Challenges Maritime Domain Awareness

Jon Huggins
Director of Oceans Beyond Piracy

OCEANS BEYOND PIRACY
a project of the One Earth Future Foundation

www.oceansbeyondpiracy.org
Projects of the One Earth Future Foundation

- Somalia
- West Africa
- Over $1 Million invested

- Secure Fisheries
- Oceans Beyond Piracy (a project of the One Earth Future Foundation)

- Colorado, USA
- One Earth Future (Peace Through Governance)

www.oceansbeyondpiracy.org
• Piracy
  – Risk Analysis
  – Operational Response
  – Self Protection of Vessels
  – Regional Capacity Building

• IUU Fishing
  – Monitor Waters
  – Control

• Stakeholders:
  – International Maritime Organization
  – Information Sharing and Analysis Centers
  – Regional Nations
  – Flag States
  – Ship Owners/Associations
  – Vessel Masters
  – Private Security Teams
Maritime Domain Awareness

**Voluntary Systems**

- Automatic Identification System (AIS)
- Vessel Monitoring System (VMS)
- Long Range Identification and Tracking (LRIT)
- Reporting Schemes
- Information Sharing

**Concerns**

- Security of Vessels/Safety of Seafarers
- Monitor Resources
- Awareness of Threats
- Potential Targeting
- Liability

---

**Involuntary Systems**

- Radar
- Vessel Patrols
- Radar Sat
- Optical Systems

**Concerns**

- Lack of information
- Cost
- Data Overload
- Freedom of Navigation
AIS Observations of Shipping Traffic | East & West Africa

THE STATE OF
MARITIME PIRACY
2013
Goal
Reduce IUU fishing and related conflict in Somalia and throughout Africa while enhancing good governance and sustainable management of marine resources

MDA Objective
Develop a multi-stakeholder approach for the monitoring, tracking and reduction of IUU fishing in Somalia and throughout Africa, relying on technology, partnerships, and port state measures

Where to Start?
Create a Baseline that Measures Intensity of Fishing in Somalia’s Potential EEZ
AIS
- Cargo/Tanker ships required to broadcast
- Fishing vessels not, though an increasing number are

Radar Satellite
- Detection of vessels >20 meters
- If > 20 meters and not broadcasting AIS, most likely a fishing vessel
EXAMPLE OF AIS TRACKING FOR EASTER ISLAND PROVINCE USING EXACTEARTH

STRAIGHT GREEN LINES: CARGO/OIL TANKERS TRANSITING
RED LINES: FISHING VESSELS, ACTIVELY FISHING

MARCH 1 – MARCH 6, 2013
EXAMPLE OF RADARSAT-2 SCAN SAR ACQUISITION FOR EASTER ISLAND PROVINCE

RESULTS: 140 EXTRAPOLATED VESSEL-DAYS OF FISHING IN EASTER ISLAND EEZ (Jan-Mar 2013). STRAIGHT GREEN LINES: TRANSITING / RED LINES: FISHING VESSELS, ACTIVELY FISHING