

The Baseline is the Pre-Project Conditions

- The baseline is a reference condition
- Projects can be evaluated by comparing pre-project environmental conditions to those after a project begins.

To monitor for change:

- ✓ Must have reference information
- ✓ Must know important variables to monitor
- ✓ Standardized monitoring and data for comparisons



The Affected Environment

Distribution

Prey availability

Abundance

Conservation Status

Population Health

Acoustic Seascape

Critical Habitat

Sea temperatures

Natural stressors

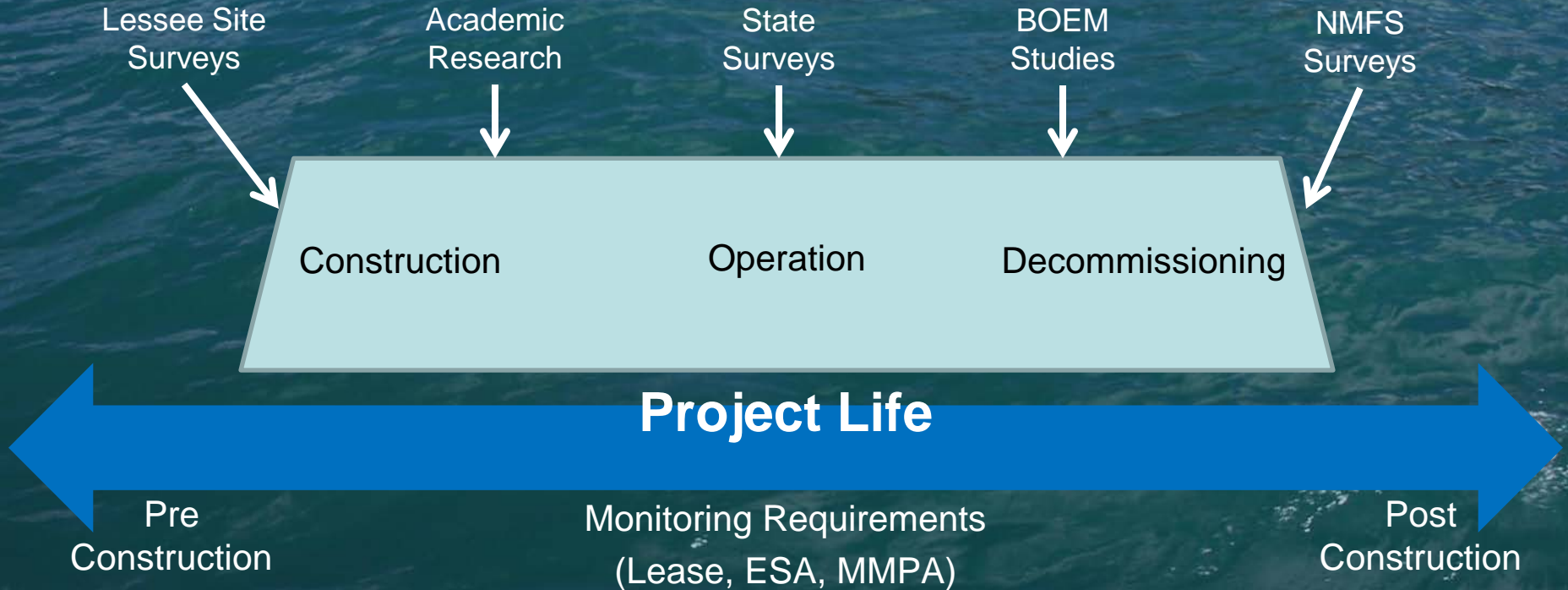
Chlorophyll-a

Migratory behavior

Anthropogenic stressors



Life Cycle Monitoring



Life cycle monitoring helps detect changes in the environment due to the project, and those that are from other natural or man-made causes.



Monitoring Change

- Project-specific and program-specific
- Possible changes in distribution, abundance, and behavior due to:
 - Avoidance of habitat/physical presence of foundations
 - Attraction of prey, protected species, and predators to structures/reef effect
 - Acoustic environment
 - No change
- Comments received on possible cumulative effects of multiple projects:
 - Changes in migratory behavior
 - Changes in selection/use of critical habitat
 - Contributions to the noise budget



Challenges

- Variable Baselines
 - Geographic differences
 - Annual variation
 - Seasonal variation
 - Large ranges of migratory species/small project areas
 - Shifting baselines from other anthropogenic sources
- Cumulative Effects
 - Detecting effects from multiple projects
 - How to best monitor for possible additive or synergistic effects
- Standards and Comparisons Across Monitoring Efforts
 - Getting the methods and data aligned
- Financial Resources



Monitoring Change

OBJECTIVES

- Understand current pre-construction baseline studies
- Identify important issues and parameters to be monitored for change
- Identify any regional or species-specific considerations
- Identify any financial, logistical, and regulatory constraints
- Identify mechanisms for standardized data collection and management

