

Use of Remote Sensing to Evaluate Risk in Zones of Seismic Testing

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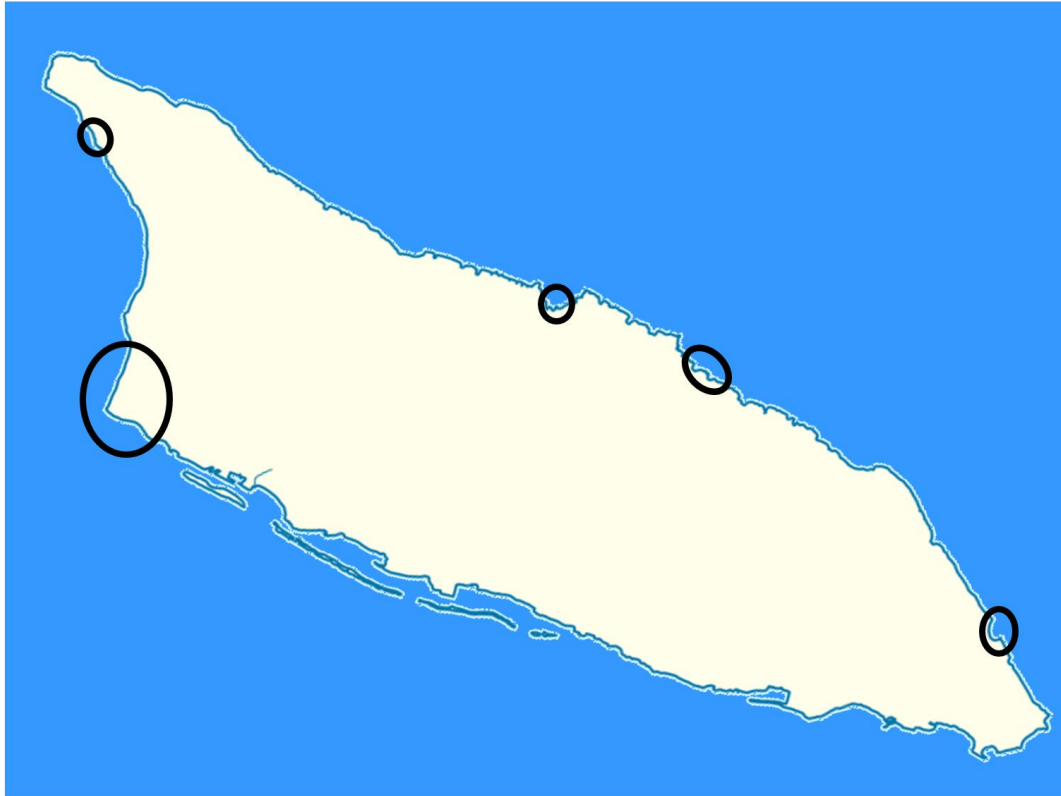
Presented to WIDECAST 2015

