Proposed Rule Revising the ESA Listing of the Green Sea Turtle

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A Joint NOAA Fisheries and U.S. Fish and Wildlife Service ESA Rulemaking

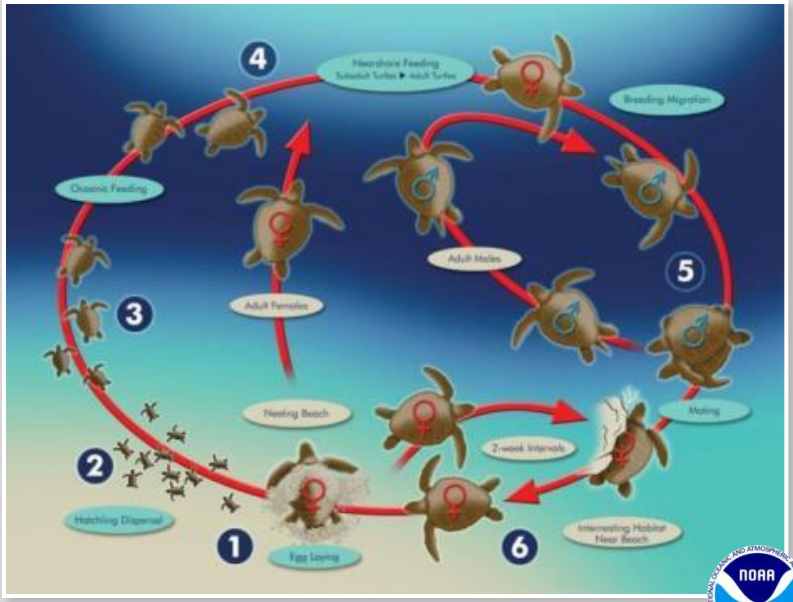
The ESA Listing Process for Green Turtles

- July 1978 – Listed as threatened everywhere with the exception of the breeding populations in Florida and the Pacific Coast of Mexico, which were listed as endangered; jurisdiction shared by NOAA Fisheries (NMFS) and U.S. Fish and Wildlife Service (FWS), i.e., the Services
- August 2007 – ESA 5-year review recommended full status review to assess potential Distinct Population Segments (DPS)
- February 2012 – Services received a petition to identify the Hawaiian green turtle population as a DPS and delist the DPS
- August 2012 – Services accepted the petition and announced initiation of a status review of the entire species
- November 2013 – Services' Status Review Team completed draft status review report; report then peer reviewed and finalized (2015)
- **March 2015 – Published proposed rule to revise green turtle listing**

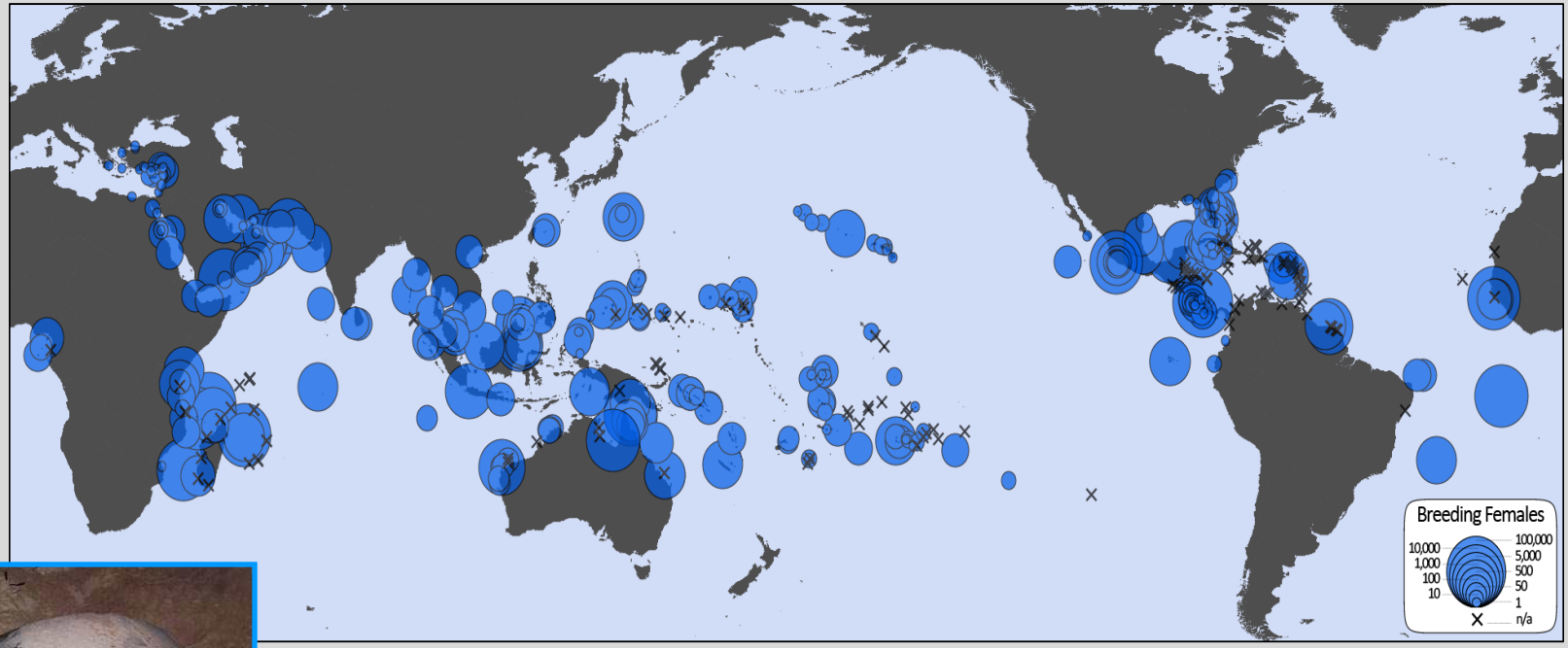
Green Turtle Biology and Behavior

- Worldwide distribution in tropical, subtropical, and temperate regions
- Complex life histories – 3 main ecological zones
  - Oceanic (>200m depth) – neonates, juveniles
  - Neritic (<200m depth) – juveniles, adults
  - Terrestrial – nesting females, eggs, hatchlings, basking males and females

