

EarthTrends: Featured Topic

Title: **The Impact of Global Trawling: Mapping our Footprint on the Seafloor**

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The impact of trawling on marine ecosystems may be larger than we realize. Certainly, the footprint of global trawling is bigger than many people suspect, according to a recent analysis of the world's trawling grounds.

Trawling is the dragging of weighted nets across the sea floor to catch shrimp and bottom-dwelling fish such as flounder. Trawling grounds are areas of the ocean where commercial trawling—legal or illegal—is prevalent.

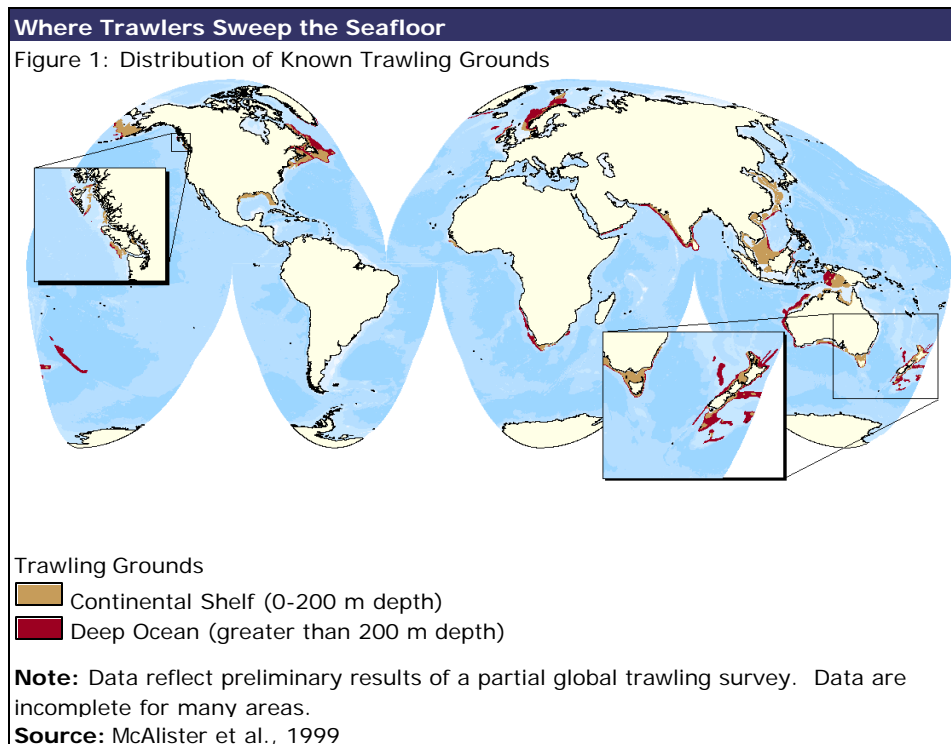
As part of a global study of ecosystem conditions, researchers attempted to map the seafloor areas that trawlers sweep—a task made difficult by the fact that no global database for ocean trawling exists. Only 24 countries—representing some 40 percent of the world's continental shelf area—provided sufficient data to map trawling grounds in their waters. (See Figure 1.) The map analysis concluded that

trawling grounds in these countries encompass 8.8 million km² (Burke et al. 2001:22-23). Extrapolating from these figures suggests that the world's trawling grounds could total approximately 20 million km², nearly two and one-half times the size of Brazil (UNDP, UNEP, WB, and WRI 2000:80).

Trawling is a major source of pressure on the biodiversity of coastal ecosystems. Modern techniques are capable not only of rapidly depleting targeted fish stocks, but also of damaging or destroying nontarget species, including corals and sponges, that may take years to recolonize. The thick natural carpet of bottom-dwelling plants and animals is important for the survival of the fry of groundfish such as cod, which find protection there. Thus, destruction of seafloor habitats is one of the principal factors in the decline of fishing stocks in heavily trawled

areas (Engel and Kvitek 1998:1204-1205). In fact, some marine ecologists have compared the effects of trawling on the biology of the seafloor to the effects of clearcutting on forest ecosystems (Watling and Norse 1998:1180-1194).

Increasing use of new deep-water trawling equipment means that damage is no longer restricted to shallow shelf areas. More and more, fishers are trawling beyond the continental shelf, expanding into areas that previously were not regularly swept by trawlers. Harvesters are trawling at depths up to 400 m and, in some places, more than 1,500 m (Burke et al. 2001:23). Because deep-living species tend to grow more slowly than shallow-water species, the long-term impact of trawling is magnified as trawl depths increase (Watling and Norse 1998:1190).



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