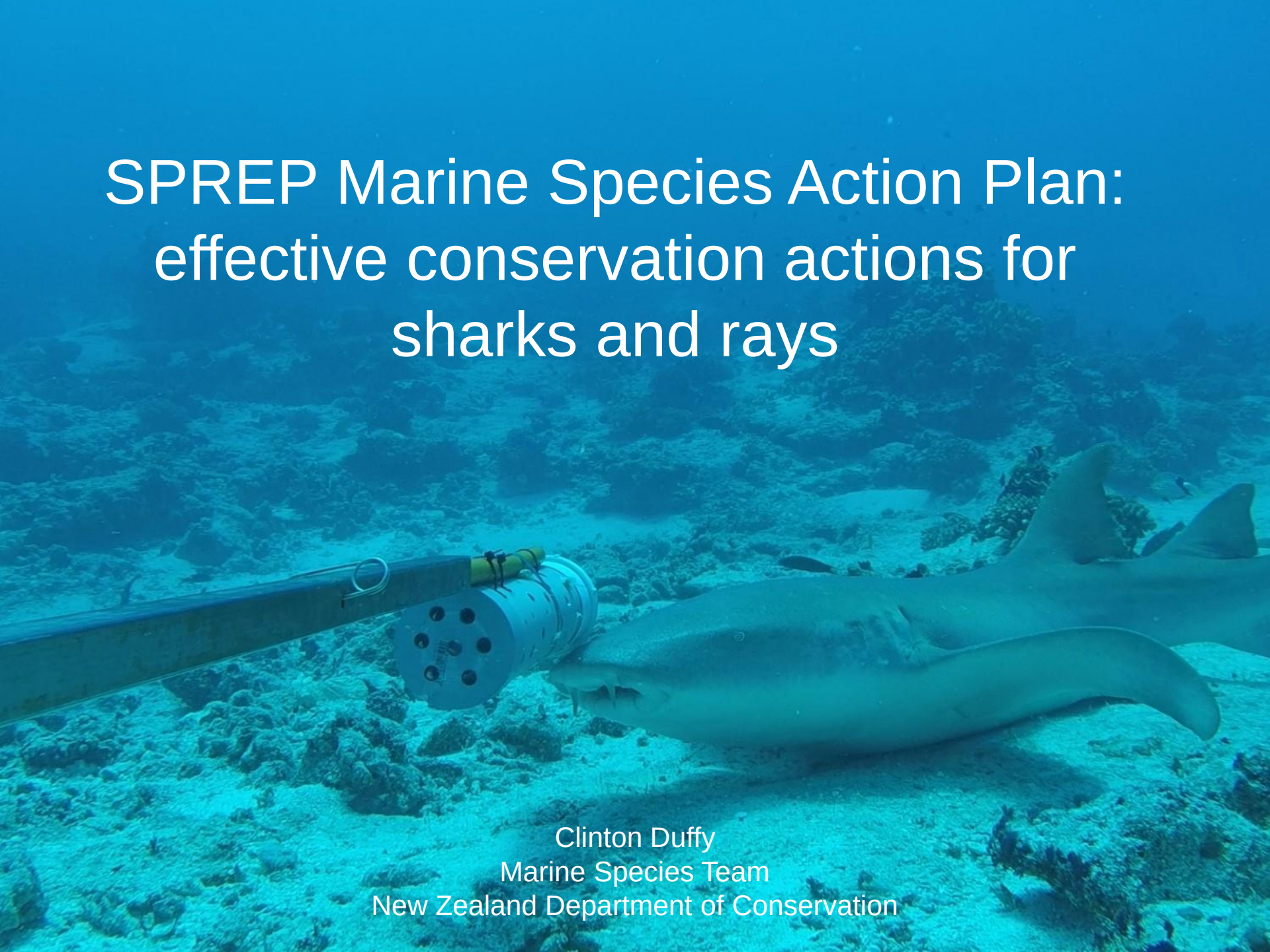
SPREP Marine Species Action Plan: effective conservation actions for sharks and rays