- Nesting occurs on sandy beaches (continent and island) during summer
- Habitat transitions/migration: seasonal, foraging, reproductive, developmental
- Seagrass and algae are the primary food source, but in some regions, invertebrates are also an important food source
- Late maturing, long-lived



Green Turtle Global Nesting Distribution



Primary Threats to Green Turtles

- Incidental capture in fishing gear
  - Gillnets
  - Trawls
  - Dredges
  - Hook and line
- Climate change and sea level rise, warming of beaches, effects on prey/sea grasses
- Loss or degradation of nesting and foraging habitat
- Directed harvest
- Vessel strikes
- Pollution such as marine debris, oil, and other and contaminants
- Dredging (non-fishery)
- Power plant entrainment

Green Turtle Status Review Process (overview)

- The Services convened a status review team (SRT) in November 2012 to review the best available scientific information, assess whether DPSs may exist, and if so, describe potential DPSs and assess extinction risk

- The SRT performed the following analyses:
  - Gather best available scientific and commercial data
  - Assess whether DPSs may exist
  - Review population parameters
  - Review threats (5 factors)
  - Assess the extinction risk of any potential DPS

Green Turtle Status Review Process (2)

To identify potential DPSs, SRT assessed ***Discreteness*** and ***Significance:***

A population segment is ***discrete*** if it is:

- Separated from other populations as a consequence of physical, physiological, ecological, or behavioral factors; or
- Delimited by international boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist and are deemed inadequate

The Green Turtle SRT examined the best available data including: physical, physiological, ecological, behavioral, tagging, and genetic data

*If found to be discrete, then **significance** is assessed……*

Green Turtle Status Review Process (3)

A population segment is ***significant*** to the species if it:

1) Persists in a unique ecological setting

2) Its loss would result in a significant gap in the range

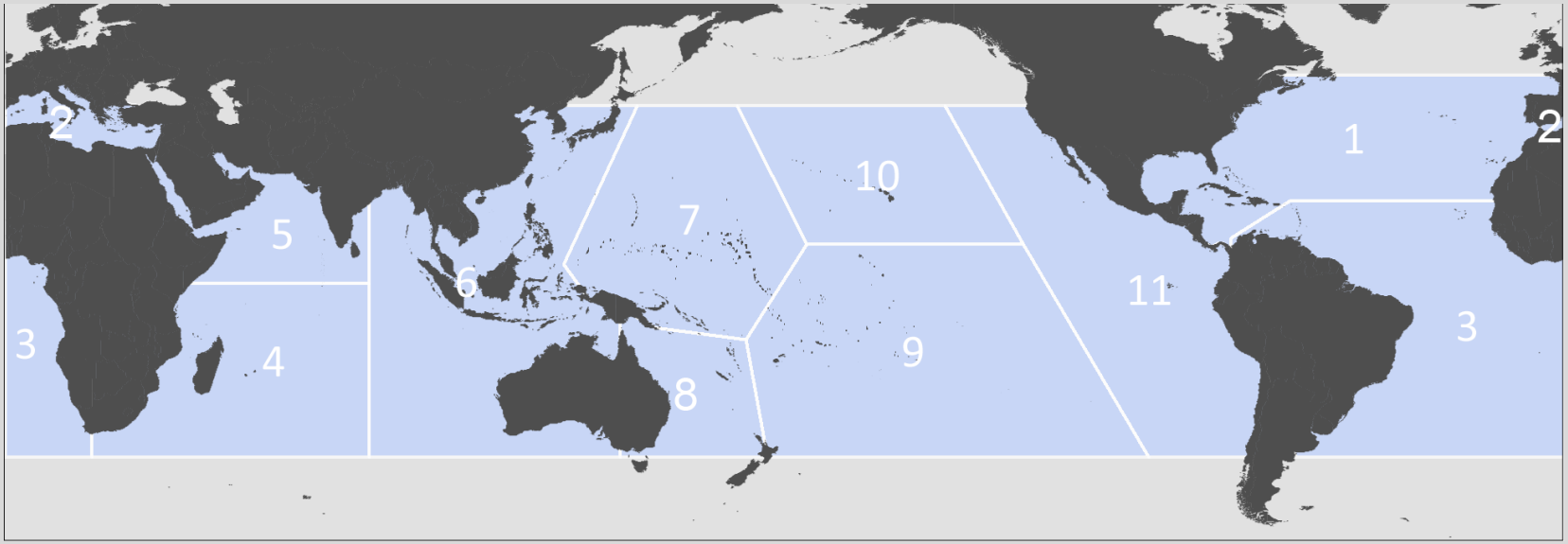
3) Represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range, or

4) Differs markedly from other populations of the species in its genetic characteristics

The Green Turtle SRT found 1,2, and 4 relevant to the consideration of green turtle DPSs.

