Pacific Offshore Cetacean Take Reduction Plan Monitoring/Compliance

2012

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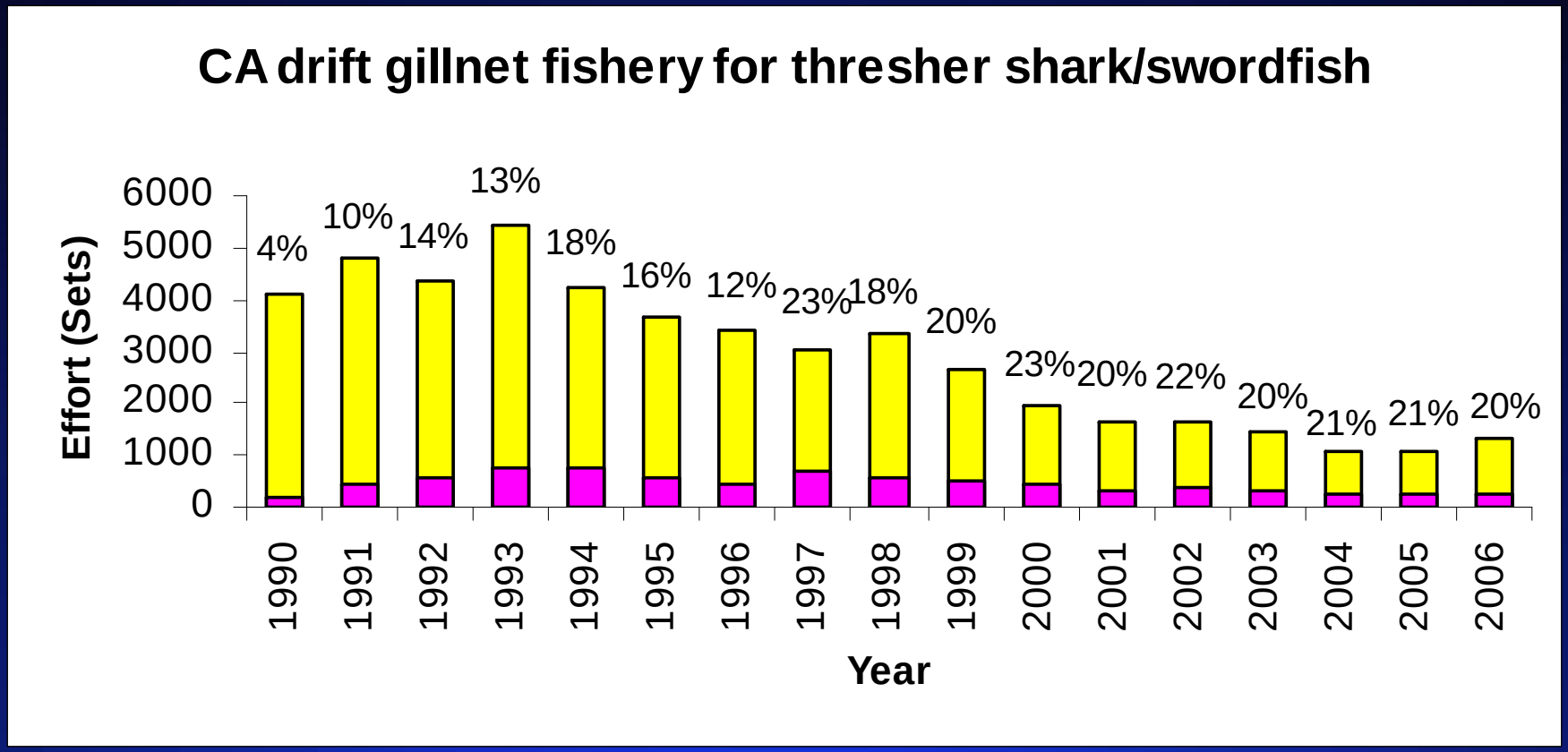
POCTRT Background

NMFS convened the Team in February 1996 to address incidental serious injury and mortality of several cetacean species in the CA/OR drift gillnet fishery

- Baird's beaked whales
- Cuvier's beaked whales
- Mesoplodont beaked whales
- Short-finned pilot whales
- Pygmy sperm whales
- Sperm whales
- Humpback whales


CA drift gillnet fishery for thresher shark/swordfish
Effort (Sets)
6000
5000
4000
3000
2000
1000
0
4%
10%
14%
13%
18%
16%
12%
23%
18%
20%
23%
20%
22%
20%
21%
21%
20%
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Year