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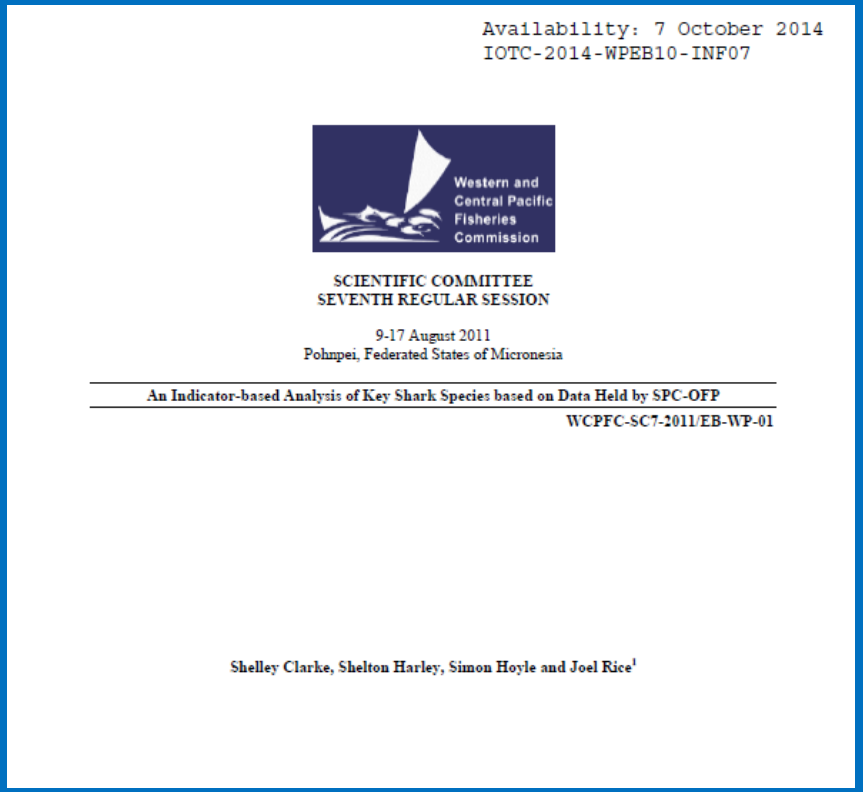
Threats to shark and rays:

- the major threat to sharks and rays globally is unregulated fishing (including legal as well as illegal fishing)
- habitat loss and modification - impacts coastal and freshwater species (barriers to migration)
- global climate change
- pollution



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IOTC-2014-WPEB10-INF07

Western and Central Pacific Fisheries Commission

SCIENTIFIC COMMITTEE
SEVENTH REGULAR SESSION

9-17 August 2011
Pohnpei, Federated States of Micronesia

An Indicator-based Analysis of Key Shark Species based on Data Held by SPC-OFP

WCPFC-SC7-2011/EB-WP-01

Shelley Clarke, Shelton Harley, Simon Hoyle and Joel Rice[1]

Factors contributing to the vulnerability of sharks and rays

Low biological production

- Slow growth
- Late age at maturity (> half maximum age)
- Low fecundity (small litter size, resting period ≥ 12 months between litters)
- Direct relationship between number of mature females and recruitment

Naturally small population sizes

Philopatry to nursery grounds

Tendency to aggregate at ‘refuging sites’, mating areas and seasonal concentrations of prey

Diversity in the SPREP region

c. 189 species (70 taxa added since 2005):

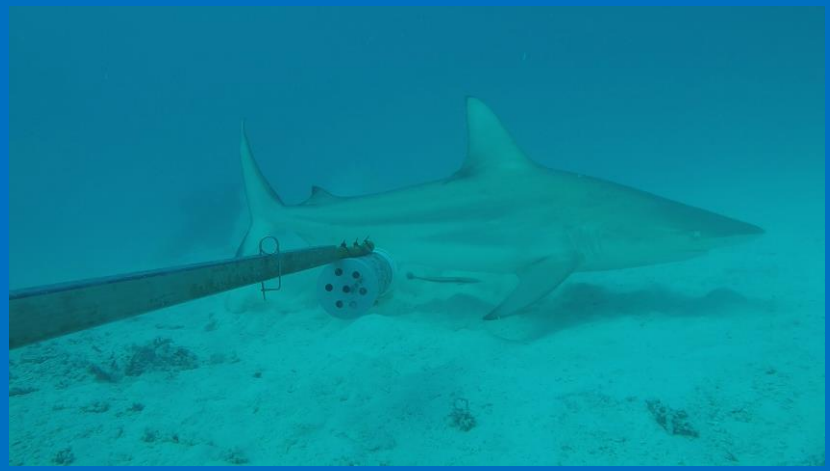
Oceanic: 29 (15%)

Deepwater: 55 (29%)

Coral reefs: 42 (22%)

Shelf: 48 (25%)

Estuarine and freshwater: 15 (8%)



