



Status of Red Abalone: Suspension of the Recreational Abalone Fishery

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Current Situation:

- Poor environmental conditions for abalone and kelp in rocky marine habitats
- Very low densities of red abalone
- Recreational abalone fishery suspended (March 2018 to March 2021)
- OFWC to consider extension of fishery closure to March 2024



Red Abalone and Red Sea Urchins



Background:

- Red abalone are large marine snails with a biogeographic range from Oregon to Mexico
- In Oregon, red abalone occur along southern OR coast (Cape Arago to OR/CA border)
- Inhabit rocky reefs in low intertidal and shallow subtidal zones where they consume drift algae, seaweed, and kelp





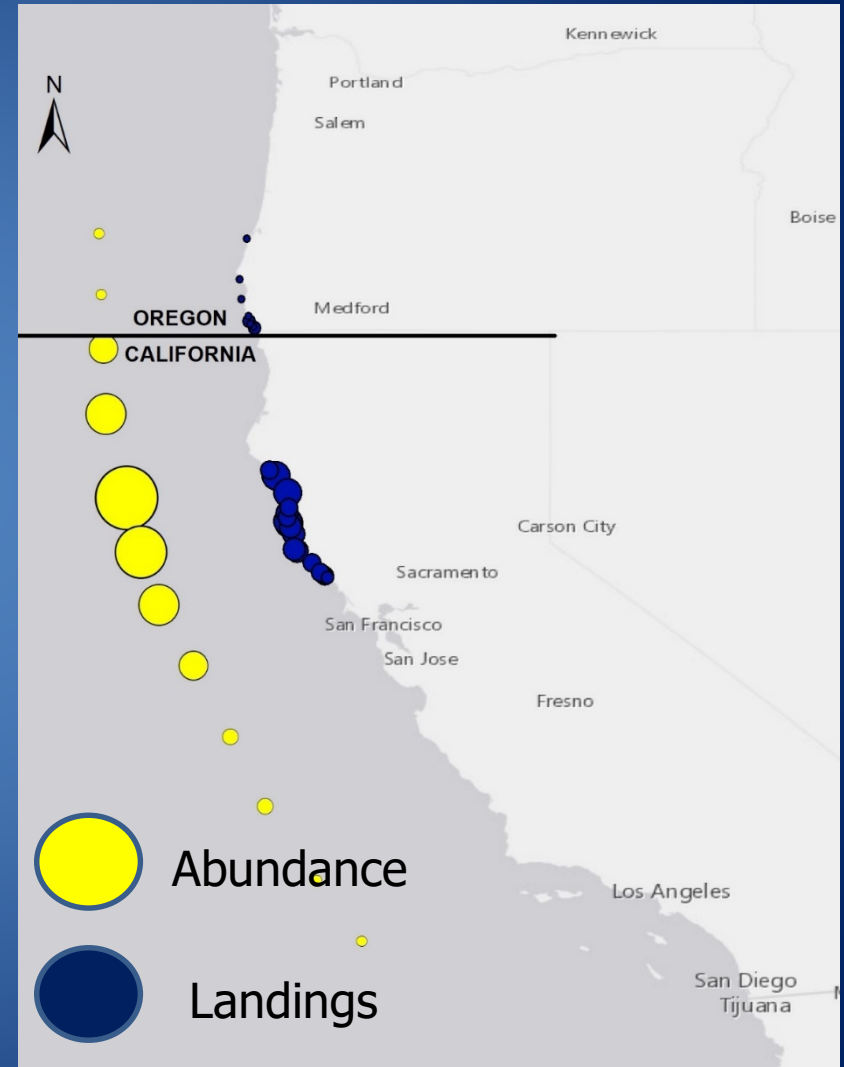
Background:

Red abalone populations in Oregon occur at the northern-most limit of their biogeographic range

Abundance of red abalone is naturally low in Oregon



Biogeographic distribution and sport landings of red abalone along the west coast



Background:

- Patchy populations and aggregations
- Broadcast spawners with poor fertilization success
- Limited dispersal of short-lived planktonic larvae
- Slow maturity (5-7 yrs) and long life span (35-55 yrs)



broadcast spawn gametes



planktonic veliger larvae





Background:

Popular recreational fisheries:

