

Environmental Planning and Management for OTEC Pilot Projects



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Background

- 1980 OTEC Act
 - Commercial OTEC technology is encouraged
 - Commercial OTEC must be licensed
 - NOAA administers licensing
 - Demonstration OTEC is excluded from licensing
 - DOE designates project as a demonstration
- 1981 NOAA regulations promulgated
- 1996 NOAA regulations canceled
- Recently there has been a renewed interest in OTEC
 - Federal funding availability
 - NOAA rulemaking in progress
 - NOAA OTEC workshops conducted

Renewable Energy is Ripe for Preparation



Environmental Issues

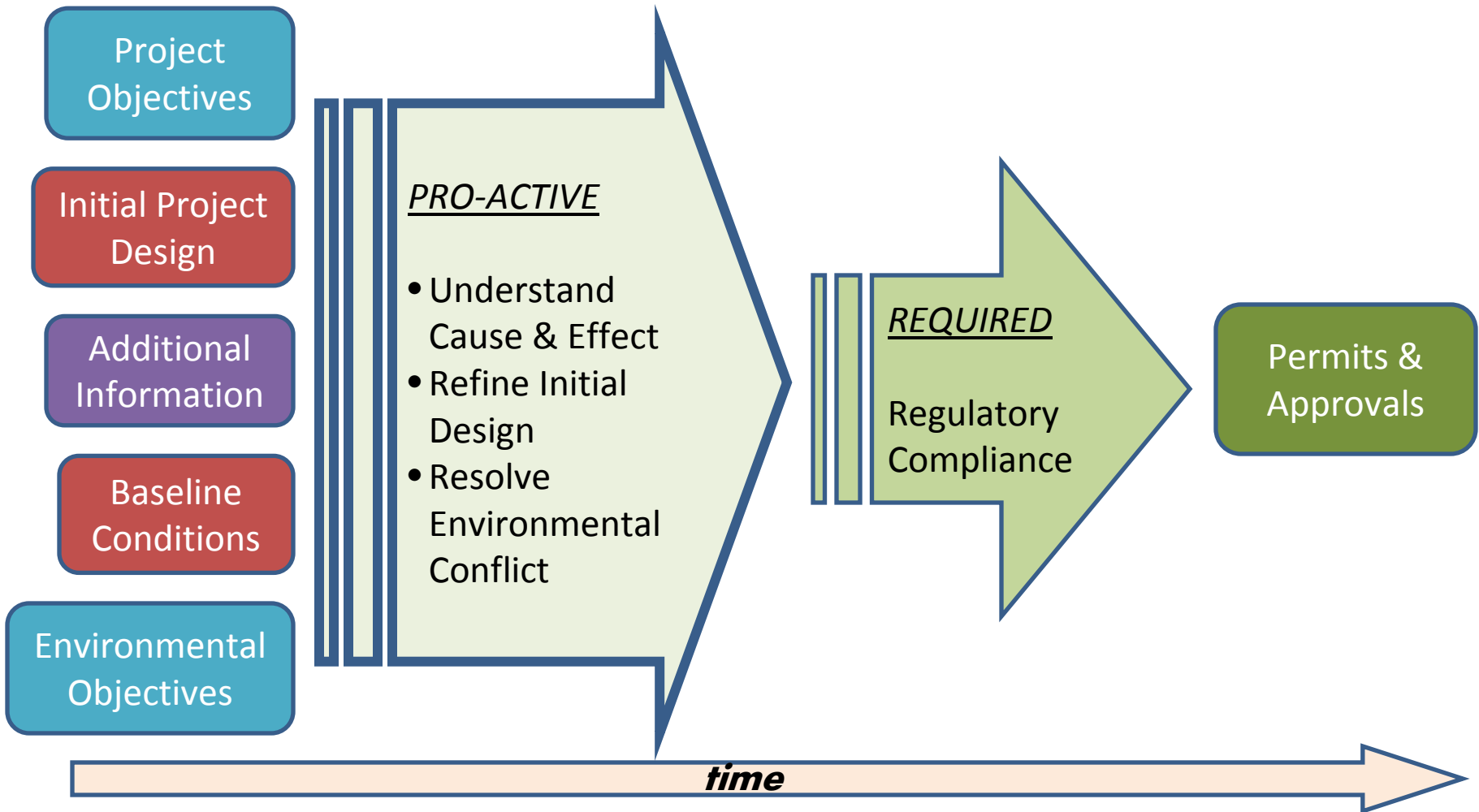
Resource	Project Activity/ Component That is the Source of Impact			
	Construction & Decommissioning	Platform Presence (e.g. shade, noise, lighting)	Water Intakes (entrainment & impingement)	Water Discharges (secondary entrainment & contamination)
Plankton & Micronekton	○	○	●	●
Nekton	○	●	●	●
Marine mammals	○	●	●	●
Sea turtles	○	●	●	○
Birds	○	●	○	○
Benthos	●	●	○	○