Green Turtle Status Review Process (4)

The SRT identified **11 potential green turtle DPSs**



1. North Atlantic
2. Mediterranean Sea
3. South Atlantic
4. Southwest Indian
5. North Indian
6. East Indian-West Pacific
7. Central West Pacific
8. Southwest Pacific
9. Central South Pacific
10. Central North Pacific
11. East Pacific

Green Turtle Status Review Process (5)

The SRT reviewed **6 critical assessment elements** to assess the **extinction risk** of each DPS:

1) Nesting Abundance
2) Population Trends
3) Spatial Structure (genetics, tagging, demography)
4) Diversity/Resilience (spatial range, diversity in nesting sites, site structure, genetics)
5) Five-Factor Threat Analyses (ESA listing factors)
   - present or threatened destruction, modification, or curtailment of its habitat or range
   - over-utilization of the species for commercial, recreational, scientific, or educational purposes
   - disease or predation
   - inadequacy of existing regulatory mechanisms
   - other natural or manmade factors affecting its continued existence
6) Existing Conservation Efforts

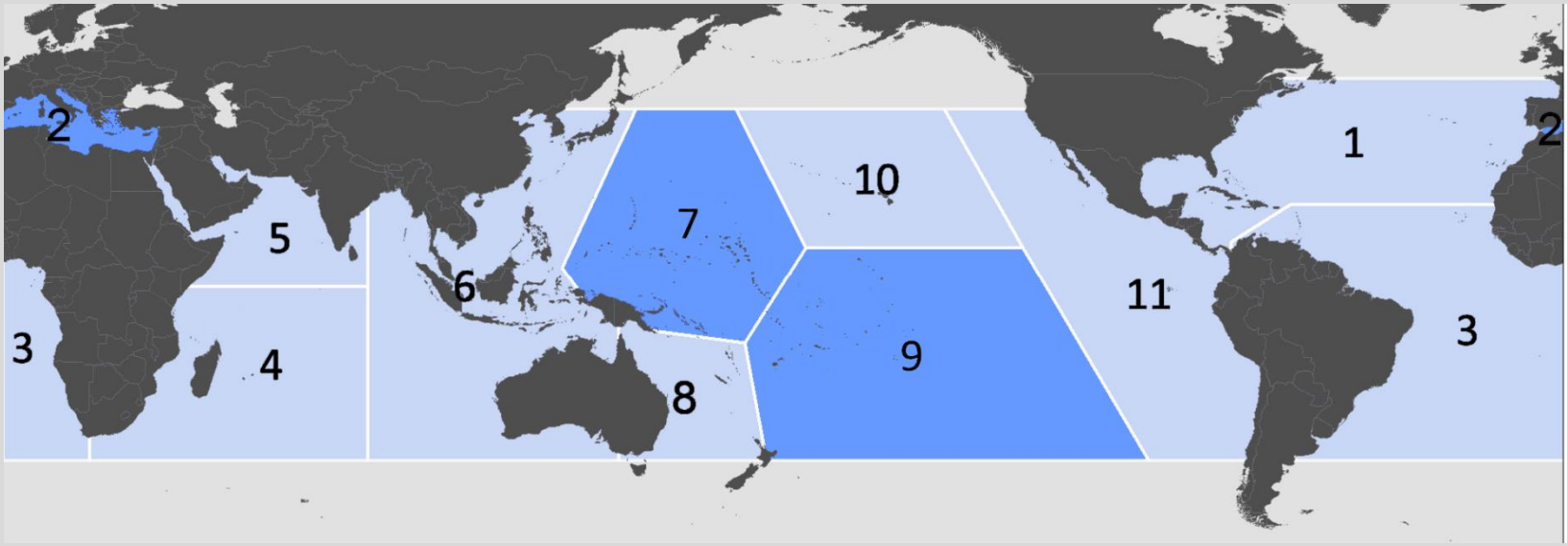
The SRT's report (i.e., Status Review) informed the Services' identification of DPSs and determination of ESA listing status for each DPS

ESA Listing Status

- ***Endangered***
  - A species is considered endangered if it is "in danger of extinction throughout all or a significant portion of its range"
- ***Threatened***
  - A species is considered threatened if it is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range"

Proposed ESA Listing Status for Each DPS

Based on the Status Review and best available information, the Services propose:

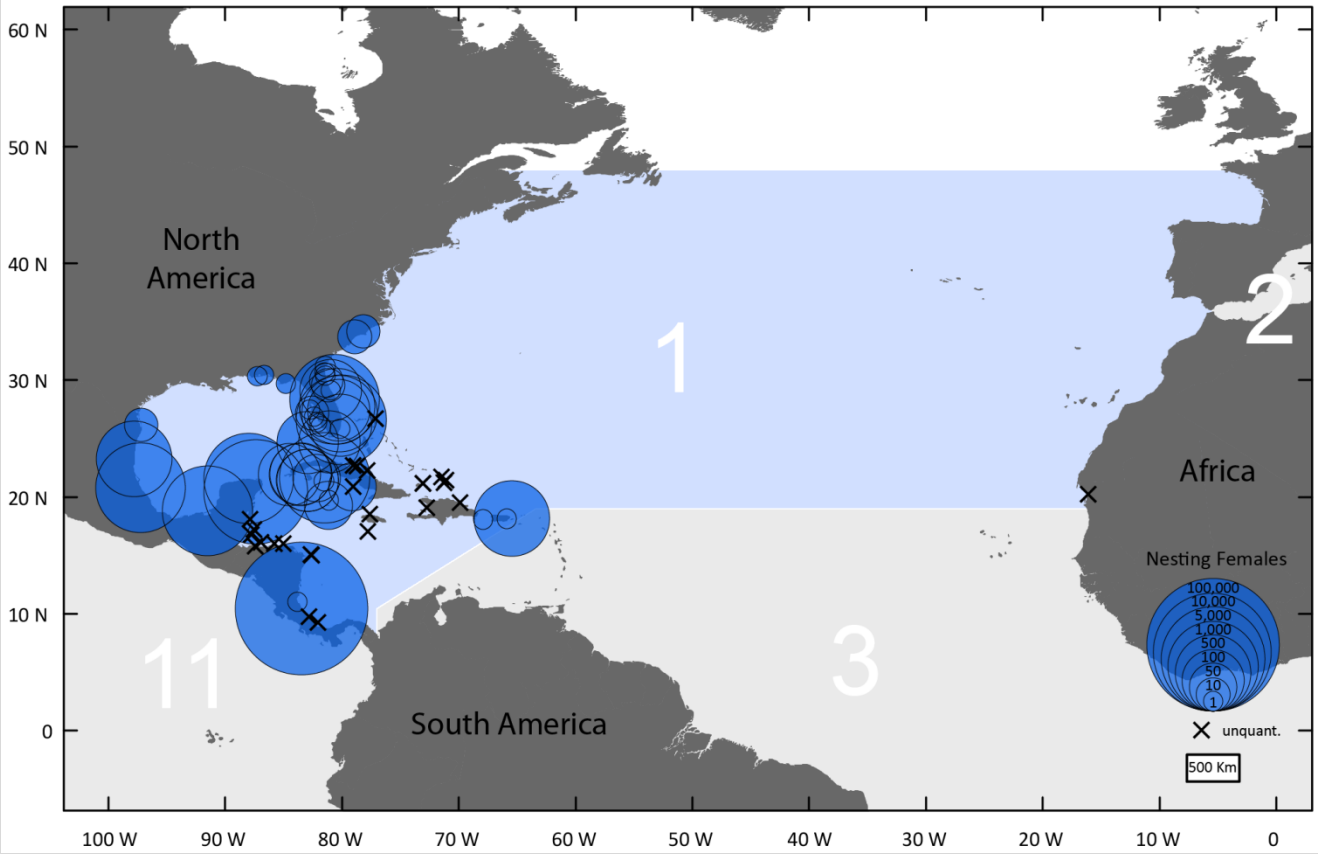


1. North Atlantic DPS – **Threatened**
2. Mediterranean Sea DPS – Endangered
3. South Atlantic– **Threatened**
4. Southwest Indian DPS – **Threatened**
5. North Indian DPS – **Threatened**
6. East Indian-West Pacific DPS – **Threatened**
7. Central West Pacific DPS – Endangered
8. Southwest Pacific DPS – **Threatened**
9. Central South Pacific DPS – Endangered
10. Central North Pacific DPS* – **Threatened**
11. East Pacific – **Threatened**

*Subject of petition

North Atlantic DPS

- Includes U.S. East Coast, Puerto Rico, etc.



North Atlantic DPS (2)

- Current Listing: Threatened except for endangered breeding population in Florida
- Proposed Listing: **Threatened** (including Florida)
- Justification:
  - Florida nesting population no longer endangered due to increasing nesting population trends and geographically widespread nesting at diverse sites
  - However, there are significant continuing threats to the DPS, including fishery interactions, coastal development, directed take (in some areas), and sea level rise and other effects of climate change

North Atlantic DPS (3)

- Change in Florida: Current "endangered" breeding population vs "threatened" DPS:
  - 50 CFR 17.32 (for threatened species): Permits issued under this section must be for one of the following purposes: Scientific purposes, or the enhancement of propagation or survival, or economic hardship, or zoological exhibition, or educational purposes, or incidental taking, or special purposes consistent with the purposes of the Act.
  - 50 CFR 17.22 (for endangered species): Permits may be issued for scientific purposes, for enhancing the propagation or survival, or for the incidental taking of endangered wildlife.

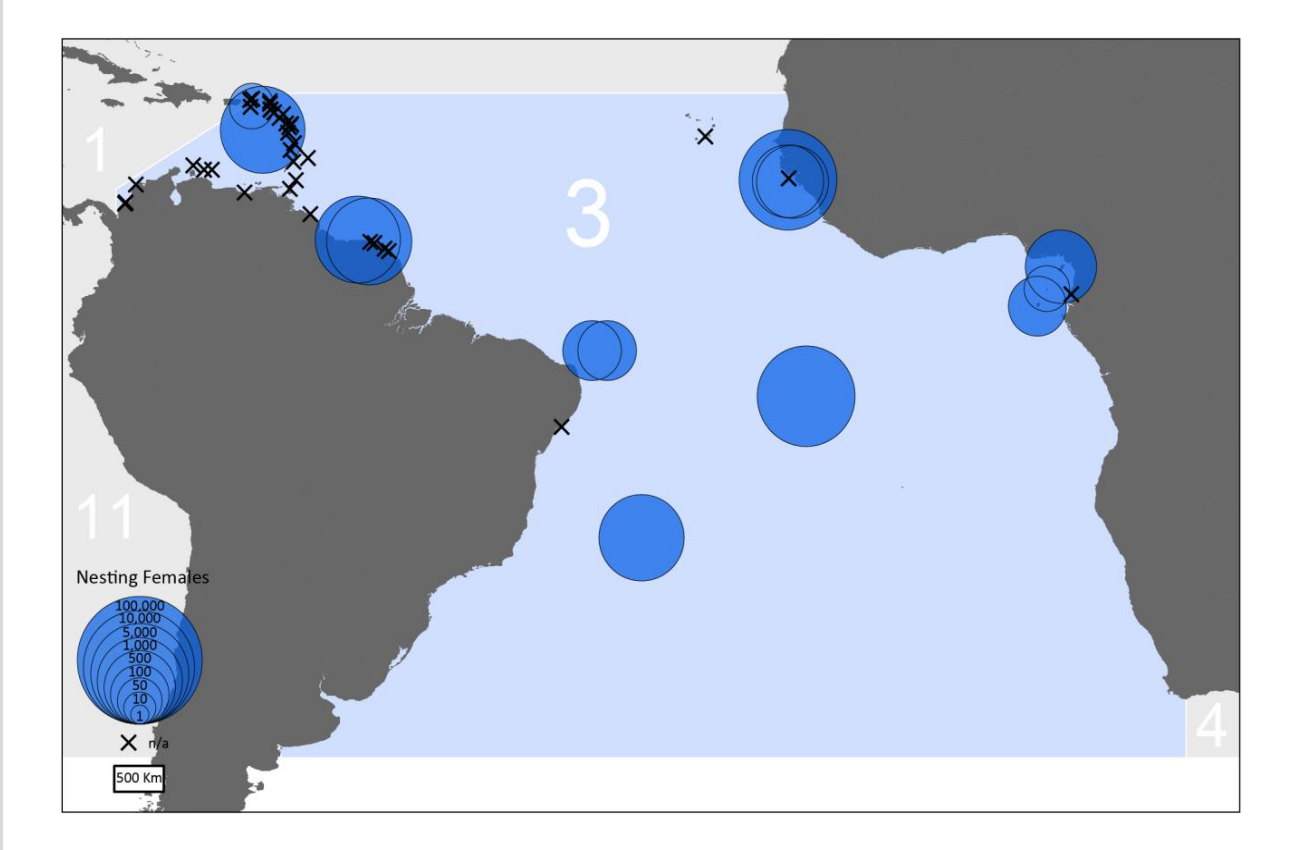
50 CFR 17.22 omits the use of endangered wildlife for "educational purposes"