Maunabo, Puerto Rico



Turtugaruba

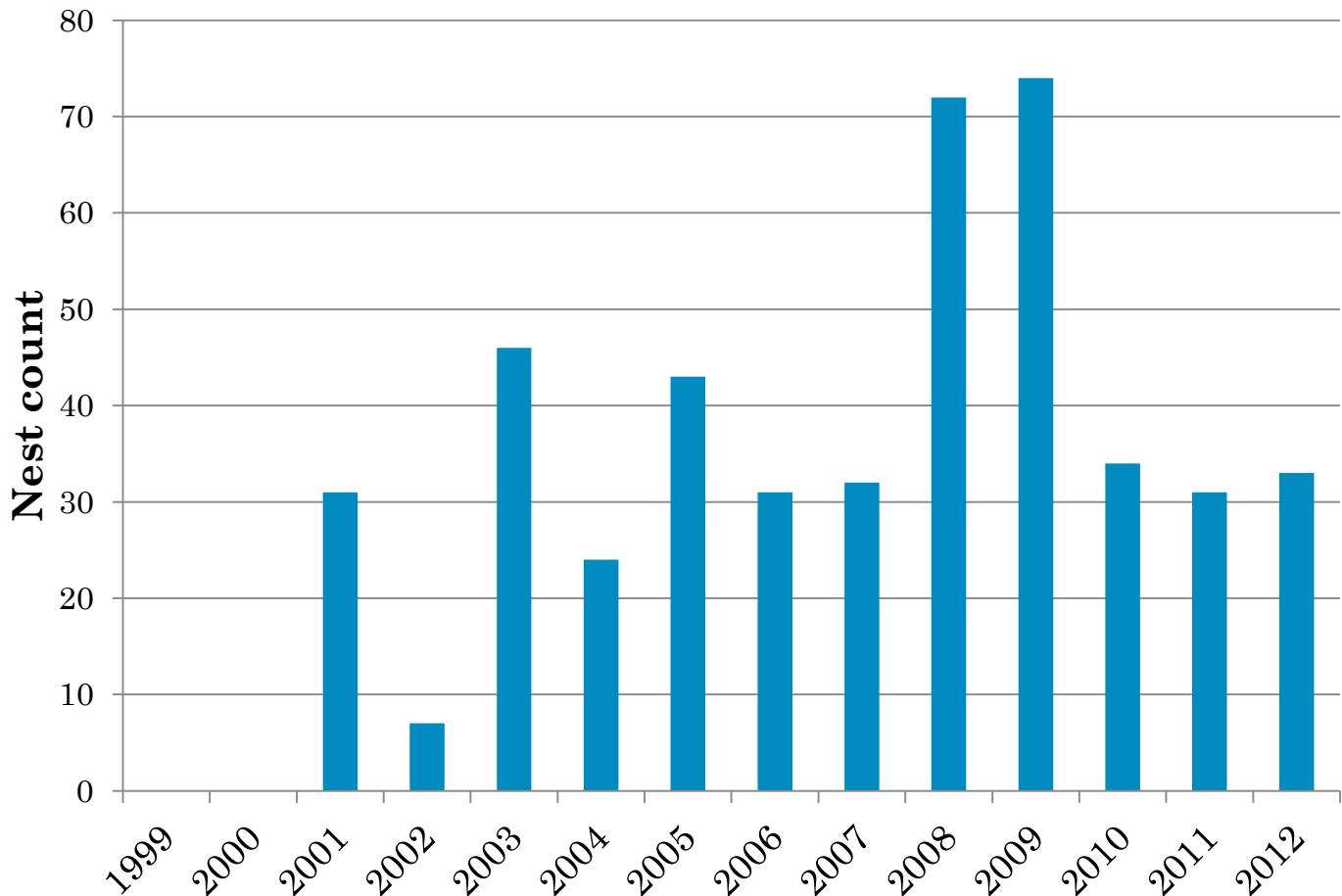
- Leatherback monitoring since 1999



Small nesting population

- Turtle identity
 - External (scars & spots)
 - Behavior
- Clutch frequency
 - Average: 7.1 nests
 - Range: 2-11 nests
 - Early starters average 8.3 nests

