN Definition of Subpopulation: *geographically or otherwise distinct groups in the population between which there is little demographic or genetic exchange***

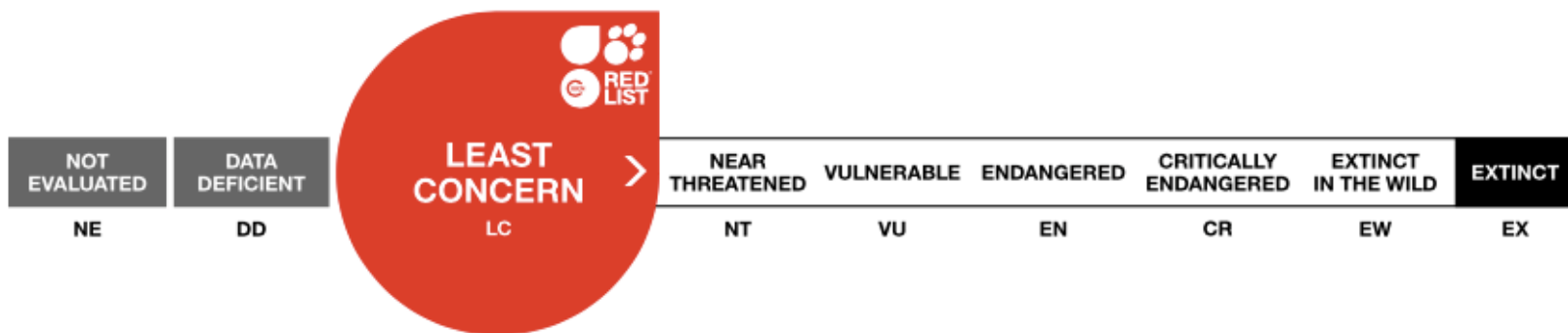
**e.g. Humpback whales, scalloped hammerhead sharks:  
global listing and multiple subpopulation listings; based on  
lots of different data types**

**Regional Management Units = subpopulations in RL  
assessments**

**\*Can be updated by Red List assessors\***

# Background

- **Status assessments: Northwest Atlantic leatherback**
  - Turtle Expert Working Group (2007): abundant, stable or increasing
  - Conservation priorities portfolio (Wallace et al. 2011): Low-risk / Low-threat, ‘healthy’ population
  - 2013 IUCN Red List: Least Concern



# How does RED LIST work?

- **GOAL: evaluate risk of imminent global extinction**
- **Red List Criteria: all equally evaluated, all indicate relative risk of extinction**
  - **A: Long-term decline**
  - **B: Geographic range restriction**
  - **C: Small population size**
  - **D: Very small population size**
  - **E: Population Viability Analysis**
- **Approach for Criterion A:**
  - Estimate 3-generation change between a past estimate and a present estimate of abundance
  - Use ~4-5 yr average of annual counts for each
  - Ignores intermediate trends
  - Assumes first counts = abundance 3-generations ago



## *Previous RL assessment*

- **How was it done?**

- Looked at long-term (>10 yr) trends in annual nest abundance data
- Relied heavily on TEWG data, including historical data collected using inconsistent monitoring
- Weighted overall, subpopulation trend by relative abundance of each site
- Historical abundance: ~25,000 nests/year
- Present abundance (through 2010): ~45,000 nests/year
  - 80% increase over ‘3-generations’



# *UPDATED RL assessment*

- **How was it done?**

- Looked at long-term (>10 yr) trends in annual nest abundance data
- Relied heavily on ~~TEWG data~~ data collected using consistent methods
- Observed, not modeled
- Weighted overall, subpopulation trend by relative abundance of each site

