

Long term monitoring of nearshore habitats in the Gulf of Alaska: Asking why before the change

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Monitoring the Gulf of Alaska Nearshore

- To detect change
- **To understand causes**
- To predict future change
 - To inform
- To contribute to problem solving



Shore surveys: biota and sediments



Marine bird and mammal surveys



Consumer diets and productivity



Carcass, spawn and debris surveys

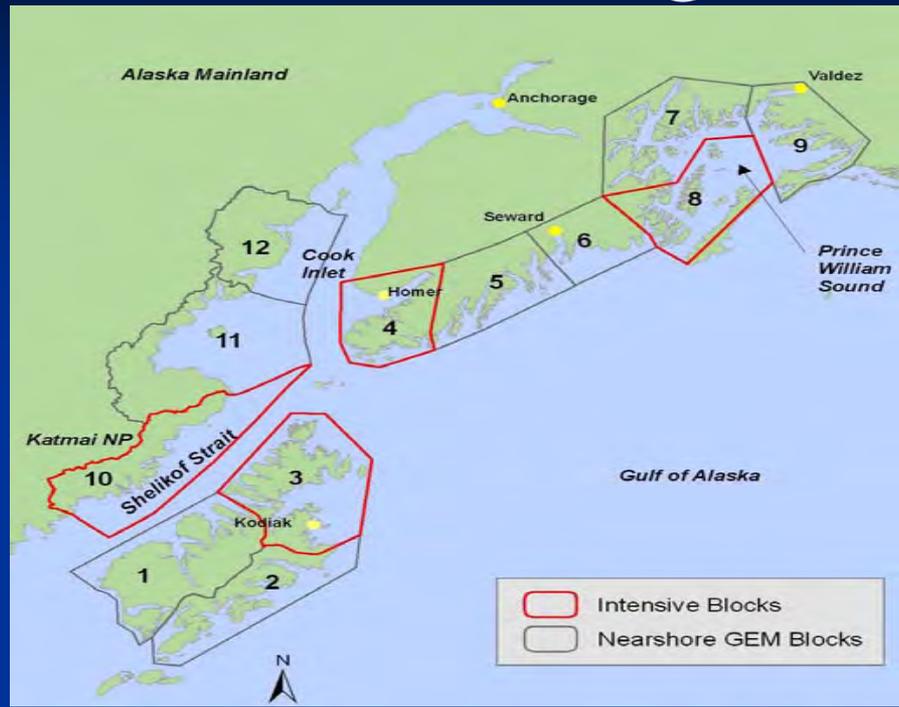


Prey measurements



Subsistence contaminants

Understanding Causes for Change

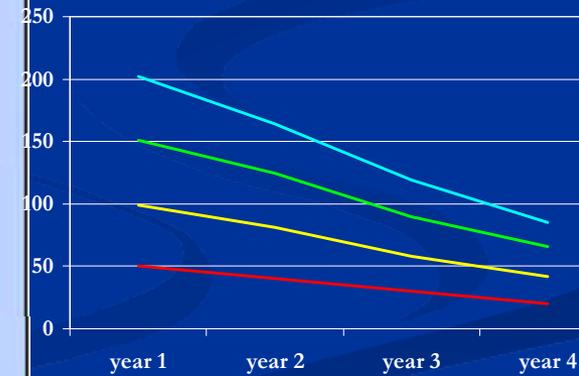
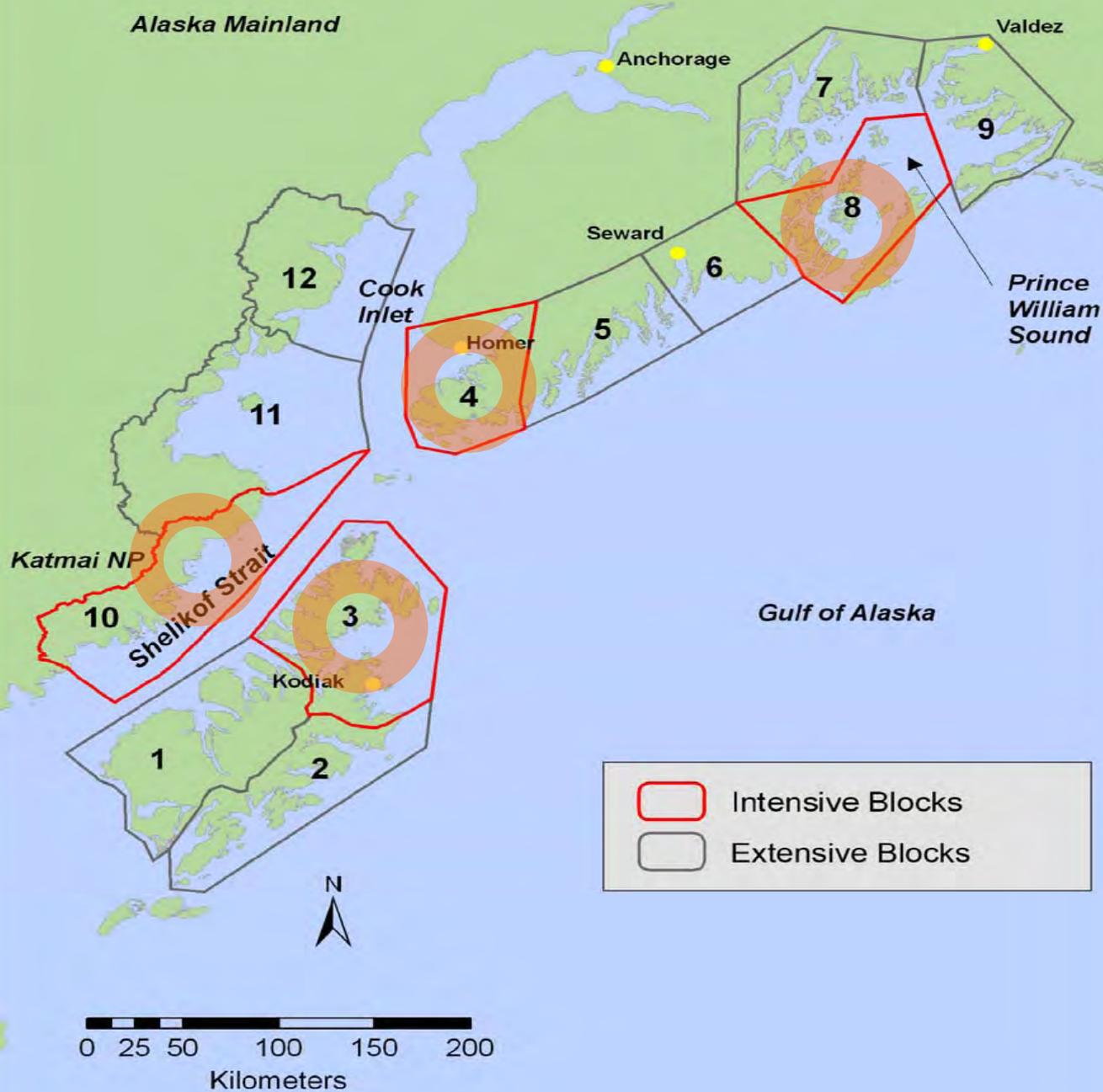


Design features

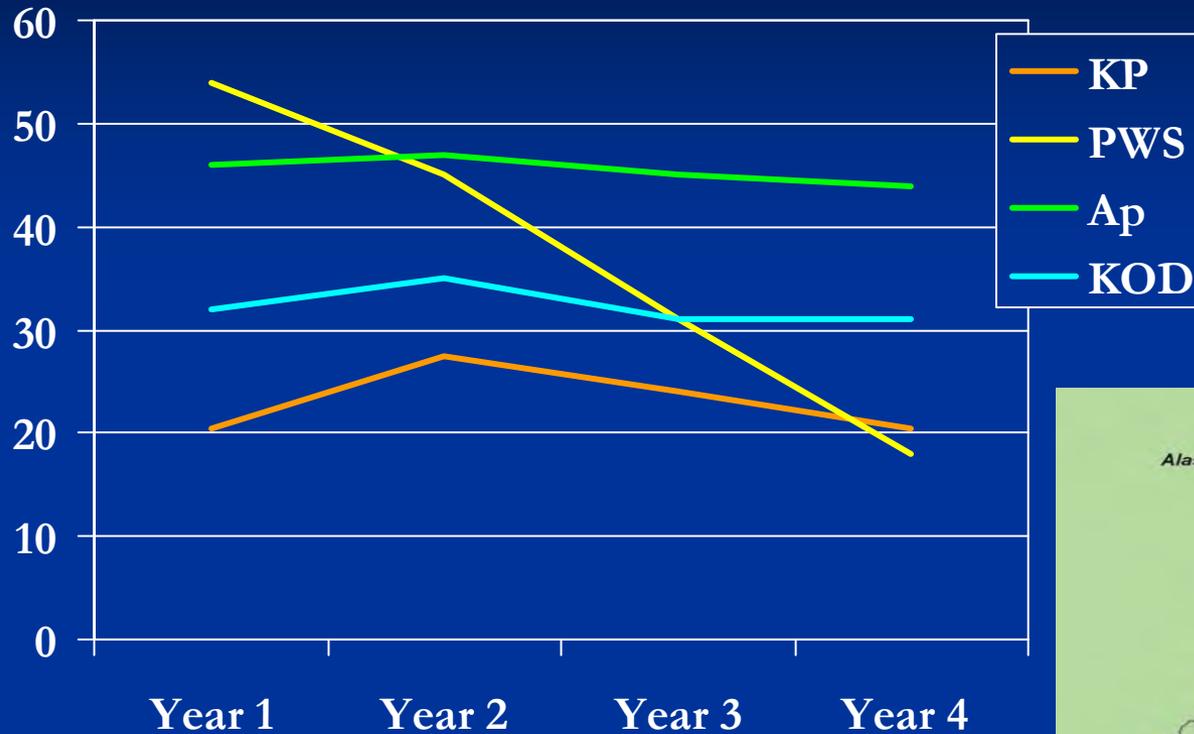
- ❑ Spatial / Temporal Patterns of Change
- ❑ Trophic Relations
- ❑ Productivity/Growth
- ❑ Size and Age structures
- ❑ Research Fund

