



SYSTEM DIMENSIONS

Extent
Pattern

CHEMICAL AND PHYSICAL

Nutrients, Carbon, Oxygen
Contaminants
Physical

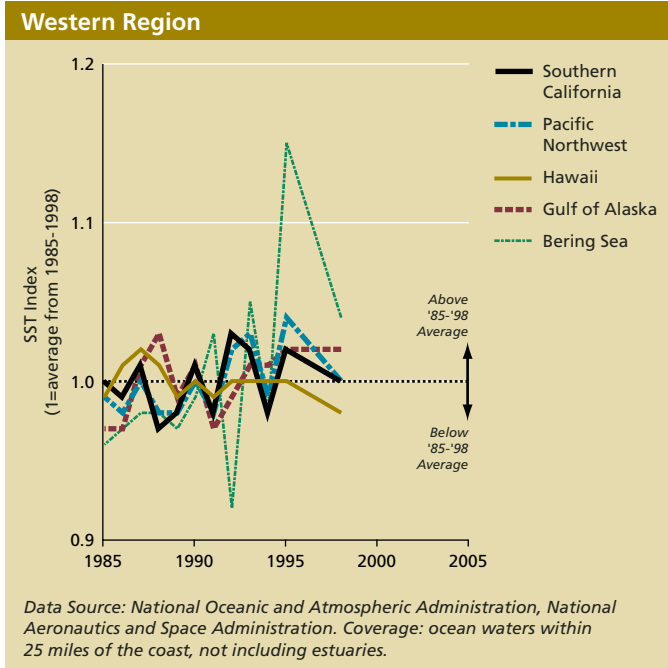
BIOLOGICAL COMPONENTS

Plants and Animals
Communities
Ecological Productivity

HUMAN USES

Food, Fiber, and Water
Recreation and Other Services

● Sea Surface Temperature



What Is This Indicator, and Why Is It Important? This indicator describes whether sea surface temperature (SST) is above or below average. Using an index, the indicator tracks how much regional average temperatures in any given year deviate from the average for the 14-year period, for waters within 25 miles of the coast. Thus, a “1.1” on the graph means that the SST for that region in that year was 10% warmer than the 14-year average for that region. The indicator defines “average SST” for a region as the average temperature for the warmest season in that region.

Water temperature directly affects the species of plants (such as algae, seagrasses, marsh plants, and mangroves) and animals (microscopic animals, larger invertebrates, fish, and mammals) that live in a particular region. In addition, increases in temperature are thought to be associated with the degradation of coral reefs (bleaching) and may increase the frequency or extent of blooms of harmful algae (see Harmful Algal Blooms, p. 78). There is widespread concern that global climate change may lead to increases in SST. Such changes could, in turn, lead to increases in the strength and frequency of storms and changes in ocean currents, such as the Gulf Stream, that would in turn lead to shifts in regional climate.

What Do the Data Show? While SST varies noticeably from year to year, and there are individual reports of gradually increasing temperatures in several of these ocean regions (see the technical note for citations), the data presented here do not show any trends.

The technical note for this indicator is on page 222.

