Inter-American Convention for the Protection and Conservation of Sea Turtles

CIT-CCE16-2023-Tec.20

Areas Used by the Northwest Atlantic Leatherback Turtle Population (*Dermochelys coriacea*) and Recommendations to Leatherback Conservation in these Areas.

The following document was presented and adopted during the 16th IAC Meeting of the Consultative Committee of Experts on April 26th, 2023. Prepared by the IAC Consultative Committee of Experts working group on the Northwest Atlantic Leatherback, coordinated by Ms. Ann Marie Lauritsen, delegate from the US; with the participation of the M.Sc. Didiher Chacon, delegate from Costa Rica to the Scientific Committee, Dr. Olga Koubrak- Sea Life Law and representative of the SPAW protocol and Ms. Robynn Laplante representative of Fisheries and Oceans - Canada. The aim of the document is to establish recommendations to protect known areas used by the Northwest Atlantic Leatherback

2023

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

TECHNICAL DOCUMENT CIT-CCE16-2023-Tec.20

Areas Used by the Northwest Atlantic Leatherback Turtle Population (Dermochelys coriacea) and Recommendations on Conservation

Developed by the IAC Northwest Atlantic Leatherback Working Group:

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INTRODUCTION:

The IAC Resolution for the Conservation of the Northwest Atlantic Leatherback Turtle CIT-COP9-2019-R2 was adopted in 2019. In it, the Parties resolved that "*The IAC Scientific Committee, according to the best scientific information available, will identify new areas critical to the NWA leatherback in the Convention area, and will recommend, through the Consultative Committee, that the Parties consider the protection of these areas."*

The IAC Northwest Atlantic Leatherback Working Group began to identify areas used by the Northwest Atlantic Leatherback Turtle (see Technical Report CIT-CC17-2020-Tec.16- Critical Areas for the Conservation of the Northwest Atlantic Leatherback Turtle (*Dermochelys coriacea*). This Report serves to further refine these areas using publicly available information from academic articles and reports and overlay this information with existing protected areas to identify gaps in protection of areas critical to NWA leatherback turtles within the IAC Convention area. The Working Group provides recommendations for further collaboration to protect the NWA leatherbacks and their habitats.

Northwest Atlantic Leatherback Turtle Geographic Range:

The following is summarized from the Northwest Atlantic Leatherback Status Review (NMFS and USFWS 2020):

The Northwest Atlantic (NWA) Leatherback population extends throughout the North Atlantic Ocean, including the Caribbean Sea, Gulf of Mexico, and the Mediterranean Sea. NWA leatherbacks are found in the waters of Albania, Algeria, Anguilla, Antigua and Barbuda, Aruba, Azores, Bahamas, Barbados, Belize, Bermuda, Bonaire, Bosnia and Herzegovina, Brazil, British Virgin Islands, Canada, Cape Verde, Cayman Islands, Colombia, Costa Rica, Croatia, Cuba, Curaçao, Cyprus, Denmark, Dominica, Dominican Republic, Egypt, France, French Guiana, Greece, Greenland, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Iceland, Ireland, Israel, Italy, Jamaica, Lebanon, Libya, Madeira, Malta, Martinique, Mauritania, Mexico, Montenegro, Montserrat, Morocco, Nicaragua, Norway, Panama, Portugal, Puerto Rico, Slovenia, Spain, St. Barthelemy, St. Eustatius, St. Kitts and Nevis, St. Lucia, St. Maarten, St. Pierre and Miquelon, St. Martin, St. Vincent and the Grenadines, Suriname, Sweden, Syria, Trinidad and Tobago, Tunisia, Turkey, Turks and Caicos Islands, United Kingdom, United States, U.S. Virgin Islands, Venezuela, and Western Sahara.

Nesting:

Nesting is widespread throughout the tropical and subtropical NW Atlantic, with larger concentrations of nesting activity occurring primarily at sites in Trinidad, French Guiana, Suriname, Colombia, Panama, Costa Rica, Puerto Rico, St. Croix, and the mainland United States (Florida Atlantic) (Dow e*t al.* 2007; Horrocks *et al*. 2016). Scattered, small aggregations throughout the Wider Caribbean also occur. Nesting is concentrated from the southeast United States throughout the Wider Caribbean Region.

Nesting Areas by Density:

Leatherback nesting in the NW Atlantic (Figure 1) may be grouped into several broad geographical areas, including the U.S. mainland (primarily Florida), North Caribbean, West Caribbean (Honduras to Colombia), and Southern Caribbean/Guianas (Venezuela to French Guiana; TEWG 2007). The largest nesting aggregations occur in Trinidad, French Guiana, and Panama. Only about 10 leatherback nesting beaches in the Wider Caribbean Region (2% of the population's total nesting sites) host more than 1,000 crawls annually (Dow Piniak and Eckert 2012).

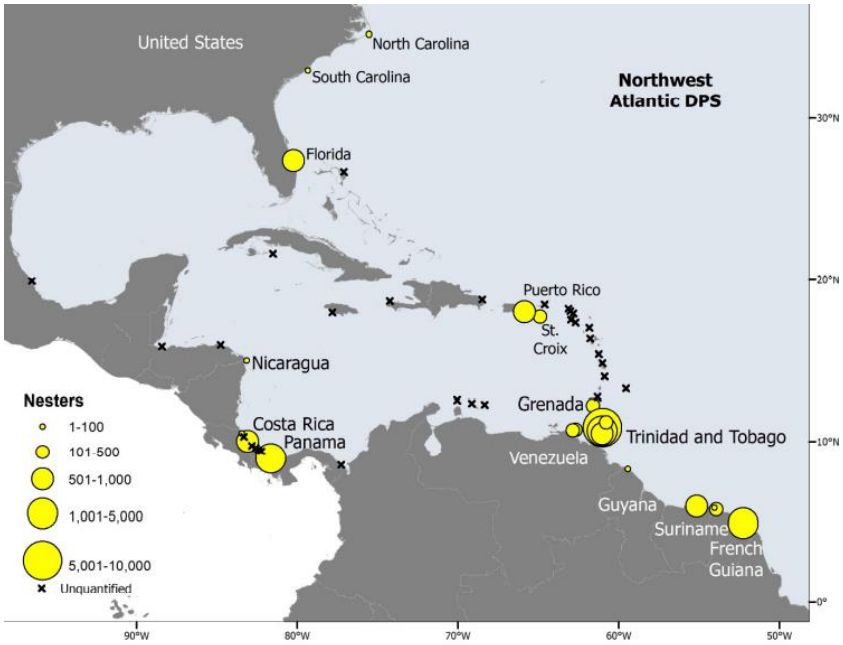

Figure 1: Leatherback nesting by density

Foraging and Migration:

Foraging areas of the NW Atlantic leatherback population include coastal and pelagic waters of the North Atlantic Ocean (reviewed by Eckert et al. 2012; Saba 2013; Shillinger and Bailey 2015). Individuals disperse initially inside the Caribbean Sea and the Gulf of Mexico or east of the Antilles Islands (Gaspar et al. 2022). These waters include the Gulf of Mexico, North Central Atlantic Ocean, northwestern shelf waters of the United States and Canada, waters along the southeastern U.S. coast, the Mediterranean Sea, and northeastern shelf waters of Europe and northwestern Africa (TEWG 2007). Some post-nesting females also remain in tropical waters to forage (Fossette et al. 2010a). This population is mostly commonly associated with open ocean and coastal shelf foraging areas off Nova Scotia (Canada), the northeastern United States, Gulf of Mexico, northwestern Europe, and northwestern Africa (James *et al*. 2005; James *et al*. 2006; Eckert 2006; Eckert *et al*. 2006; Fossette *et al.* 2010a; Fossette *et al*. 2010b; Dodge *et al*. 2014; Stewart *et al.* 2016; Aleksa *et al.* 2018).

Fossette *et al*. (2014) analyzed available satellite telemetry data between 1995 and 2010 from turtles tagged at the foraging grounds throughout the Atlantic Ocean. They found widespread use of the North Atlantic Ocean (Fossette *et al*. 2014). High-use areas were mainly in the central (25

to 50° N, 50 to 30° W) and eastern Atlantic Ocean, in the waters off Western Europe, around Cape Verde (year-round) and the Azores (October to March; Fossette *et al*. 2014). Fossette *et al*. (2014) found that seasonal high use areas also occurred along the eastern U.S. coast (April to June and October to December) and off Canada (July to December). The Gulf of Mexico is also a high use foraging area, with a peak in the northeast Gulf of Mexico during August and September (Aleksa *et al*. 2018).

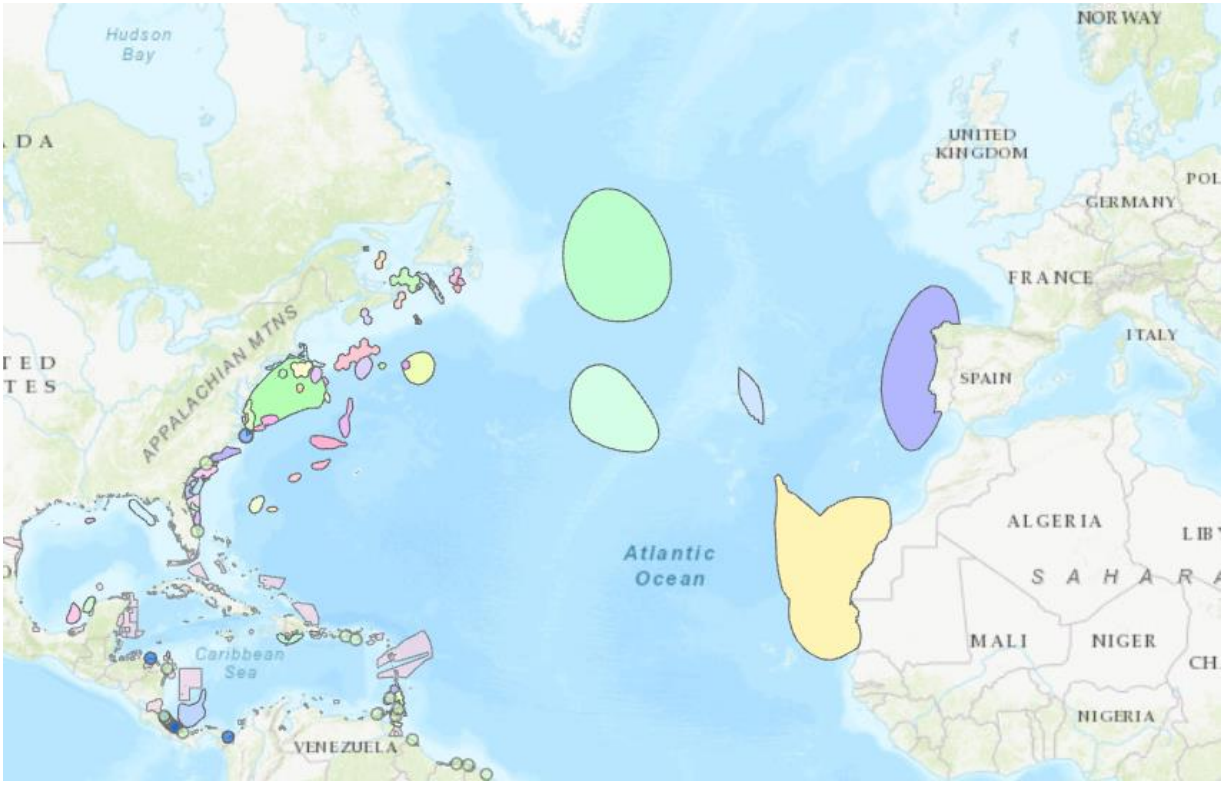

Figure 2: Geographic areas of high use based on the information available from citations

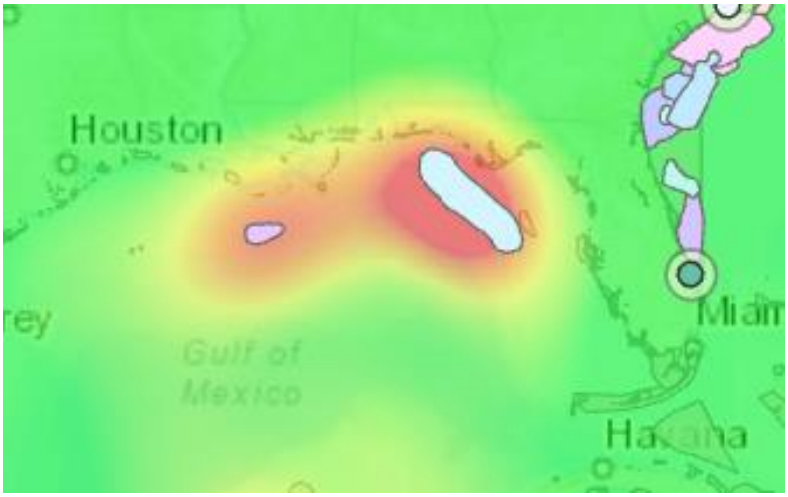

Figure 3: Information available by seasons (Winter and Spring) in the Gulf of Mexico (Evans et al. 2021).

