The Use of Tagging Data to Develop Other Effective Area-Based Conservation Measures

Laurence Kell,Vardis Tsontos,
Brian Luckhurst, Howard Roe,
Tim Lam, ...

Sargasso Sea Commission (SSC) – Objective is to
Strengthen the stewardship of the Sargasso Sea, an economically
and biologically significant high seas area

Two projects

- Fonds Francais Pour L'Environment Mondial (FFEM)
- GEF Common Oceans Program

Objective to support the sustainable use and conservation
of biodiversity in areas beyond national jurisdiction

SARGASSO SEA
COMMISSION

Sargasso Sea is an Ecologically or Biologically Significant Marine Area*

The Sargasso Sea Commission exercises a stewardship role and keeps its health, productivity and resilience under review

This relates to ICCAT move towards
Ecosystem Based Fisheries Management &
Two potential tools are

- **MPAs**, which have as their primary objective conservation.
- **Other Effective Area-Based Conservation Measures**, which are geographically defined areas which are governed to achieve multiple cultural, social, economic, spiritual, and other locally relevant objectives, as long as effective conservation is still delivered.
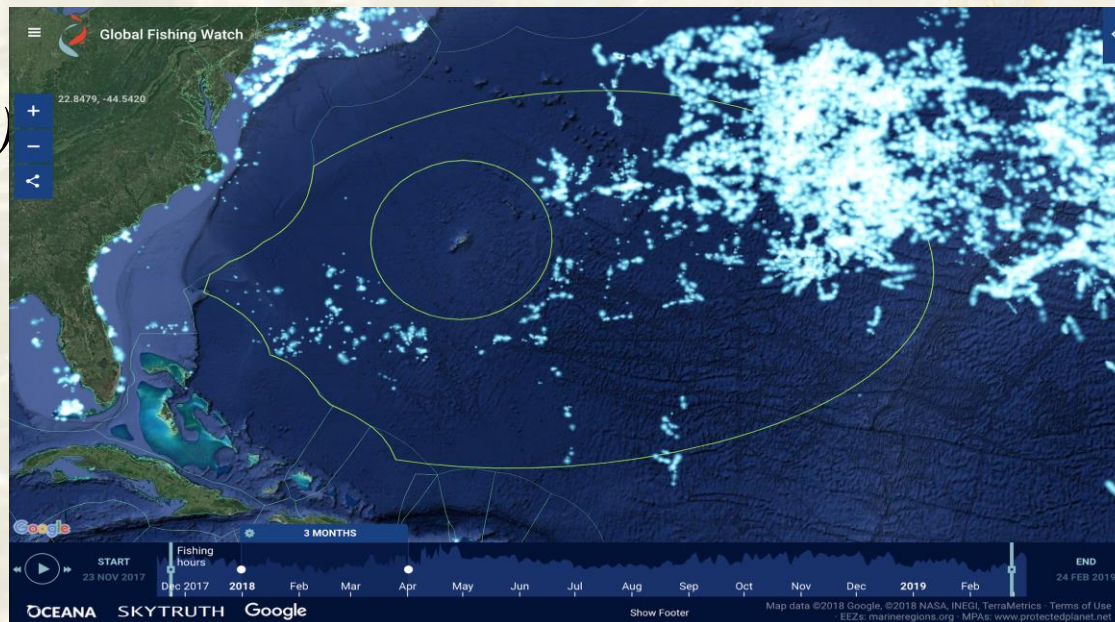
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Fishing Pressure
Fishing Vessel Tracks in the Sargasso Sea

AIS: Global Fishing Watch – *Fishing vessel tracks in real time (2018 – 2019)*

SCRS/2018/068   Collect. Vol. Sci. Pap. ICCAT, 75(2): 276-284 (2018)

SOCIO-ECONOMIC ASPECTS OF THE ICCAT FISHERIES

S. Tsuji[1], P. Sabarros[2] and F. Forget[2]

Machine Learning, researchers interested in heterogeneity, data collection, transfer learning, and rapid generalization

Machine Learning

ML researchers interested in heterogeneity, data collection, transfer learning, and rapid generalization

- To monitor ocean ecosystems, drones are being used
- Tagged marine animals are autonomous drones

Trends in Ecology & Evolution

CellPress
REVIEWS

Review

Translating Marine Animal Tracking Data into Conservation Policy and Management

Graeme C. Hays,[1,*] Helen Bailey,[2] Steven J. Bograd,[3] W. Don Bowen,[4] Claudio Campagna,[5] Ruth H. Carmichael,[6,7] Paolo Casale,[8] Andre Chiaradia,[9] Daniel P. Costa,[10] Eduardo Cuevas,[11,12] P.J. Nico de Bruyn,[13] Maria P. Dias,[14,15] Carlos M. Duarte,[16] Daniel C. Dunn,[17] Peter H. Dutton,[18] Nicole Esteban,[19] Ari Friedlaender,[10,20] Kimberly T. Goetz,[21] Brendan J. Godley,[22] Patrick N. Halpin,[17] Mark Hamann,[23] Neil Hammerschlag,[24] Robert Harcourt,[25] Autumn-Lynn Harrison,[26] Elliott L. Hazen,[3] Michelle R. Heupel,[27] Erich Hoyt,[28,35] Nicolas E. Humphries,[29] Connie Y. Kot,[17] James S.E. Lea,[30] Helene Marsh,[23] Sara M. Maxwell,[31] Clive R. McMahon,[25,32,33] Giuseppe Notarbartolo di Sciara,[34,35] Daniel M. Palacios,[36] Richard A. Phillips,[37] David Righton,[38,39] Gail Schofield,[40] Jeffrey A. Seminoff,[41] Colin A. Simpfendorfer,[23] David W. Sims,[29,42,43] Akinori Takahashi,[44] Michael J. Tetley,[35] Michele Thums,[45] Philip N. Trathan,[35] Stella Villegas-Amtmann,[10] Randall S. Wells,[46] Scott D. Whiting,[47] Natalie E. Wildermann,[48] and Ana M.M. Sequeira[49]

MACHINE LEARNING APPROACH TO ESTIMATE SPECIES COMPOSITION OF UNIDENTIFIED SEA TURTLES THAT WERE RECORDED ON THE JAPANESE LONGLINE OBSERVER PROGRAM

K. Okamoto[1], M. Kanaiwa[2], and D. Ochi[1]

SARGASSO SEA
COMMISSION

COVERAGE: The CEOS Ocean Variables Enabling Research and Applications for GEO

- NASA-led R&D cross-cutting collaborative effort within the Committee on Earth Observation Satellites (CEOS)
- Growing need to better marshal available Earth observations across different platforms and scales in support of ocean science and marine resource management for societal benefit.
- Develop data infrastructures and services providing improved access to diverse observations for the oceans, that are proliferating rapidly in extent and type, to promote their more integrated and efficient use.
- More fully realize the potential of satellite remote sensing data amongst new data user communities.

- *https://coverage.ceos.org*

- Demo video of the Vis tool app for animal telemetry and data of different kinds
  https://www.youtube.com/watch?v=ueXo-4mK7dA