North Atlantic DPS (4)

- FWS Cooperative Agreement (FWC) pursuant of Section 6 of the ESA contains the following provisions:
  - Any authorized employee or agent of the FWC may take or issue a conservation permit authorizing the take of Federally-listed *endangered species* for purposes that are consistent with the Act provided that such taking is not anticipated to result in:
    - The death or permanent disabling of turtle
    - The removal of turtle from Florida
    - The holding of turtle in captivity for a period of more than 45 days.
- Current restrictions for endangered species in the permits issued by FWC under FWS section 6 cooperative agreement would no longer apply
- Coordination between FWC and FWS prior to publication of final rule

South Atlantic DPS

- Includes U.S. Virgin Islands



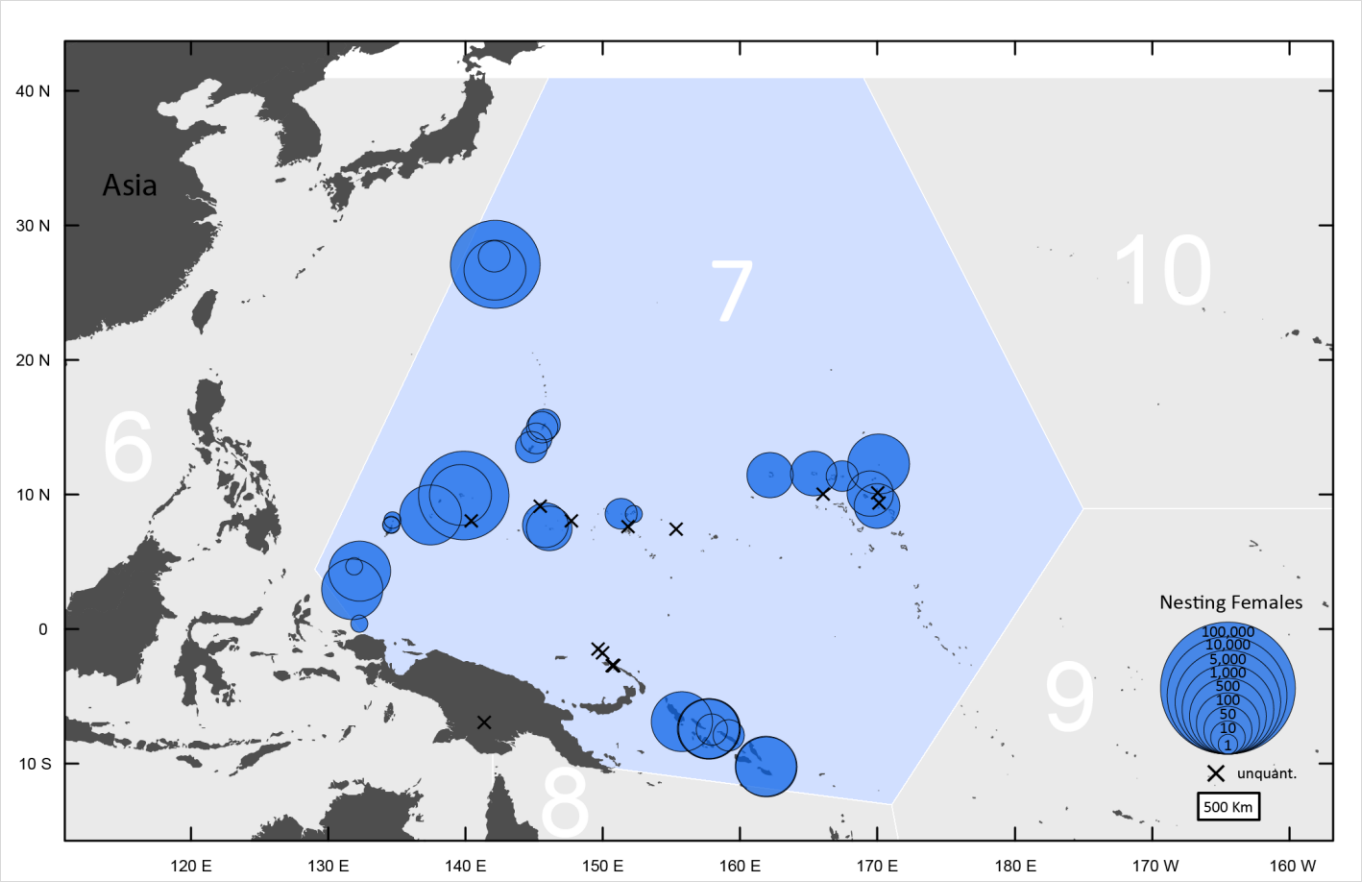
South Atlantic DPS (2)