Leatherback nests at West coast, Aruba



Seismic research 2013

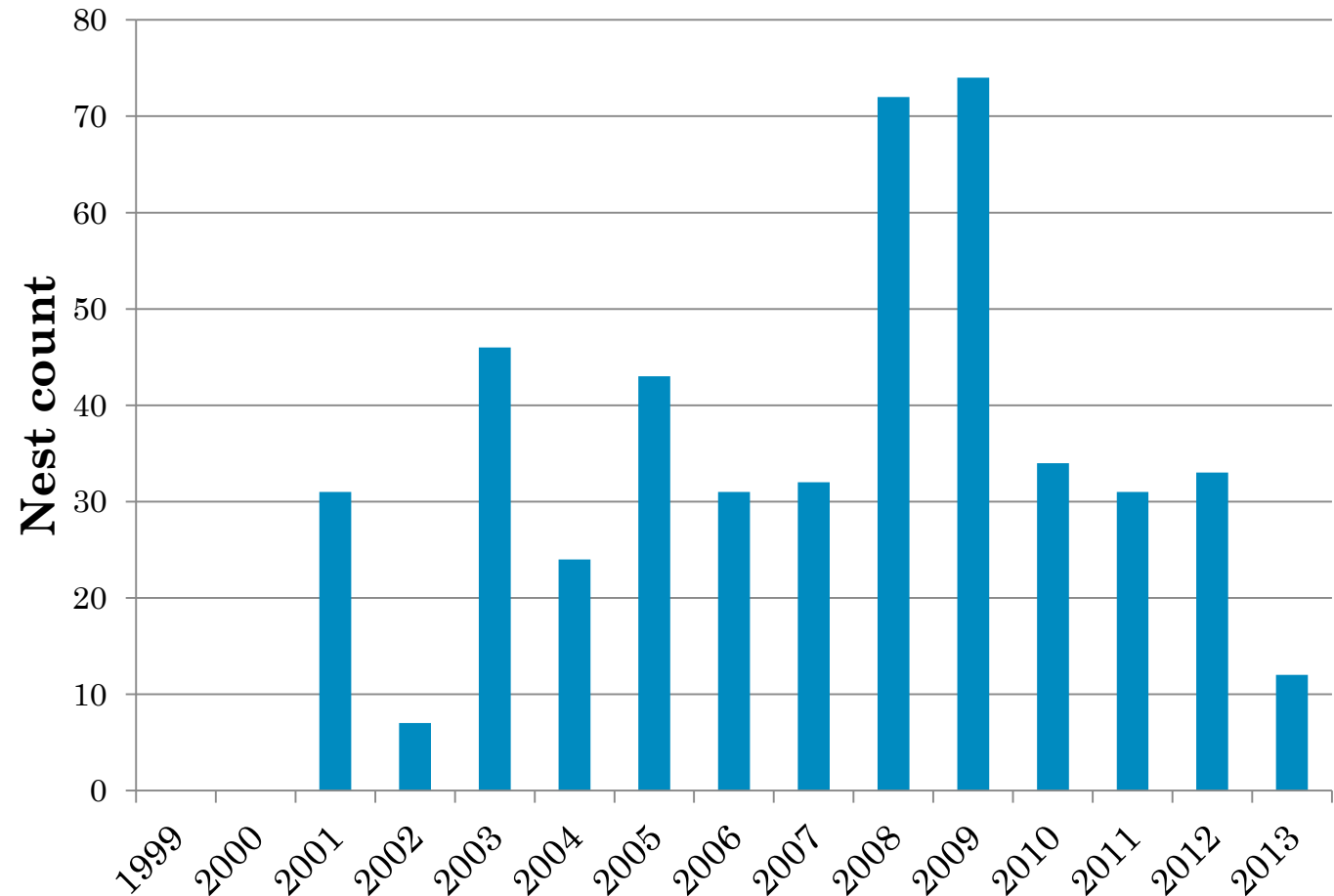
- Permit given by government
 - Mid February – End March
- Local NGO's concerned
- We could not indicate:
 - interesting locations
 - migration patterns



2013 Leatherbacks

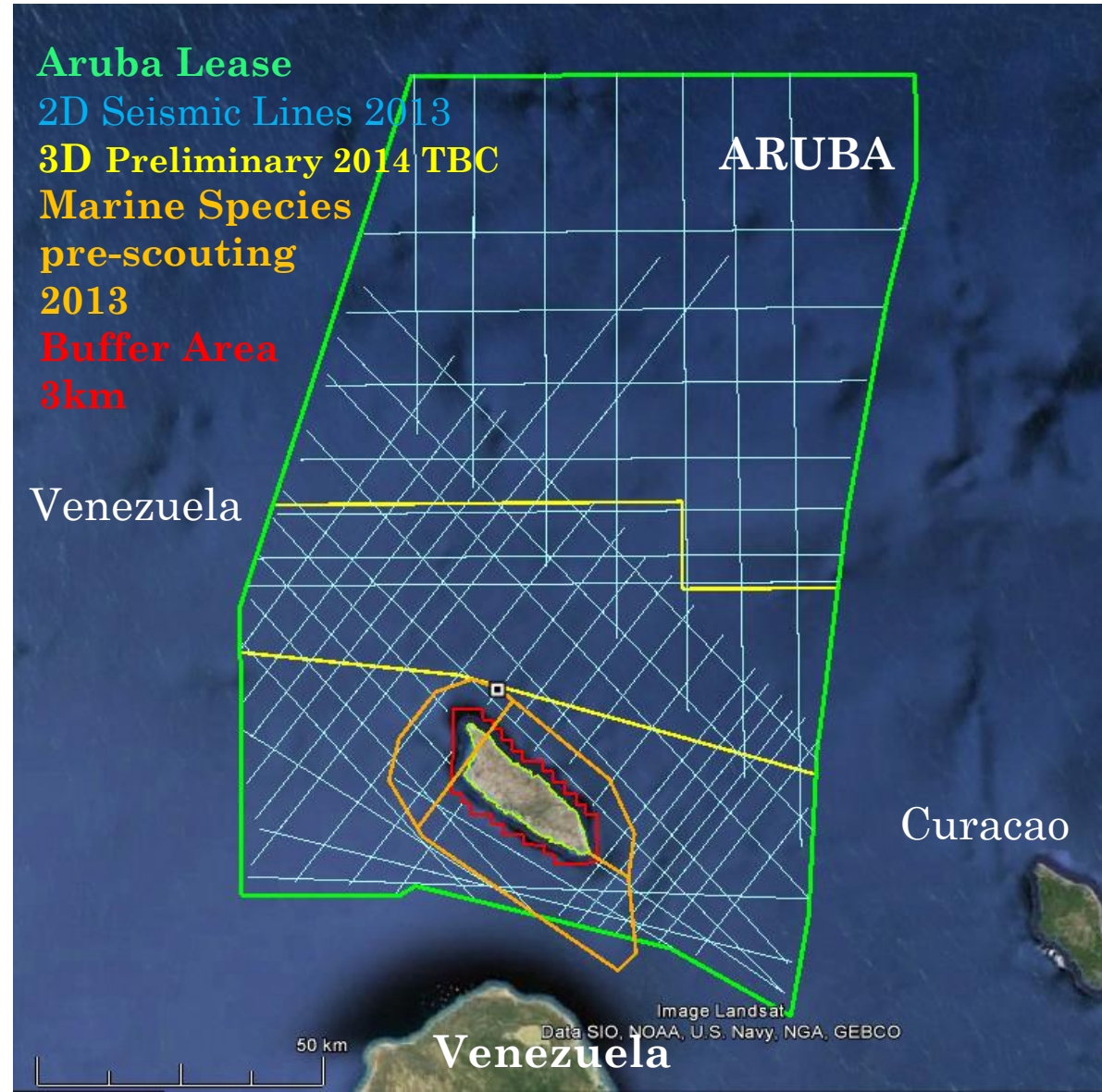
- Three females
- Two March starters
 - 1 or 2 nests
- One April starter
 - 9 nests
- No leatherbacks on other beaches