Stock	Site	Past Estimate 1*		Recent Estimate	
		Years	Value	Years	Estimate to 2017
Guianas-Trinidad	Suriname (Galibi, Matapica)	1999-2003	9,316	2013-2017	2,419
	French Guiana (Awala Yalimapo)	1986-1990	28,973	2013-2017	424
	French Guiana (Cayenne)	1999-2003	1,304	2013-2017	3,741
	Guyana	1989-1993	173	2013-2017	228
	Trinidad (Matura)	2006-2010	10,203	2013-2017	7,876
	Trinidad (Fishing Pond) #	2009-2012	5,135	2013-2017	
	Trinidad (Grand Riviere) #	2009-2012	10,951	2013-2017	
	Tobago #	2009-2013	410	2013-2017	
	Grenada	2002-2006	339	2013-2017	847
	Venezuela (Cipara)	2000-2004	100	2012-2015	63
	Venezuela (Querepare)	2002-2006	68	2013-2017	117
	<b>Guianas-Trinidad TOTAL</b>			<b>50,476</b>	
W. Caribbean	Costa Rica (Tortuguero)	1995-1999	1,000	2013-2017	127
	Costa Rica (Gandoca)	1990-1994	306	2009-2012	246
	Costa Rica (Pacuare)	2004-2008	396	2013-2017	241
	Costa Rica (Estacion La Tortuga)	2002-2006	295	2013-2017	303
	Costa Rica (Mondonguillo)	1991-1995	523	2013-2017	554
	Costa Rica (Cahuita)	2000-2004	223	2008-2012	185
	Panama (Chiriqui)	2004-2008	3,663	2013-2017	4150
	Others (Panama-Arnila, Colombia-Golfo de Uraba) #	2006-2007	3,831 (Panama); 2,299 (Colombia)		
	<b>W. Caribbean TOTAL</b>			<b>6,406</b>	
N. Caribbean	Sandy Point, St. Croix, US Virgin Islands	1982-1986	133	2013-2017	283
	Puerto Rico - Culebra	1984-1988	138	2013-2017	55
	Puerto Rico - Luquillo-Fajardo	1996-2000	137	2013-2017	264
	Puerto Rico - Maunabo	1999-2033	95	2013-2017	261
	Puerto Rico - other beaches #			2011-2017	
	St. Kitts	2003-2007	227	2013-2017	38
	Guadeloupe	2005-2009	88	2013-2017	154
	British Virgin Islands	1990-1994	7	2013-2017	21
<b>N. Caribbean TOTAL</b>			<b>825</b>		<b>1,076</b>
Florida	Florida, North Carolina, USA	1989-1993	51	2013-2017	414



Stock	Site	Years	Change through 2017
Guianas-Trinidad	Suriname: Galibi, Matapica	1999-2017	-0.74
	French Guiana: Awala Yalimapo	1986-2017	-0.99
	French Guiana: Cayenne	1999-2017	1.87
	Guyana	1989-2017	0.32
	Trinidad: Matura	2006-2017	-0.23
	Grenada	2003-2017	1.50
	Venezuela: Cipara	2000-2015	-0.37
	Venezuela: Querepare	2002-2017	0.72
<b>Guianas-Trinidad TOTAL</b>			<b>-0.69</b>
Western Caribbean	Costa Rica: Tortuguero	1995-2017	-0.87
	Costa Rica: Gandoca	1990-2012	-0.20
	Costa Rica: Pacuare	2004-2017	-0.39
	Costa Rica: Estacion La Tortuga	2002-2017	0.03
	Costa Rica: Mondonguillo	1991-2017	0.06
	Costa Rica: Cahuita	2000-2012	-0.17
	Panama: Chiriqui	2004-2017	0.13
<b>W. Caribbean TOTAL</b>			<b>-0.09</b>
Northern Caribbean	Sandy Point, St. Croix, US Virgin Islands	1982-2017	1.13
	Puerto Rico: Culebra	1984-2017	-0.60
	Puerto Rico: Luquillo-Fajardo	1996-2017	0.93
	Puerto Rico: Maunabo	1999-2017	1.75
	St. Kitts	2003-2017	-0.83
	Guadeloupe	2005-2017	0.75
	British Virgin Islands	1990-2017	2.00
<b>N. Caribbean TOTAL</b>			<b>0.30</b>
Florida	<b>Florida TOTAL</b>	<b>1989-2017</b>	<b>7.12</b>

# *Recent RL assessment*

- **What happened?**

- It's real: Actual declines in the past decade (see trend assessment results)
- It's the methods: Difference in how some historical estimates were calculated
- Key: French Guiana estimates
  - Previous assessment used data going back to 1967, and only had modeled estimates through 2005, had to extrapolate to 2010
  - Current assessment used actual count data from index sites over time, but between 1986 and 2017 only (reliable monitoring effort)

- **What now?**

- Went through committee review, IUCN Marine Turtle Specialist Group member review
- Now in review with IUCN; possible official update to Red List (in March?)



# *What the IUCN Red List is, and what it is not*

Also: the role of IUCN Red List Assessments  
in sea turtle conservation



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# What the RL is and what it is not:

## Extinction risk vs conservation needs



Categories provide semi-quantitative indices of extinction risk



Least Concerned

Near Threatened

Vulnerable

Endangered

Critically endangered



HEALTHY < 30%



>30% >50% >80% 100%

EXTINCT  
in the wild



# What the RL is and what it is not:

## Extinction risk vs conservation needs



‘Least concern’ is technically correct in that context



Least Concerned

Near Threatened

Vulnerable

Endangered

Critically endangered



HEALTHY < 30%



>30%

>50%

>80%

100%

EXTINCT  
in the wild

# What the RL is and what it is not:

## Extinction risk vs conservation needs

BUT: what about taxa that are under threat, are declining, etc., or those whose non-threatened status is entirely conservation dependent?