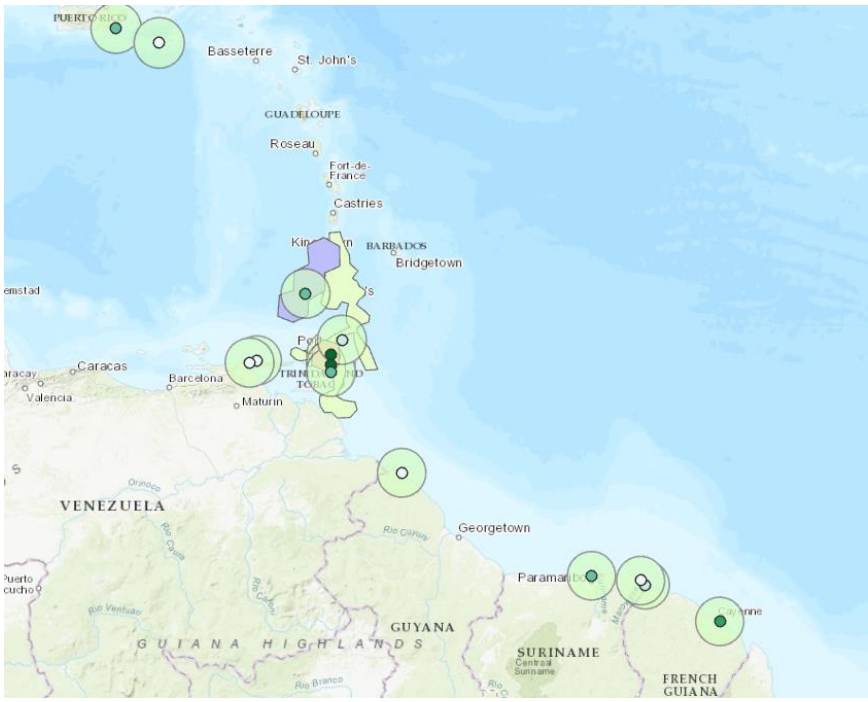

Figure 4: High use internesting areas extending ~ 20km from shore (Eckert et al. 2006)

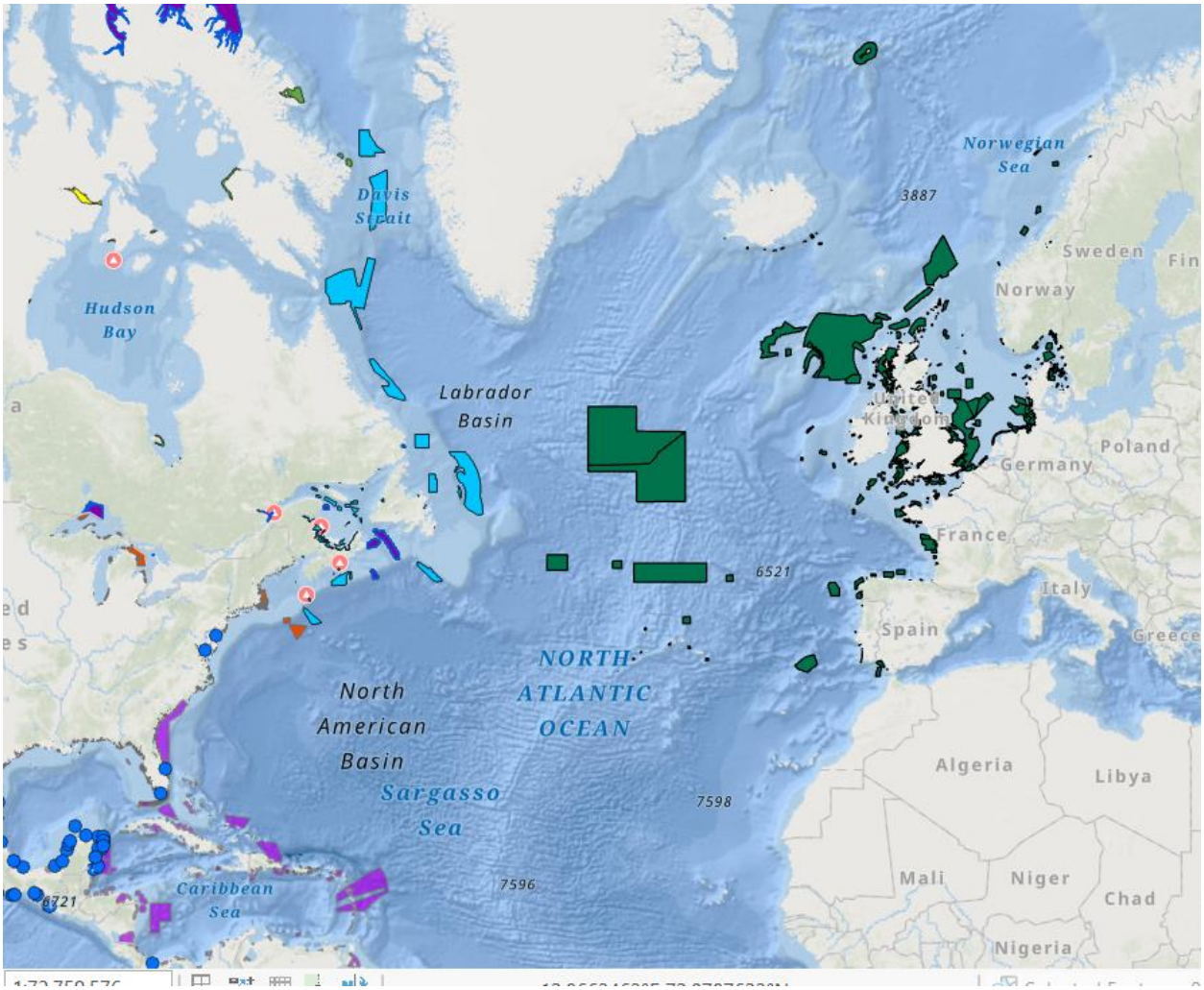

Figure 5: Existing protected areas: Ramsar sites, Marine Protected Areas and Other Effective Areas (United States and Canada), SPAW Protocol Protected Areas, IUCN Green list areas, Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), the Specially Protected Areas and Biodiversity Protocol to the Barcelona Convention.

SUMMARY:

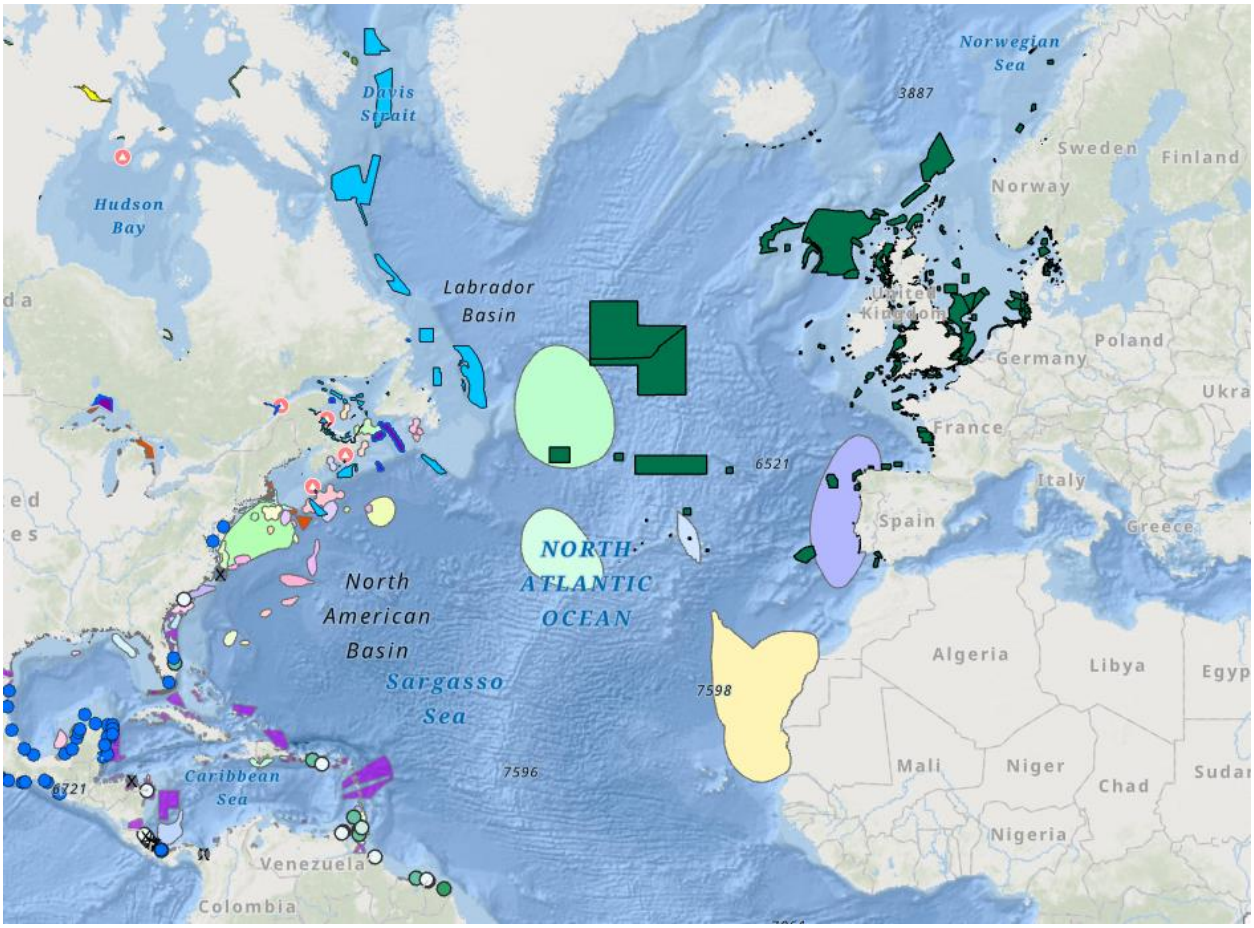

Figure 6: Existing known high use areas overlayed with existing protected areas

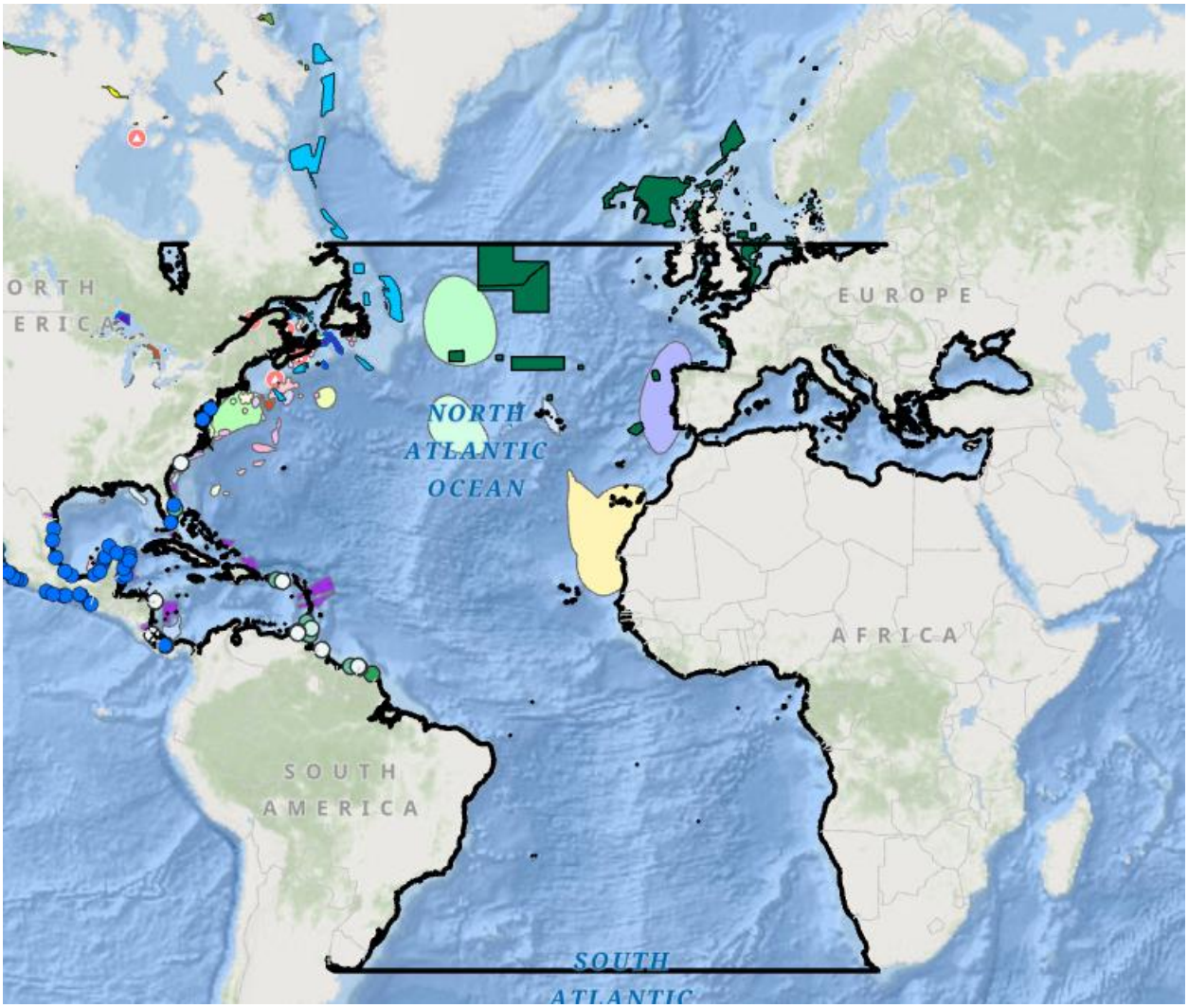

Figure 7: Existing known high use areas overlayed with the ICCAT Convention area

CONCLUSIONS:

- Most known high use leatherback areas are not currently under any form of legal area protection.
- Significant areas of high use are found on the high seas, in areas beyond national jurisdiction and in countries not a member of the IAC.
- Existing protected areas do not cover sufficient areas of high use to address threats on the nesting beach and in the water.
- The International Commission for the Conservation of Atlantic Tunas (ICCAT) Convention Area encompasses the geographic range of the Northwest Atlantic Leatherback Turtle population highlighting the need to collaborate under the MOU to reduce leatherback bycatch in these fisheries.
- Collaboration with national and international bodies such as ICCAT, Ramsar, the SPAW Protocol, and the Sargasso Sea Commission to promote the conservation of the Northwest Atlantic Leatherback Turtle is key.

RECOMMENDATIONS FROM WORKING GROUP:

- Review each existing protected area within the geographic range of the Northwest Atlantic leatherback population to determine if it supports leatherback turtle protection and work with those conventions/agencies/organizations (i.e., Ramsar and SPAW Protocol) to provide technical assistance on protection measures to recommend be incorporated or if they are already in place, to be strengthen within these areas.
- Work with national and international bodies to address specific threats to maximize leatherback protection within existing protected areas and provide technical assistance on leatherback protection measures to incorporate within these areas.
- Collaborate with all countries within the geographic range of the northwest Atlantic leatherback population to mitigate regional threats.

  - Prioritize actions with IAC Member Countries to mitigate threats and share techniques and solutions that have been effective to reduce threats and protect leatherback areas. Regional threats include:

    i. Poaching (threat reduction efforts: alternative livelihood solutions, enforcement)
    ii. Erosion due to climate change (threat reduction efforts: resilient coastline)
    iii. Tourism/coastal development (threat reduction efforts: light retrofit programs, coastal construction).