Leatherback nests at West coast, Aruba



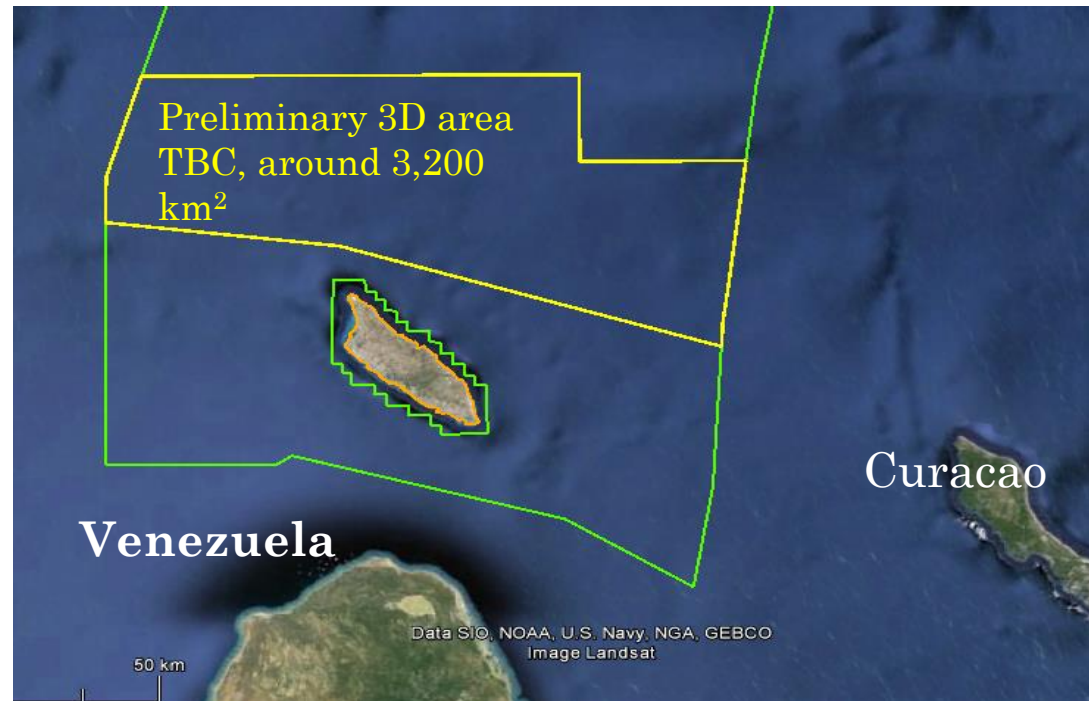
Seismic research 2014

- Announced
 - July - September
- Turtugaruba publicly concerned
- Dialogue started
 - Data request
 - Expert review?
- WIDECAST involved
 - Scott & Karen Eckert



Win-Win

- Research
 - Satellite tracking
 - Answering interesting and migration pattern questions
- Mitigation
 - VHF-radio tags
 - Reducing turtle risk
 - Rerouting survey pattern