Article

Global status and conservation potential of reef sharks

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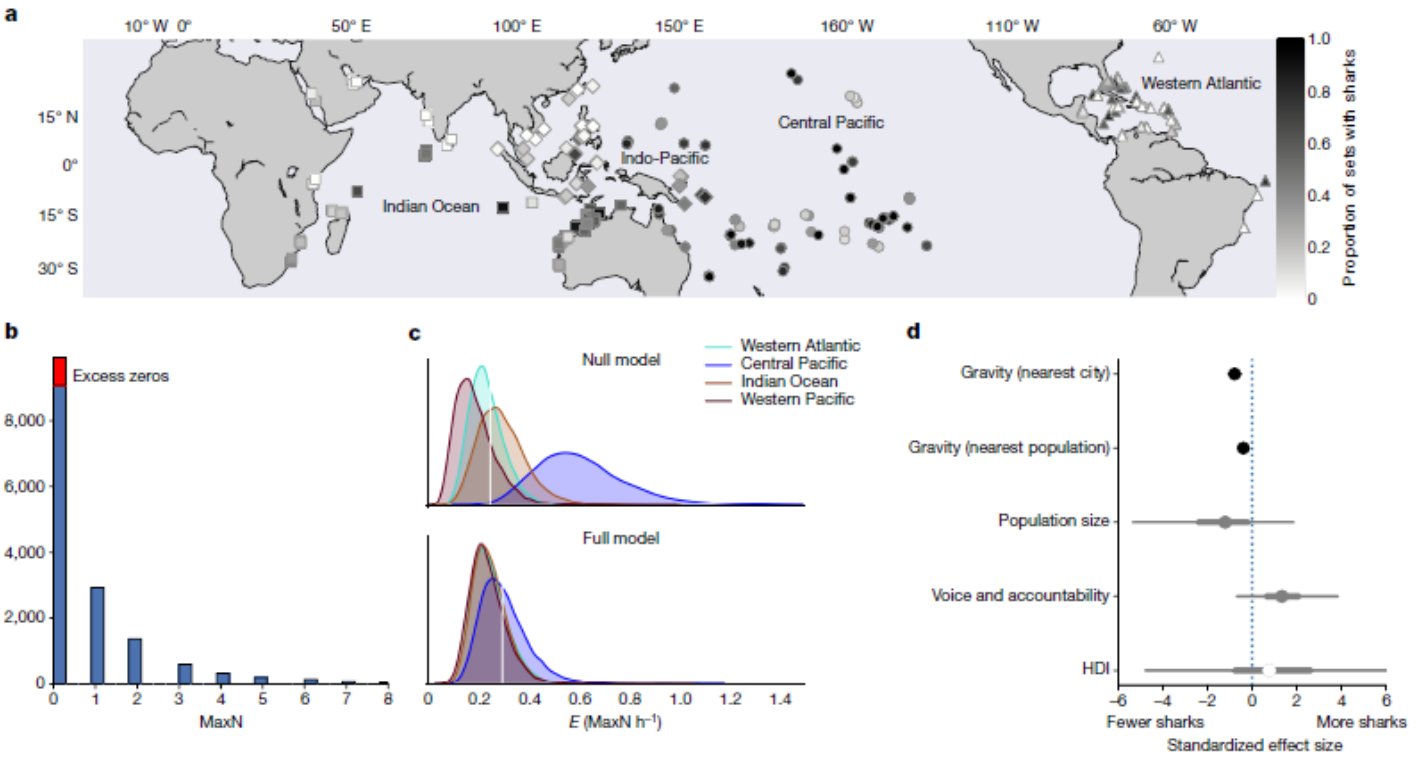
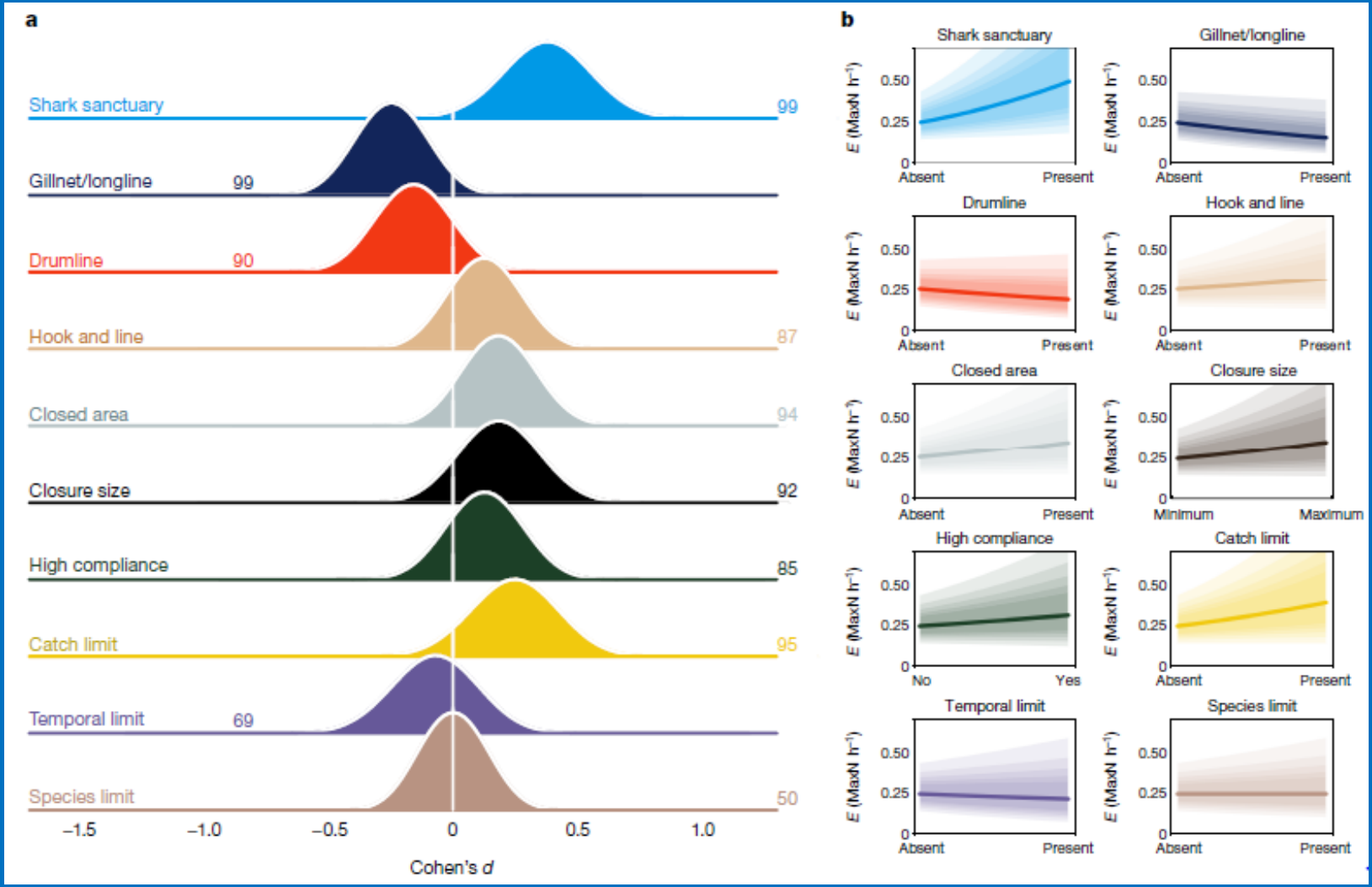
Decades of overexploitation have devastated shark populations, leaving considerable doubt as to their ecological status[1,2]. Yet much of what is known about sharks has been inferred from catch records in industrial fisheries, whereas far less information is available about sharks that live in coastal habitats[3]. Here we address this knowledge gap using data from more than 15,000 standardized baited remote underwater video



