# (Template) Decreasing mercury levels in consumer fish over the three decades of increasing mercury emissions in China

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**Abstract:** (no more than 250 words) Fish consumption is the primary dietary route of human exposure to methylmercury. It has been well documented that elevated mercury concentration in fish in North America and Europe is linked to anthropogenic mercury emissions. China is the world’s largest producer, consumer, and emitter of mercury, as well as the world’s largest commercial fish producer and consumer. Although mercury pollution in fish in China is currently receiving much attention worldwide, its status remains largely unknown. Here, we conducted a meta-analysis on total mercury concentrations in marine and freshwater fish samples, covering 35,464 samples collected in China over the past 30 years. It is found that, opposite to the increasing emission and documented mercury contamination events, mercury levels in fish have gradually decreased in China over the past 30 years. The results were in sharp contrast to those found in North America and Europe. The mercury concentrations in fish were significantly anticorrelated with the fish catch and fish aquaculture and were inverse to trophic levels. Overfishing and the short lifecycle of aquaculture fish, both reducing the trophic level and the duration of mercury accumulation, were the most likely causes leading to the decline of mercury concentrations found in fish in China.

**Keywords：**(4–7 keywords) Meta-analysis; Mercury; Fish; Spatial-temporal variability; Freshwater and marine waterbodies; China

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