Tagging turtles in 2014

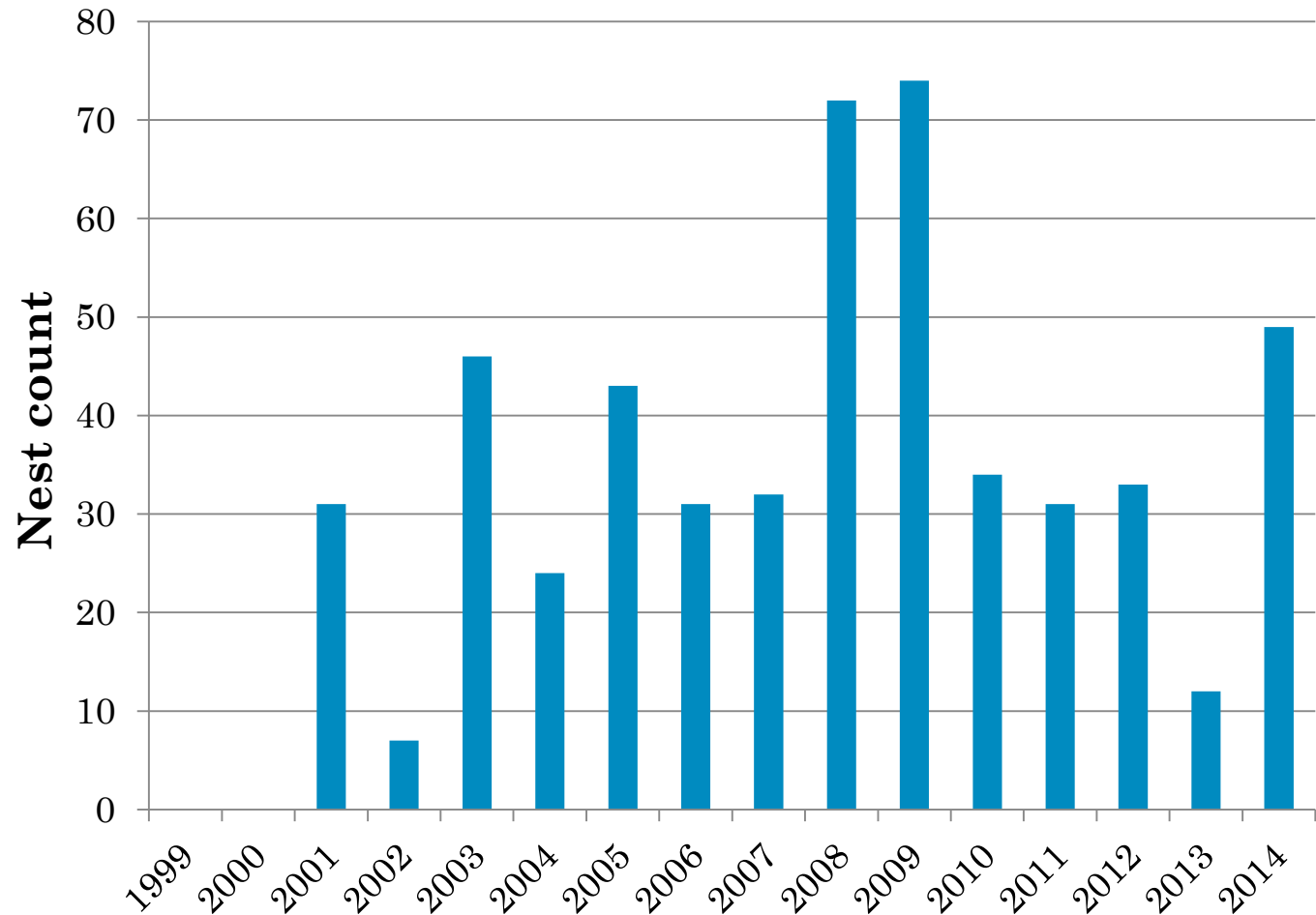
- 4 Leatherbacks
 - 3 Green turtles
 - 1 Loggerhead
-
- Reset tags / download data on tags of returning females.



2014 Leatherbacks

- No 'strange' behavior
- 13 females total
 - 8 on West coast
- No tag detected by radio receiver on research vessel
- Vessel alerted when satellite tracking crossed research zone

Leatherback nests at West coast, Aruba



Interesting habitat

- Along shelf-break
- Note: Only East coast nesters tagged in 2014



Migration patterns



To be continued in 2015

- Satellite tagging
- Dialogue remains open



Thank you!!

- Repsol
- WIDECAST
- Aruba Cites Authority