Attributes of nations with the healthiest shark populations relative to regional expectations:

- well-governed - voice and accountability (+), national wealth (x), socio-economic disparities (-)
- strong, directed management of shark fisheries
- shark sanctuaries

Effect sizes of management interventions for reef sharks



Effective measures:

- Large shark sanctuaries – no targeted catch or trade in shark (size matters; smaller no-take marine reserves work in conjunction with ‘top-down’ fisheries management)
- Gear restrictions – gill net, longline, drumline bans
- Catch limits (daily, per vessel) – less predictable outcomes, difficulties with compliance

Transboundary issues:

High Seas – EEZ – Territorial Sea

- Continuity essential for conservation of highly migratory oceanic species (particularly silky shark, oceanic whitetip, hammerhead sharks, thresher sharks)
- Setting sustainable limits technically challenging, limited/incomplete data, time consuming, contestable
- Difficult to monitor and enforce catch limits

Is it time for a total ban on shark fishing?

Pelagic sharks in the western and central Pacific are likely to have been depleted by longlining by the early-mid 1970s (Meyers & Worm 2003).

- clear, easy to understand, consistent across borders (no possession of sharks or shark products, no transhipment, ban on wire traces, ban on gill nets)
- timeliness cf. further research
- enforcement still likely to be challenging

Thank you