Nearshore Sampling Design

Conclusion:
Large spatial
scale change



An example of inferring cause:



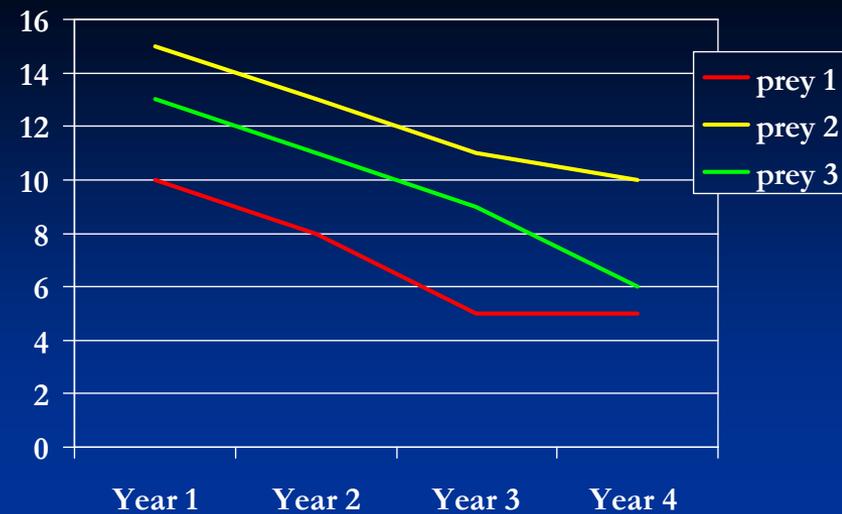
A declining WPWS
sea otter trend



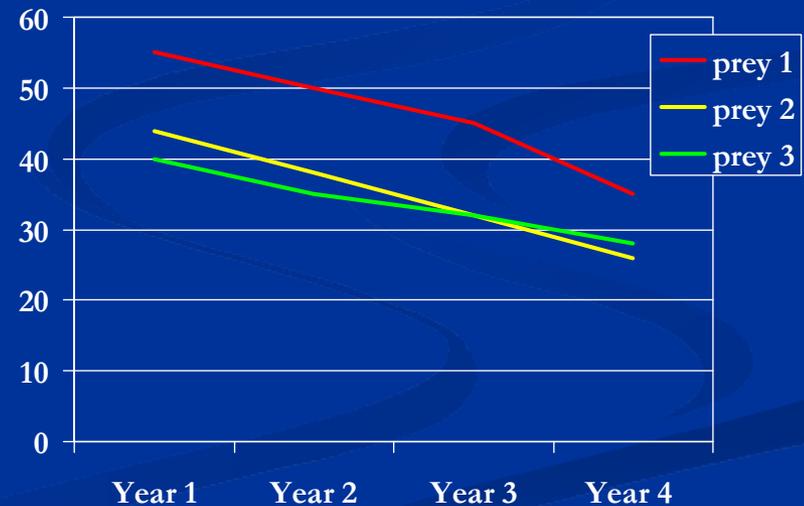
An example of inferring cause:



Conclusion: Declines a result of locally reduced prey and natural equilibration processes; no management required



Prey densities



Prey sizes