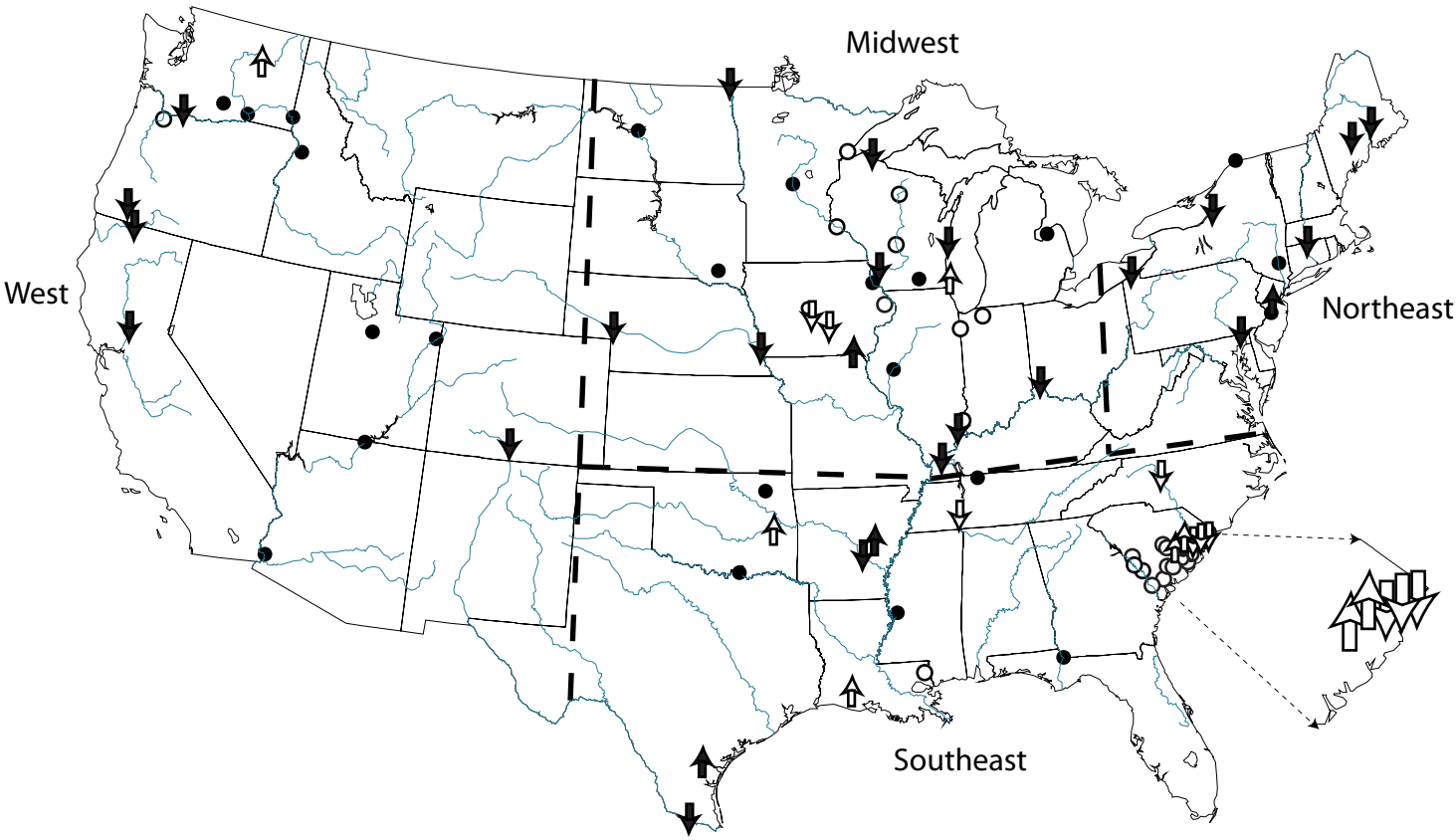
A national dataset on concentrations of mercury in fish, compiled mainly from State and Federal monitoring programs, was used to evaluate trends in mercury (Hg) in fish from U.S. rivers and lakes. Data from 50 sites sampled across the U.S. show downward trends in Hg concentrations in fish during 1969–1987 exceeded upward trends by a ratio of 6 to1. Fish Hg trends corresponded with implementation of regulatory controls on direct releases of Hg to the atmosphere and surface waters in the 1970s. Four southeastern states had more upward Hg trends in fish between 1988 and 2005 than four midwestern states. Southeastern states may be more heavily influenced by long-range global transport and increases in distant Hg emissions. No trends were found in 62% of more recent fish data between 1996 and 2005 in 6 midwestern and southeastern states. A lack of Hg trends in fish in the more recent data was consistent with the lack of trends in wet Hg deposition at Mercury Deposition Network sites and with relatively constant global emissions during the same time period.



Mercury trends in fish tissue at 90 river and lake sites in U.S., 1969–2005.

Arrows: sites with significant trends ($p<0.05$). *Circles*: sites without significant trends.
Black symbols: 50 sites sampled 1969–1987. *White symbols*: 40 sites sampled mostly 1988–2005.
One site in Alaska (no trend) is not shown. Trends in South Carolina are shown in larger view.
Heavy dashed lines mark four regions of the country.