● = probably important ○ = less important

The degree of impact is uncertain



Environmental Planning



To Manage Uncertainty - Facilitate the Critical Path



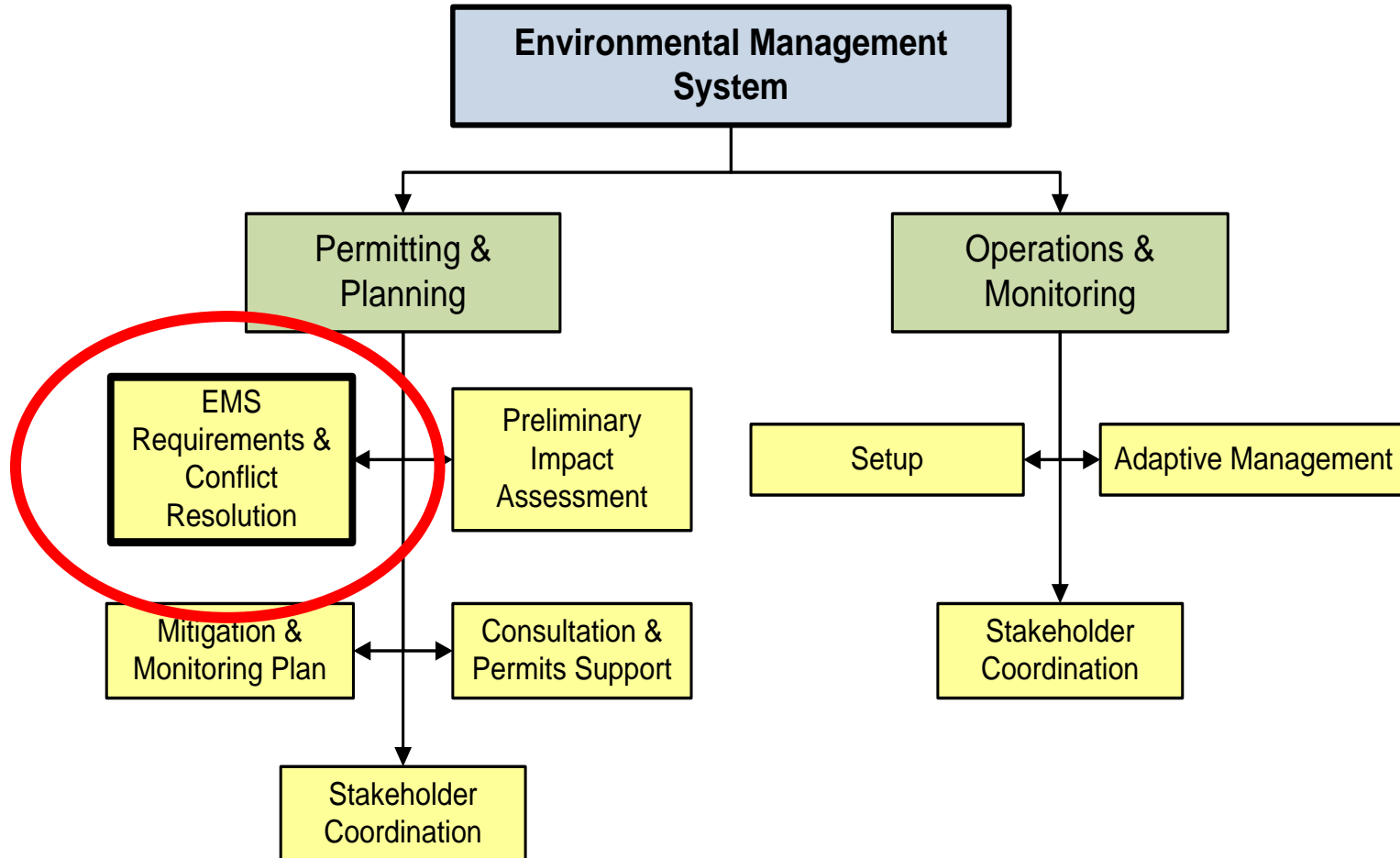
Environmental Integration Concepts

- Integrate environmental experts as equal partners
- Embrace the objective of sustainable development
- Encourage progressive environmental impact management
 - Build environmental impact management into the technology development process instead of treating the need to comply with environmental regulatory standards as something separate and apart
 - Incorporate relevant environmental goals into the design process at a time when environmental issues can be balanced against financial and technological realities