Least Concerned

Near Threatened

Vulnerable

Endangered

Critically endangered



HEALTHY

< 30%

>30%

>50%

>80%

100%

EXTINCT  
in the wild



# The big misunderstanding

Protect turtles you must!



Turtle conservation

Critically Endangered...  
Least Concern!



*Red List is about imminent extinction risk,  
NOT conservation needs*



# Use the Force... for good?

- How should we communicate about Red List?
- Turn away from the Dark Side: What are different approaches to assessing sea turtle status?
- How conservation-dependent are sea turtles, really?

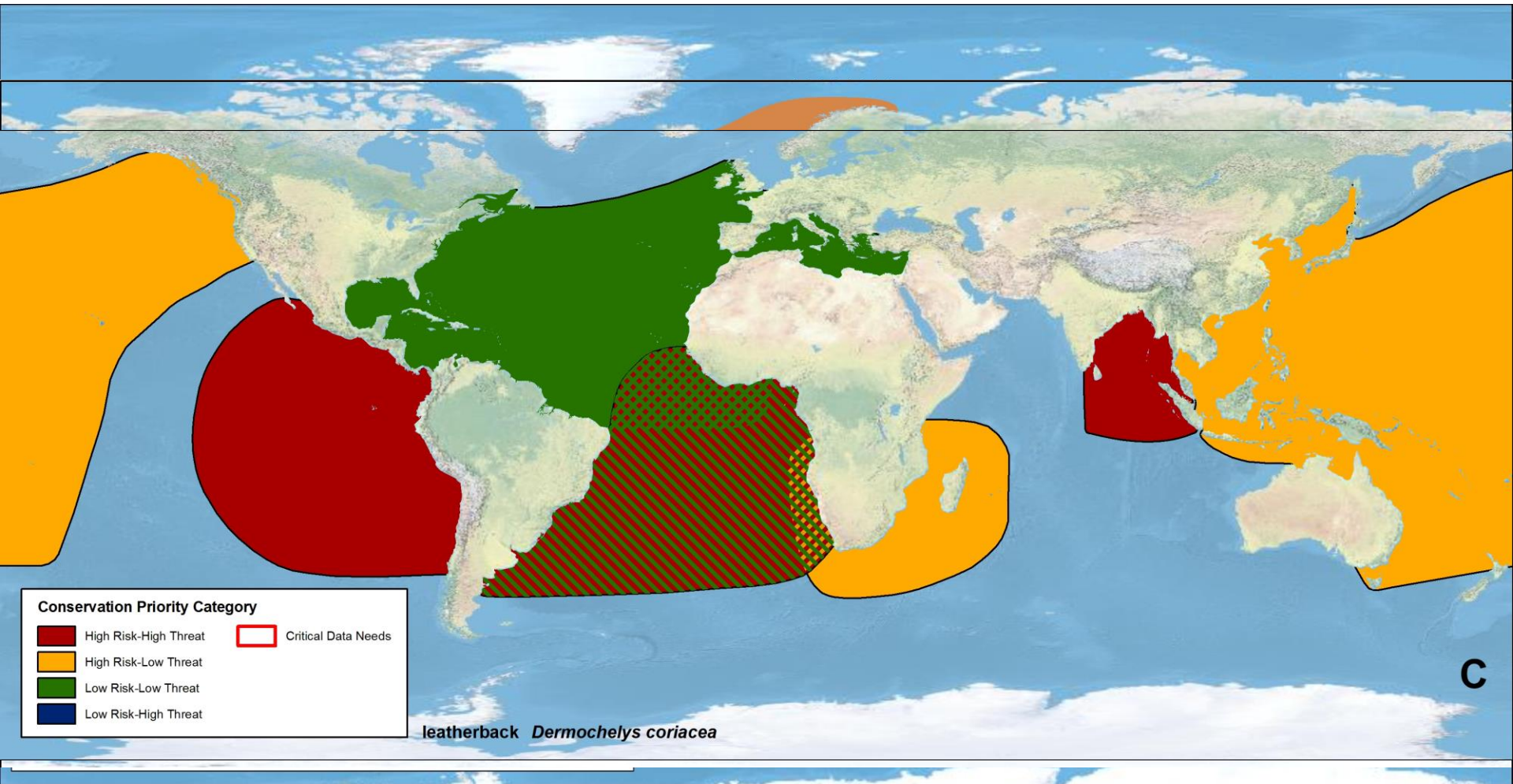


Questions?



foto: Brian Skerry





GLOBAL distributions  
and variation

+ RMUs

+ CPP = status  
assessments at  
'population' levels