

OCEAN ACIDIFICATION

HOW WILL CHANGES IN OCEAN CHEMISTRY AFFECT MARINE LIFE?

CO₂ absorbed from the atmosphere



carbon dioxide



water



carbonate ion



2 bicarbonate ions

consumption of carbonate ions impedes calcification

National Marine Sanctuaries of the West Coast Ocean Acidification Action Plan

Report is in response to resolutions passed by all five west coast SACs.

By January 2010, all 13 sanctuaries had adopted similar resolutions.

Coordinated approach to addressing ocean acidification issues.

West Coast Ocean Acidification Task Force

West Coast Regional Office

Olympic Coast NMS

Cordell Bank NMS

Gulf of the Farallones NMS

Monterey Bay NMS

Channel Islands NMS

Channel Islands NMS SAC

Pacific Marine Environmental laboratory

National Centers for Coastal Ocean Science

Comprehensive Strategy on Ocean Acidification

Understand and protect biological communities within west coast sanctuaries

Develop adaptations

Communicate these impacts and solutions to the public.

Seven Strategies

1. Monitoring for ocean acidification
2. Research on ocean acidification
3. Education and outreach
4. Mitigating damages to sanctuary resources
5. Influencing national policy
6. Demonstrate leadership by reducing carbon emissions
7. Internal coordination on ocean acidification issues.

Implementation Options:

Available staff versus additional resources