- Current Listing: Threatened
- Proposed Listing: **Threatened**
- Justification:
  - Relatively high nesting abundance and geographically widespread nesting and foraging (therefore not endangered)
  - Yet, threats persist from fishery interactions, directed harvest of turtles and eggs, and sea level rise and other effects of climate change

Take prohibitions and exceptions remain in place for threatened "species"

Central West Pacific DPS

- Includes Guam and CNMI



Central West Pacific DPS (2)

- Current Listing: Threatened
- Proposed DPS: **Endangered**
- Justification:
  - Low nesting abundance, with fewer than 6,500 nesting turtles
  - Exposure to increasing threats, including coastal development, directed take of turtles and eggs, bycatch in fisheries, and sea level rise and other effects of climate change

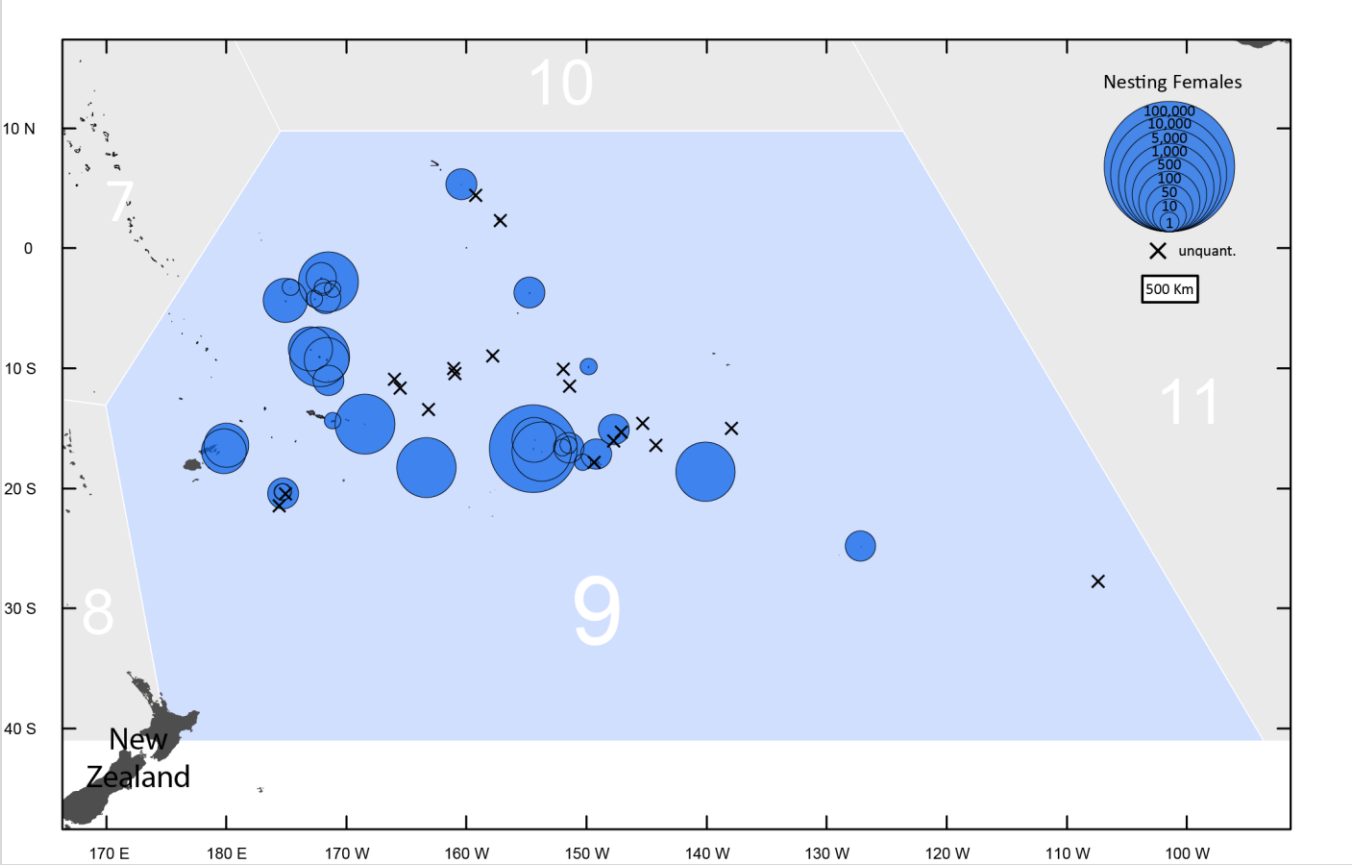
Central West Pacific DPS (3)

- Change in listing status from threatened to endangered
- Take prohibitions and exceptions remain the same except:
  - Take will not be authorized for educational purposes
  - Take will not be authorized for exhibition purposes
  - Incidental take requires authorization from the Services via
    - Incidental take permit
    - Incidental take statement

No take for educational or exhibition purposes,
no incidental take without Services' authorization

Central South Pacific DPS

- Includes American Samoa



Central South Pacific DPS (2)

- Current Listing: Threatened
- Proposed DPS: **Endangered**
- Justification:
  - Very low nesting abundance (fewer than 3,000 nesting females)
  - Exposure to increasing threats, including pollution, coastal development, directed take of turtles and eggs, bycatch in fisheries, and sea level rise and other effects of climate change