DGN Effort and Coverage 1990-2010

year (Jan to Dec)	total sets	observed sets	% observer coverage
1990	4078	178	4.4
1991	4778	470	9.8
1992	4379	596	13.6
1993	5442	728	13.4
1994	4248	759	17.9
1995	3673	572	15.6
1996	3392	421	12.4
1997	3039	692	22.8
1998	3353	587	17.5
1999	2634	526	20.0
2000	1936	444	22.9
2001	1665	339	20.4
2002	1630	360	22.1
2003	1467	298	20.3
2004	1084	223	20.6
2005	1075	225	20.9
2006	1433	266	18.6
2007	1241	204	16.4
2008	1103	149	13.5
2009	761	101	13.3
2010	492	59	12.0

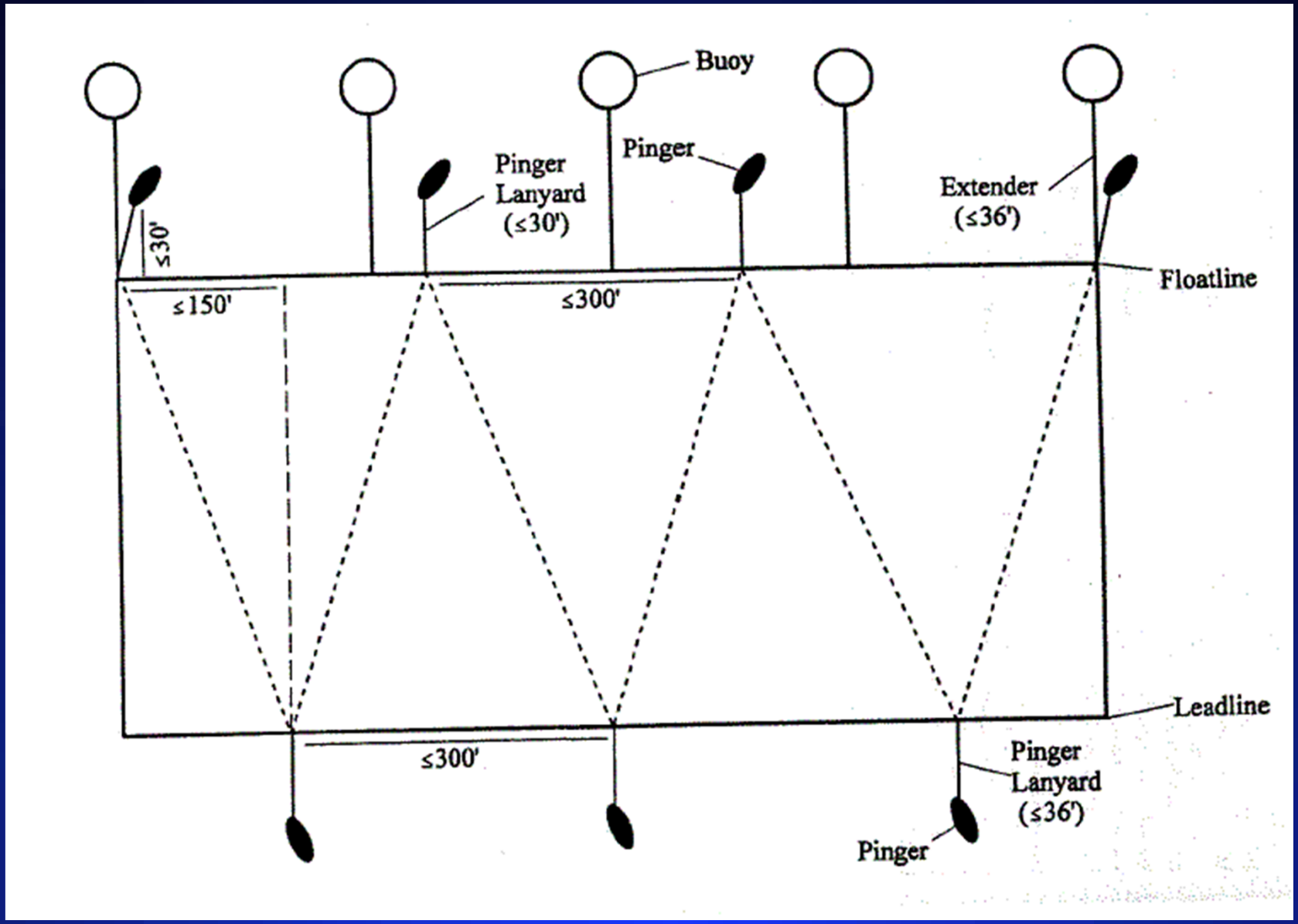
Pacific Offshore Cetacean Take Reduction Team – Consensus Recommendations