Integrating Environmental Improves Value



OTEC Pilot EMS Structure



Structure Maintains Continuity



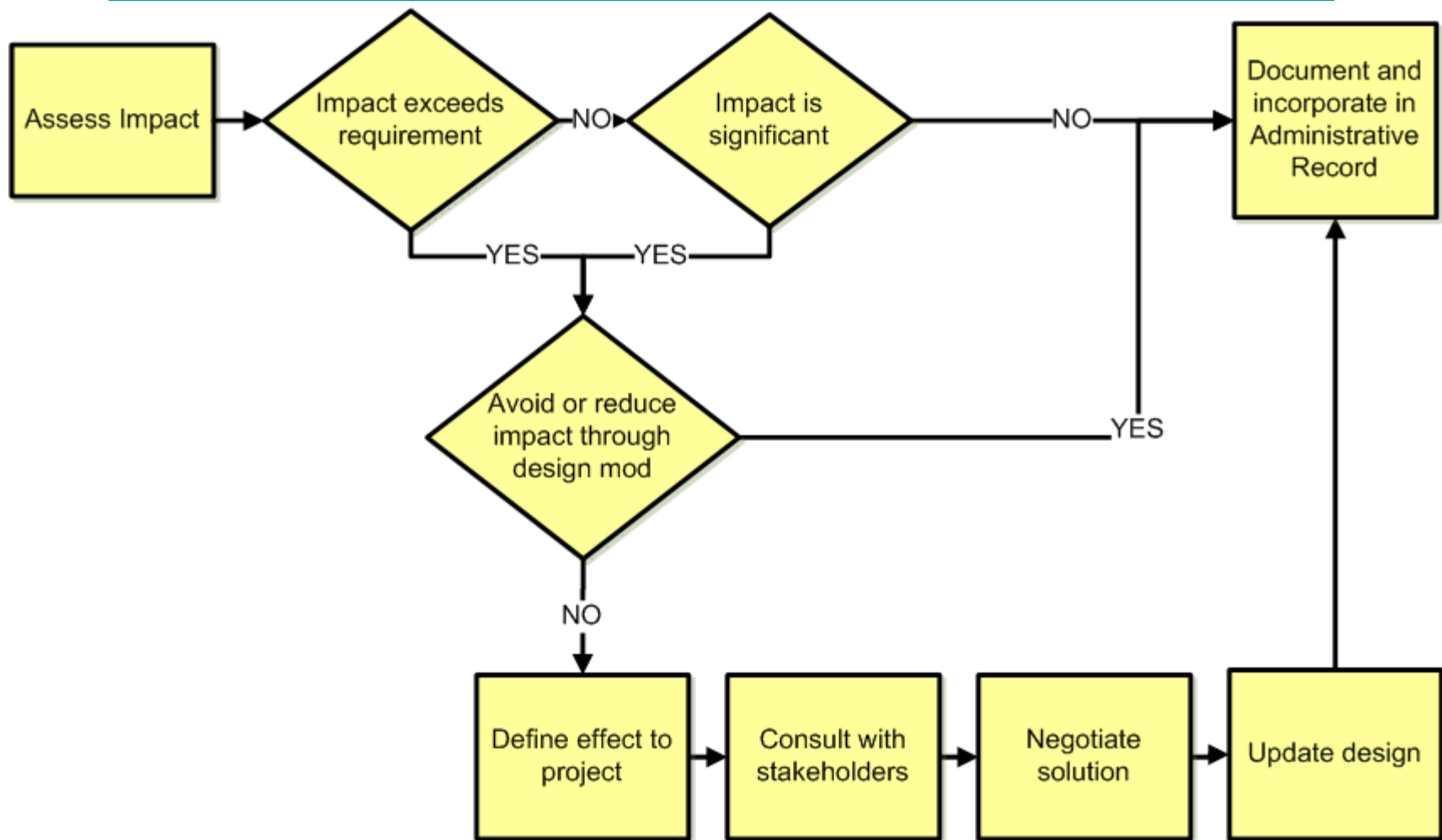
EMS System Requirements

- **Determinate and pre-set:**
 - Standards and thresholds (absolute and quantitative)
 - Criteria (advisory)
- **Indeterminate and project-specific:**
 - Environmental impact significance
 - Project needs and purposes

Identify and Define Requirements Early



Execute



Address All Impacts & Maintain an Administrative Record



OTEC Pilot Success

Progressive Environmental Impact Management

- * Integrated
- * Deliberative
- * Uninterrupted and connected
- * Relevant and applicable
- * Effective and efficient

“It’s all about information management.”



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