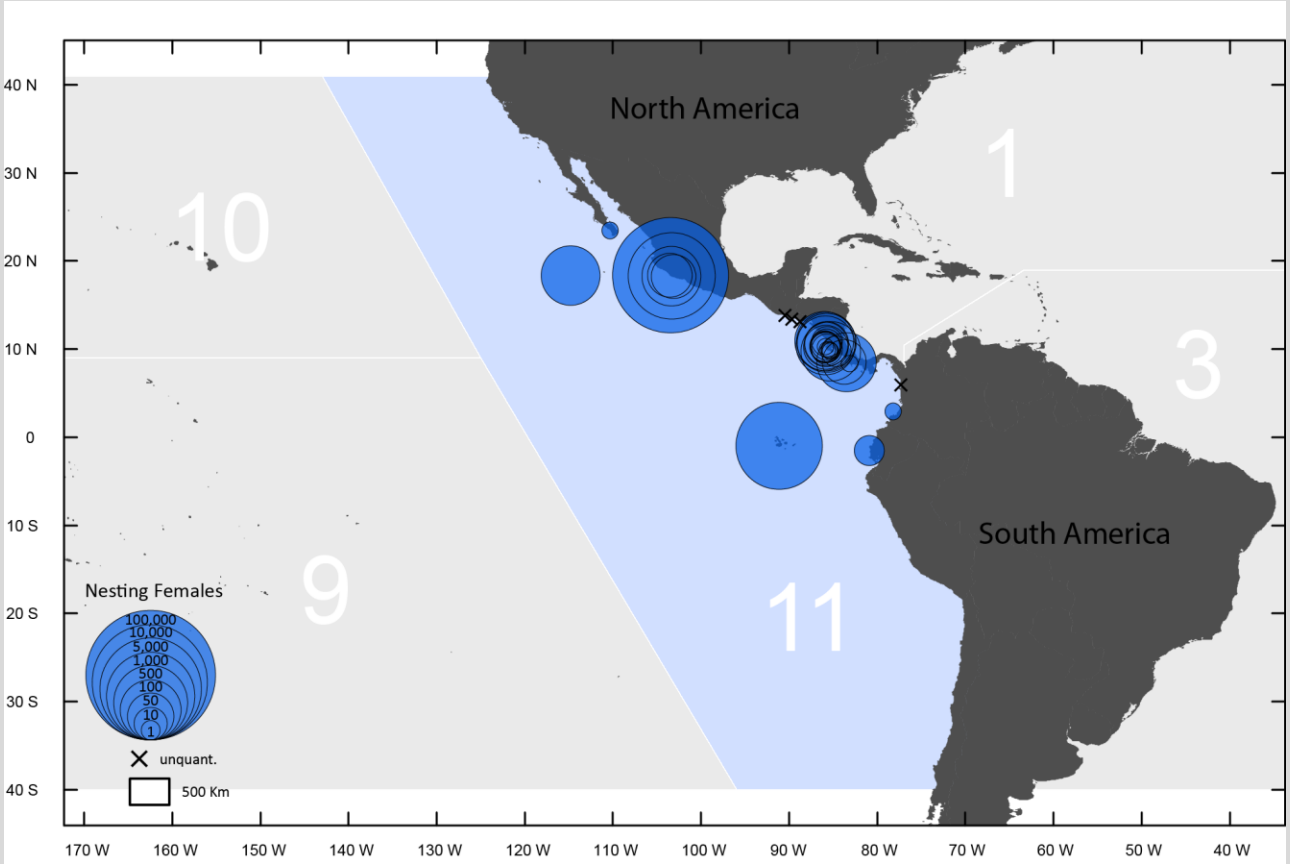
Central South Pacific DPS (3)

- Change in listing status from threatened to endangered
- Take prohibitions and exceptions remain the same except:
  - Take will not be authorized for educational purposes
  - Take will not be authorized for exhibition purposes
  - Incidental take requires authorization from the Services via
    - Incidental take permit
    - Incidental take statement

No take for educational or exhibition purposes,
no incidental take without Services' authorization

East Pacific DPS

- Includes U.S. West Coast



East Pacific DPS (2)

- Current Listing: Threatened except for endangered breeding population along the Pacific Coast of Mexico
- Proposed Listing: **Threatened**
- Justification:
  - Relatively high nesting abundance and increasing trends (therefore not endangered)
  - Yet, continued threats from coastal development, directed harvest, and fishery bycatch

