The Northeast

Lobstermen unload the day's catch. Warming waters could have an impact on New England's famous lobster fishery.

Northeast Fisheries

Fisheries are a major part of New England's economy, history, and culture, but some species are under pressure from overfishing. Some of the region's most-important fish species are known to be affected by water temperature. Adult cod, for example, require bottom-water temperatures cooler than 54°F; their young require water cooler than 46°. Substantial ocean warming could restrict cod to living only in cooler pockets in northern areas and Georges Bank.

Lobsters, another key species for northeast fisheries, tolerate a wider range of water temperatures than do cod. In warmer water, however, lobsters need more oxygen to survive. This requirement, combined with the fact that warmer water holds less oxygen, makes the concentration of oxygen in the water insufficient for lobsters at about 79°F. Since the late 1990s, lobster populations in Long Island Sound have fallen precipitously. While many factors may have contributed to this decline, warming is probably part of the mix: water temperatures have exceeded 79°F with increasing frequency. On the other hand, northward, in the Gulf of Maine, warmer conditions could improve lobster habitat—supporting a longer growing season, faster lobster growth, and larger area suitable for juveniles to grow in.

Some dangerous animal parasites are moving northward in response to warming waters, with potentially major impacts on fisheries. One example is the oyster parasite *Perkinsus marinus*, which can cause mass oyster deaths. This parasite has extended its range northward from Chesapeake Bay to Maine—a 310-mile shift linked to above-average winter temperatures.