- All net extenders must be ≥ 36 ft
- Pingers must be used on all sets and meet required specifications
- Skippers must attend workshops (when notified)
- Recommendation that CA Department of Fish and Game and OR Division of Fish and Wildlife not re-issue lapsed permits

Pinger Requirements

- Must be used on all sets
- Spaced ≤ 300 ft apart on leadline, floatline (staggered configuration)
- At sea, full complement must be onboard
- All pingers must be operational & functioning within sound specifications

Pinger and Extender Configuration



Effectiveness of Pingers

- Cetacean bycatch nearly 50% lower in sets with ≥30 pingers compared to non-pingered sets
- 3.7% of observed sets had ≥ 1 failed pinger
  - In those sets, ~18% of deployed pingers had failed
  - Cetacean bycatch rate 10x higher in sets where ≥ 1 pinger failed v. sets without pinger failure

Beaked whale entanglements (1990-1995)

35 observed entangled in 3,303 sets (12% coverage)

21 – Cuvier's beaked whale
3 – unidentified beaked whales
2 –unidentified Mesoplodon
1 – Stejneger's beaked whale
5 – Hubbs' beaked whale
1 – Baird's beaked whale
2 – Pygmy sperm whale (not a beaked whale but demonstrated sensitivity to anthropogenic noise)

1996-2010: zero observed in >4,400 sets

pingers 10-12 kHz, 130 dB source level (15 dB above ambient noise at 100m)

Progress toward MMPA Goals

	Avg Take 06-10/PBR	% of PBR
Pacific white-sided dolphin	11.6/193	6.0%
Risso's dolphin	1.4/39	3.6%
Common dolphin, long-beaked	3.8/164	2.3%
Common dolphin, short-beaked	30.4/3,440	0.9%
Northern right whale dolphin	2.6/48	5.4%
Harbor seal	4.6/1,600	0.3%
California sea lion	79.8/9,200	0.9%
Northern elephant seal	1.2/4,382	0.03%

Pingers cont'd

- Bycatch of CA sea lions in sets with ≥ 30 pingers were nearly 2x that of sets without pingers
- Dinner bell effect?
  - Carretta and Barlow (2011) found that depredation of swordfish not linked to pingers
  - Predictors included: 1) total swordfish catch; 2) month fished; 3) area fished; 4) deck lights

2007 TRT Recommendations

- Increased enforcement at-sea, additional training/outreach with CDFG/USCG regarding regulations.
- Explore options for checking pinger compliance (hydrophones), EM
- Expand scope of TRT to include small-mesh gillnet fisheries (add rep, CDFG advisor, outreach regarding pingers)

2009 TRT Recommendations

- NMFS should consider experiments to test pingers with frequencies that would reduce interactions with sea lions
- Any takes would not be attributed to the DGN as managed under the POCTRP
- Skipper workshops should be held for new operators (mandatory) and voluntary for skippers that have attended workshops in the past

Compliance

- Enforcement officers should conduct at-sea boardings on at least 4 unobservable vessels (~50% of unobservable vessels)
- NMFS should purchase "pinger receiver location systems" for enforcement
- Unobservable vessels should be required to use VMS, AIS (Automatic Identification System), or notify NMFS of time/location following each set
- NMFS should continue to provide training and outreach materials to state and federal law enforcement agencies regarding POCTRP regs

NMFS Activities

- One pinger detection device purchased ($5K), training provided to NMFS-OLE and USCG
- Two in-air pinger detection devices purchased for use by observers and to assist fishermen who have reported trouble hearing the device
- NMFS is considering giving fishers properly working pingers to exchange for non-functioning pingers at-sea to provide incentive to fishermen to carry observers

NMFS Activities Cont'd

- Electronic monitoring (contract with Archipelago – tested pinger detection and species ID) – fairly successful but fishermen against the idea
- List of unobservable/unobserved vessels assessed and sent to OLE/USCG for at-sea boarding opportunity

Fleet/NGO activities 2012-2013

- Partnership formed between DGN fleet and The Nature Conservancy in 2012
- TNC has purchased F3 and F70 pingers for use in DGN fleet for two years to reduce cetacean bycatch (currently ~8 orders received from fishermen)
- Currently a trial period and the fleet still maintains required #s/configuration of pingers

Effectiveness of POCTRP - Metrics

- 100% compliance with Plan regulations;
- At least 50% of the unobservable vessels are boarded at sea annually;
- There is an appropriate level of enforcement of all sectors of the fleet to ensure compliance; and
- At least 20% observer coverage is achieved

www.nmfs.noaa.gov/pr/interactions/trt/poctrp.htm