    iv. Bycatch (threat reduction efforts: gear modifications to minimize leatherback interactions, fishers' engagement/outreach such as best practices for leatherback safe handling and release.

  - Reach out to Countries within other Conventions and international bodies such as the ICCAT, Ramsar, and the SPAW Protocol to encourage their member countries to engage with the IAC to address the threats to the Northwest Atlantic leatherback population.
    - Engage with the International Commission for the Conservation of Atlantic Tunas (ICCAT) through the existing requirements: Existing sea turtle measures include collection of data on sea turtle interactions in ICCAT fisheries, as well as threats on sea turtles in the conventional area; live release of sea turtles accidentally caught; sharing information on technical measures to reduce turtle incidental catch levels and handling and release practices. ICCAT Contracting Parties and Collaborators (CPC) are encouraged to collect detailed data on the interactions with sea turtles, including record interactions, and gear characteristics, times and locations, target species, and disposition status, nature of the hooking or entanglement (i.e., gear type and how it was entangled), hook size and type, and the size of the animal (standard measurement of carapace).

As stated in the IAC Resolution Conservation of NWA Leatherback CIT-COP9-2019-R2 improve the cooperation under the newly adopted Memorandum of Understanding between the ICCAT and the IAC, identify areas to collaborate to make progress toward addressing this need and reducing the threat of leatherback turtle bycatch. Eckert and Hart (2021) identified the need to consistently collect and analyze sea turtle bycatch data in the longline fisheries to better understand the magnitude of this fishery.

Under the newly adopted recommendation "BYCATCH OF SEA TURTLES CAUGHT IN ASSOCIATION WITH ICCAT FISHERIES (COMBINE, STREAMLINE, AND AMEND RECOMMENDATIONS 10-09 AND 13-11", IAC Scientific and Consultative Committees provide technical assistance as needed to highlight the importance of each measure in reducing leatherback bycatch and continue to support efforts that could lead to strengthening this Recommendation. In consultation with ICCAT Secretariat explore the possibility to present the information on this technical document to ICCAT pertinent working group and as appropriate encourage collaboration in the areas suggested above, or new ones proposed.