- ✓ Southern OR
- ✓ Northern CA

Regional decline in red abalone, starvation, increase in urchins, loss of kelp, increased harvest pressure

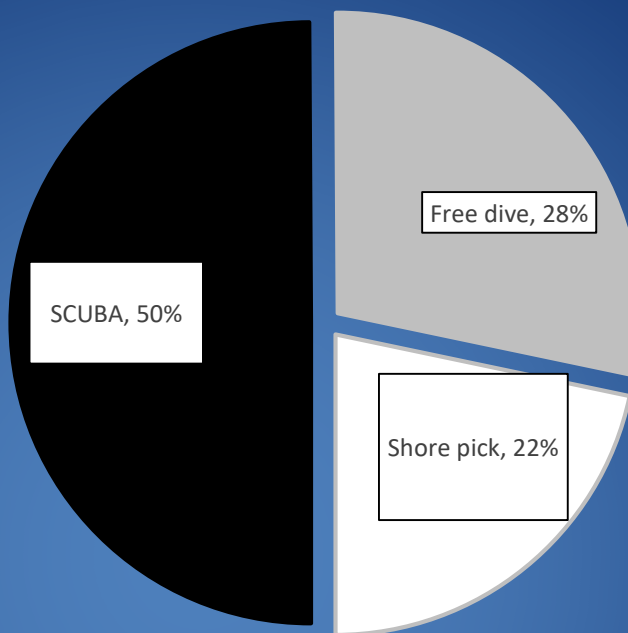


- OR & CA: Suspend Recreational Harvest of Red Abalone for 2018 – 2021
- CA: Extend Suspension to 2026



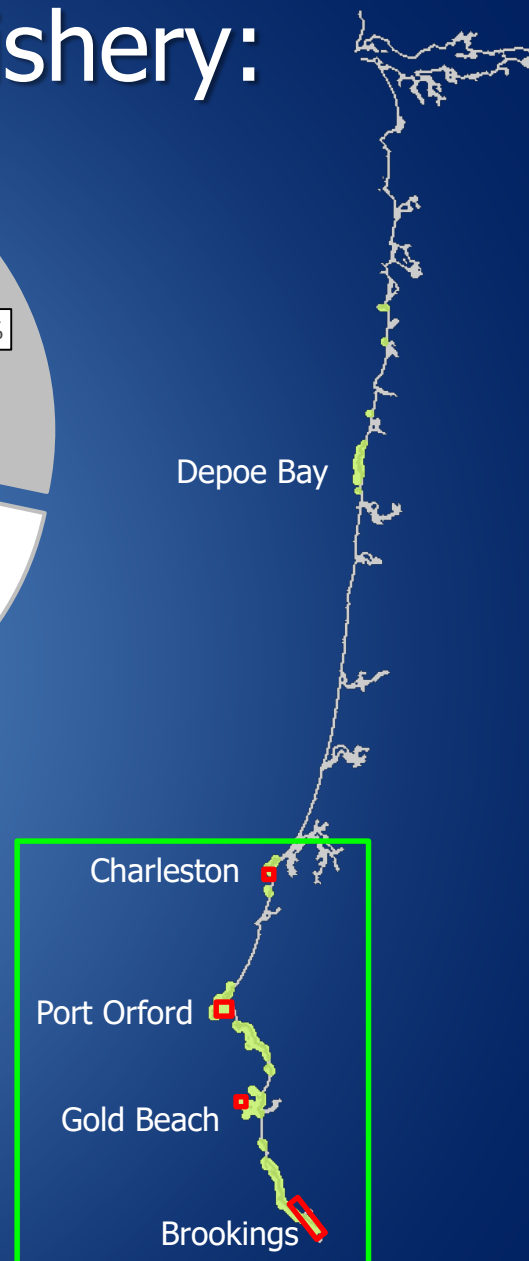
Oregon's Abalone Fishery:

- Location:
 - South coast
 - Shallow kelp beds
- Permits:
 - ~300/year
- Harvest:
 - ~189/year (2007-2017)



California:

~25,000 permits/year
~239,000 abalone/year (2002-2015)
No SCUBA allowed





Current Problems for Oregon Abalone:

- Poor environmental conditions in shallow marine habitats
 - ✓ starvation
 - ✓ very low densities
- Foraging abalone are vulnerable to take
- Sustained regional interest in recreational harvest



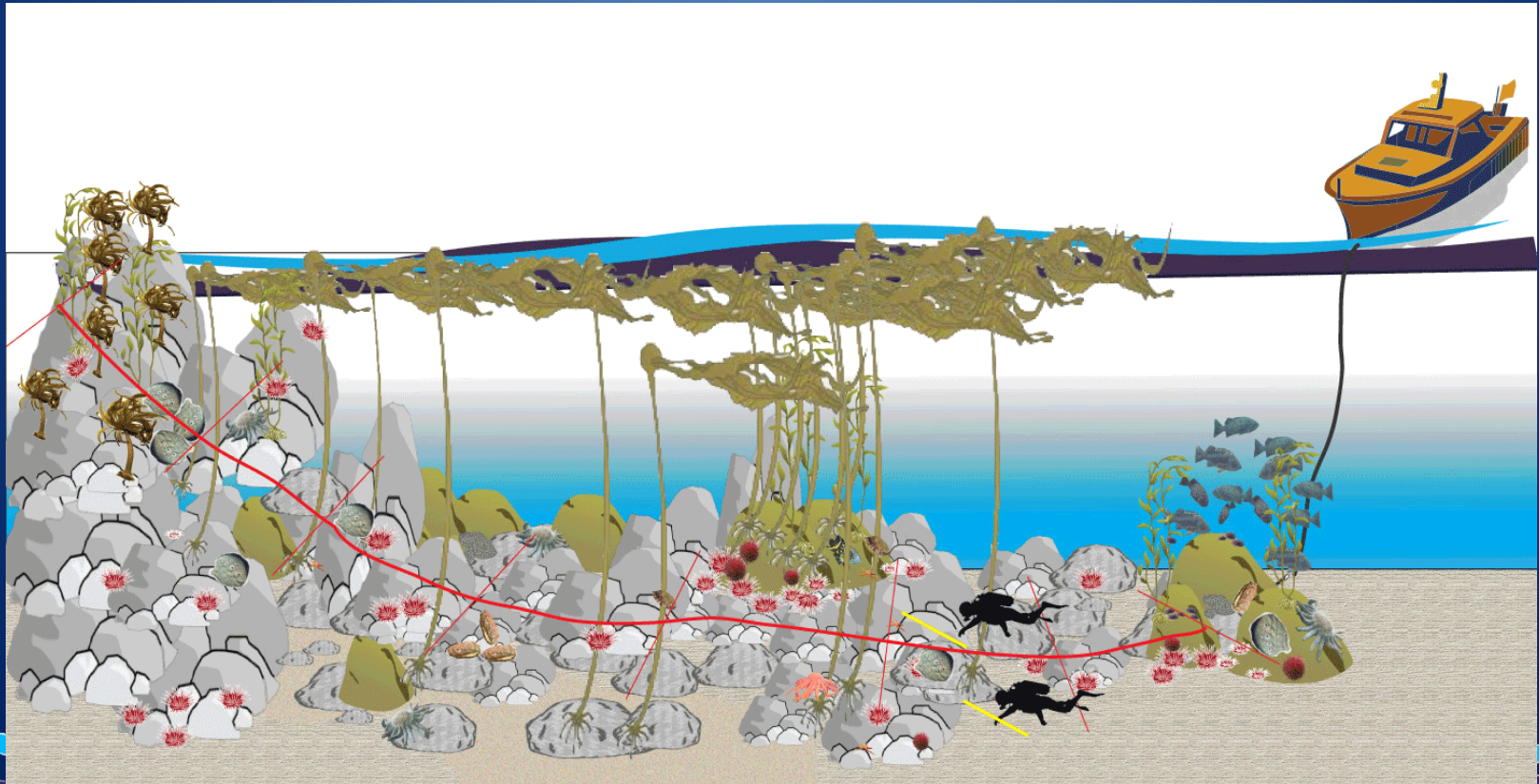


Low Density of Red Abalone in Oregon

- Population Surveys at Abalone Index Sites (SCUBA divers & underwater belt transects)
 - 2015 / 24 index sites
 - 2019 / 11 index sites



southern OR coast





Low Density of Red Abalone in Oregon

Index Surveys of Red Abalone Populations:

Year	Abalone Density	Abalone Distribution
2015	0.03 abalone/m ²	1 abalone / 33 m ²
2019	0.015 abalone/m ²	1 abalone / 67 m ²

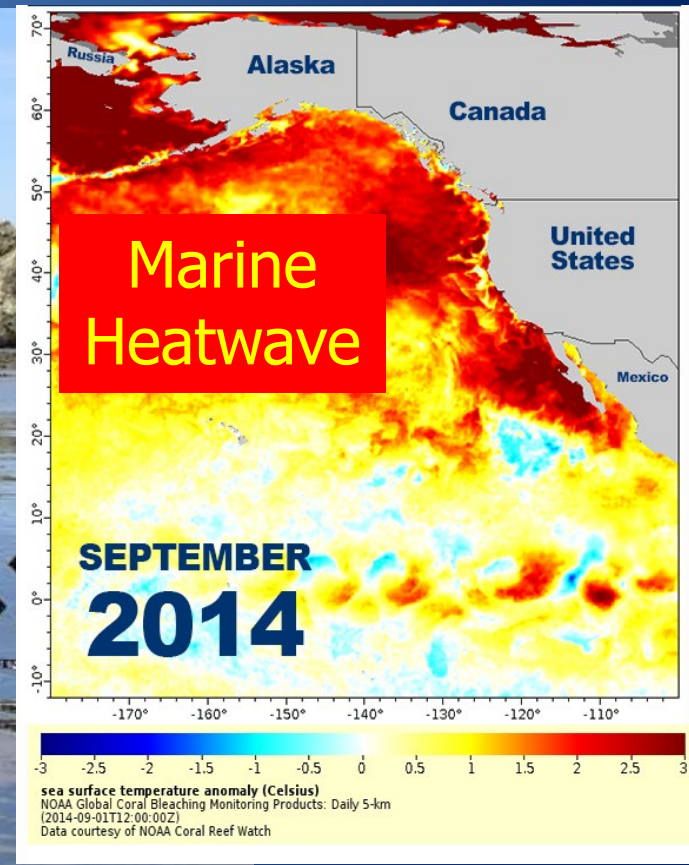
Current densities are well below the threshold (0.15, 0.20 abalone/m²) considered essential to ensure successful reproduction and maintenance of a local abalone population



Poor Environmental Conditions for Abalone



Nereocystis,
Southern
Oregon Coast



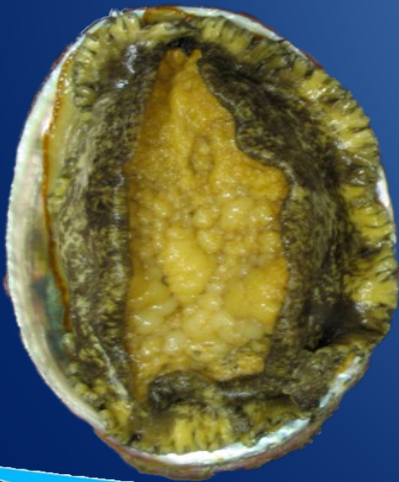


Poor Environmental Conditions for Abalone

- Kelp beds vastly reduced after 2015 marine heatwave
- Other factors:
 - purple sea urchins
 - sea star wasting syndrome

Healthy

Starved



Orford Reef 2014, extensive kelp



Orford Reef 2016, little kelp



Prior Commission Actions:

- 2018 / Suspension of Recreational Abalone Fishery (Salem)
 - ✓ biology and ecology
 - ✓ discuss fishery problems
 - ✓ permit holder questionnaire
 - ✓ management options
 - ✓ suspend sport harvest (2018 to 2021)
- 2019 / Update on Suspension (Gold Beach)
 - ✓ tour of Port Orford docks
 - ✓ marine environmental conditions remain poor for abalone, kelp, sea stars





Recent Activities:

- ODFW and contract divers conduct underwater surveys at 11 index sites (2019)
- Reef Check citizen group conducted underwater survey at Port Orford (fall 2020; prelim observations indicate continued decline)
- ODFW completed manuscript to summarize ecology, history, and management of abalone in Oregon (1940-2019)