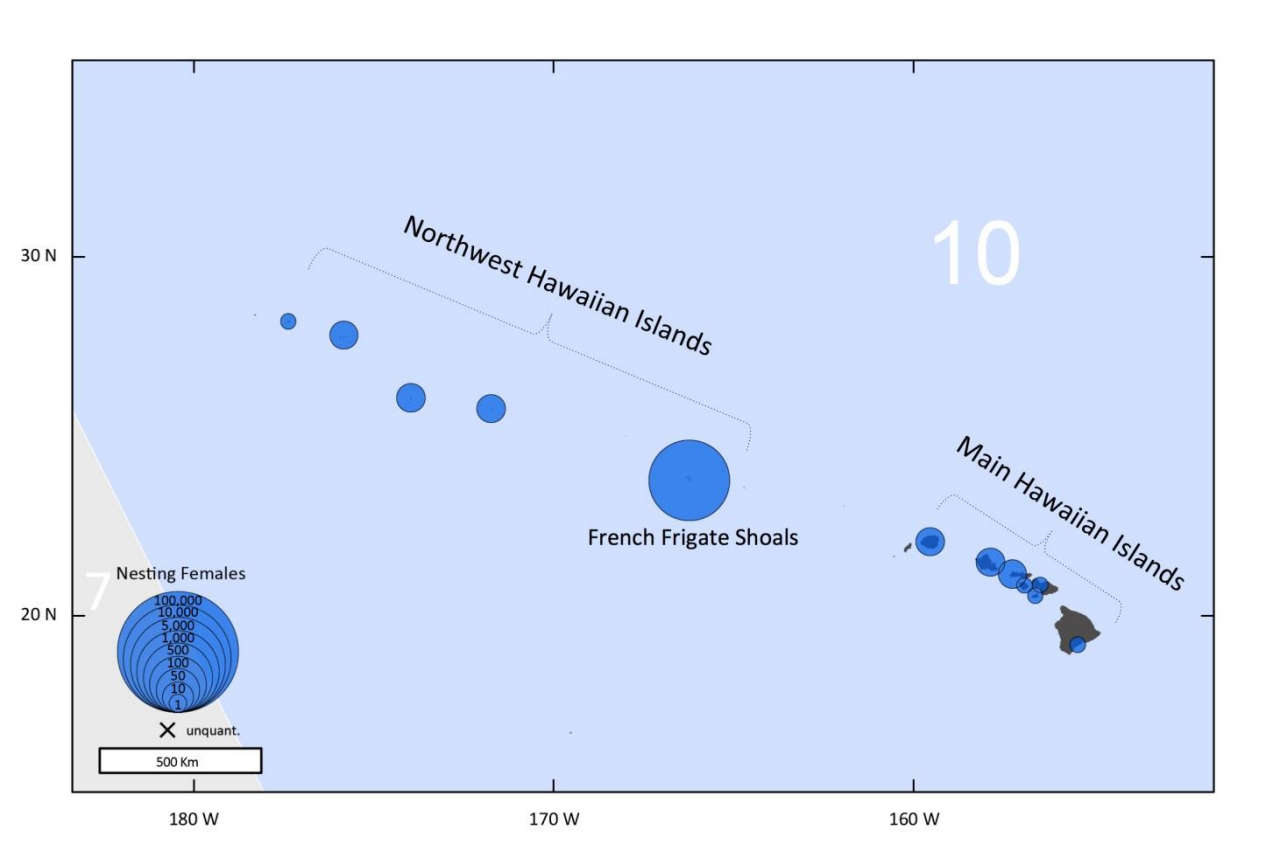
East Pacific DPS (3)

- Change in East Pacific: Current "endangered" breeding population vs "threatened" DPS:
  - 50 CFR 17.32 (for threatened species): Permits issued under this section must be for one of the following purposes: Scientific purposes, or the enhancement of propagation or survival, or economic hardship, or zoological exhibition, or educational purposes, or incidental taking, or special purposes consistent with the purposes of the Act.
  - 50 CFR 17.22 (for endangered species): Permits may be issued for scientific purposes, for enhancing the propagation or survival, or for the incidental taking of endangered wildlife.

50 CFR 17.22 omits the use of endangered wildlife for "educational purposes"

Central North Pacific DPS

- Includes Hawai‘i



Central North Pacific DPS (2)

- Subject of petition
- Current Listing: Threatened
- Proposed Listing: **Threatened**
- Justification:
  - Long-term increasing nesting trend; yet, still small nesting population (<4,000)
  - Extremely limited spatial distribution (96% nesting at one low-lying atoll)
  - Increasing threats due to climate change, including sea level rise, disease, habitat degradation, and coastal fisheries

Take prohibitions and exceptions remain in place for threatened "species"

Prohibitions on Take (all DPSs)

We propose to apply the existing take prohibitions and exceptions for endangered and threatened sea turtles (for example, requirements to use TEDs) to the proposed DPSs.

Critical habitat

- Existing critical habitat will remain in place around Culebra Island, Puerto Rico (50 CFR 226.208) out to 3 nautical miles, in the interim.
- We are not proposing additional critical habitat at this time but are requesting information on potential areas of critical habitat in DPSs under U.S. jurisdiction: North Atlantic DPS, South Atlantic DPS, Central West Pacific DPS, Central South Pacific DPS, Central North Pacific DPS, and East Pacific DPS.
- After a complete review of the best available information, we will propose critical habitat designations in a separate rule.

Next steps

- In proposed rule, we request comments on:
  - Population abundance and trends
  - Current and anticipated threats
  - Conservation efforts and their effectiveness
  - Information on areas that might warrant designation of critical habitat

- Will consider public comments and use best available scientific and commercial information to make final status determinations

Next steps (2)

- Provide comments by June 22, 2015 via:
  - Online (www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2012-0154)
  - Mail
    - Green Turtle Proposed Listing Rule, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Room 13535, Silver Spring, MD 20910
    - Green Turtle Proposed Listing Rule, U.S. Fish and Wildlife Service, North Florida Ecological Services Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256
  - Public Hearing: Japanese Cultural Center, 2454 South Beretania Street, Honolulu, Hawai'i 96826, on April 8, 2015 at 6 to 8 p.m., with an informational open house starting at 5:30 p.m.

How would the rule affect green turtles?

If finalized as proposed, the final listing of 11 DPSs:

- Would not reduce current conservation efforts by NMFS and USFWS, domestically or internationally
- Would provide for more focused recovery and conservation efforts, as well as more focused threat analyses

How would the rule affect Federal agencies?

- **Section 7 consultations** on new federal actions would consider the effects of such actions on the listed DPSs.
- The Services would need to assess, on a case-by-case basis, whether **reinitiation of consultation** will be required for any previously completed formal consultations on Federal actions affecting sea turtles; few re-initiations are anticipated.
- During **reinitiated consultations,** the Services would
  - Update consultation with new information
  - Determine whether prior analysis is still relevant and if basis for original conclusion remains valid
  - More thorough analysis required if new information suggests that the original conclusion may no longer be valid

How would the rule affect recreational use of the beach and ocean?

- Green sea turtle protections that currently exist would remain in effect
- We expect that the public would not notice any difference in the way they use the beach and ocean (i.e., the rule would not change how the public uses the beach or the ocean)

Questions?

To comment…

- Provide comments by June 22, 2015 via:
  - Online (www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2012-0154)
  - Mail
    - Green Turtle Proposed Listing Rule, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Room 13535, Silver Spring, MD 20910
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