- Reach out to all countries key for NWA leatherback through existing Regional Working Groups other Conventions, and international bodies identifying parallel objectives and work together to amplify conservation efforts.

  i. Parallel action items within the WIDECAST Technical Document No. 22 titled "Northwest Atlantic Leatherback (Dermochelys coriacea) Regional Action Plan for the Wider Caribbean Region" and the IAC Resolution "Conservation of the Northwest Atlantic Leatherback Turtle (CIT-COP9-2019-R2) are as follows: .

     - L3.1. Work with the IAC Secretariat to facilitate outreach to non-Parties.
     - L.3.1.1. Support the IAC Secretariat in appropriate channels of outreach.
     - L.3.1.2. Work with relevant government bodies (non-Parties) on accession to the convention.
     - L4.2. Leverage resolutions and reporting requirements regarding leatherback bycatch and IUU through the IAC.
     - L.4.2.1. Promote active participation of IAC Parties in developing resolutions and reporting requirements designed to reduce leatherback mortality.
     - H2.1 Establish a series of nearshore protected areas based on data on habitat used by leatherbacks during mating and nesting seasons.
     - H2.1.1 Conduct a review of existing local databases, identifying those associated with existing MPAs.
     - H4.1 Identify leatherback legal and IUU bycatch "hot spots" in the oceanic habitat (high seas).

- H4.1.1. Work with ICCAT and IAC to coordinate a regional conservation strategy for bycatch mitigation and monitoring in oceanic habitat.
- H6.1 Determine best practices for enforcement agencies in protecting leatherbacks in nearshore environments.
- D3.1 Implement a comprehensive regional turtle legal and IUU bycatch characterization program to identify bycatch "hot spots" and priority opportunities for mitigation actions.
- D3.1.1. Advocate for deployment of trained onboard observers when and where such programs could contribute valuable data on the number, distribution, and seasonality related to fishery interactions with leatherbacks.

ii. SPAW Protocol: The main objectives include implementing priority activities of existing species recovery and management plans developed under the framework of SPAW; support existing Sea Turtle Recovery Action Plans (STRAPs) through the implementation of national priority actions, in particular the provision of training as it relates to educators (teacher training), law enforcement officers, veterinarians and first responders; collaborate further with the IAC on sea turtle activities in the Workplan, with a specific focus on the NWA leatherback, to ensure that work is not duplicated.

a. Renew the Memorandum of Cooperation (MOC) between the IAC and the SPAW Protocol: 3rd COP - COP3/2006/R-6.
b. Participate in the work of the SPAW Protocol's Species Working Group with a designated IAC representative. A representative of the SPAW Protocol also participates in the IAC's NW Atlantic Leatherback Working Group. This item is currently being implemented, as IAC USA Focal Point is a member of the SPAW species working Group and a delegate of SPAW is a member of IAC NWA leatherback working group.

iii. Sargasso Sea Commission: Under the recently signed MOU between the IAC and the Sargasso Sea Commission, share information which will be beneficial in identifying opportunities for cooperation in international forums in particular unsustainable fishing practices such as illegal, unreported, and unregulated (IUU) fishing, focused on the protection and conservation of sea turtles and their habitats. According to their agreement, "the focus of the Commission is on preserving the unique ecosystem and habitat of the Sargasso Sea that is threatened by human activities and in need of precautionary management. Human activities impact the Sargasso Sea in a variety of ways including

unsustainable fishing practices, shipping, pollution and even exploitation of *Sargassum"*. These also represent threats to sea turtles. Although the Commission lacks regulatory authority, it works with international bodies with the necessary competence, such as ICCAT, in order to implement its mandate."

iv. RAMSAR Convention on Wetlands: Begin engaging with Ramsar on refining conservation actions within existing Ramsar sites which are also critical Northwest Atlantic leatherback nesting beaches. Consult with Ramsar Secretariat and as appropriate with Ramsar Focal Points to provide the measures / legal protection in place for sea turtles in the Ramsar sites in particular those located in the NWA, to highlight the benefits of the Ramsar site designation status for the conservation of sea turtles in those sites. IAC to share this technical document with Ramsar Secretariat asking to be circulated to relevant Ramsar countries, to stress the need for support the implementation of the conservation measures in place for NWA leatherback in those sites.

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