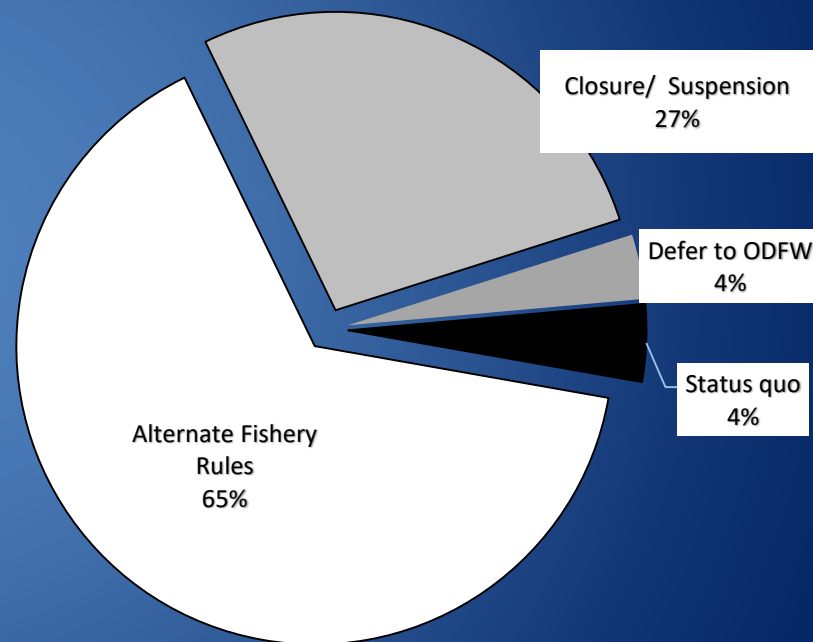
Red Abalone and Red Sea Urchins



Public Input 2018:

Input from Recreational Abalone Harvesters:

- Questionnaire (418 sent / 167 responses)
- Overall preference
 - 65% prefer to continue fishery with alternate rules
 - 27% prefer suspension or closure
- Alternate fishery rule preference
 - Most prefer to reduce annual take (below 5/yr)





Public Input 2019 – 2020:

West Coast Abalone Fishery Managers:

- West Coast Abalone Workshop (Oct 2020)
 - ✓ extend current protections for abalone populations
 - ✓ monitoring of index populations
 - ✓ regional approach to management of sport fisheries
 - ✓ improve stocking and enhancement activities

Southern Oregon Coastal Stakeholders:

- Oregon Kelp Alliance (2019-2021)
- CoastWatch seminar (Nov 2020)
 - ✓ encourage monitoring and urchin removal
 - ✓ support extension sport fishery closure



Activities for 2021-2024:

- Continue to monitor red abalone populations and environmental conditions at index sites
- Coordinate with academic investigators, ORKA, and Reef Check to determine feasibility of future citizen-scientist surveys of kelp beds, abalone, and sea urchins
- Track progress of abalone management actions in CA toward development of a regional fishery management plan



Expectations for 2021-2024:

- New surveys of red abalone populations will provide data to evaluate whether abalone populations continue to decline, remain static, or improve
- Consider changing ocean conditions and coordinate with CDFW toward development of *de minimis* recreational fishery (estimate: 9-11 years)
- Academic investigators, ORKA, and Reef Check will contribute information about kelp beds, abalone, and sea urchins
- Provide periodic updates to OFWC



Other Potential Measures:

- Consider possible activities to assist recovery of abalone and kelp ecosystem:
 - ✓ eliminate cap on recreational harvest of purple urchins from subtidal zone
 - ✓ active removal/culling of purple urchins
 - ✓ mariculture and outplanting of juvenile abalone





Options:

Option 1 – Maintain the current temporary closure of the recreational abalone fishery for an additional period of three years (March 17, 2021 to March 17, 2024).

Option 2 – No Action (status quo; recreational harvest of abalone would resume on March 17, 2021).

Staff Recommendation:

Option 1: *Amend the Oregon Sport Fishing Regulations for the Marine Zone contained in OAR 635-039-0090 to maintain the temporary closure of the recreational abalone fishery for an additional period of three years (March 17, 2021 to March 17, 2024).*

Questions & Discussion:

