



# Fishery Basics — Fishing Gear

## Changes in Gear Over Time

Fishing gears and **methods** designed to lure and capture fish have been in use for thousands of years. Stone-tipped fishing spears, hooks, lines, nets made of tree fibers, and traps were used in some of the first civilizations throughout the world. Although simple in design, these prehistoric concepts are the blueprints for many of the gears used in modern **fisheries**.

As societies and trade routes developed so did the fishing techniques and gear. Some of the first improvements were the development of **barbed hooks** to replace traditional hooks and the use of stronger fibers, such as hemp and linen, for lines and nets. Improvements on gear and methods continued for centuries. However, it was not until the advent of steam powered vessels at the end of the 19<sup>th</sup> century, the introduction of motor-driven vessels in the early 20<sup>th</sup> century, and the mechanization of fishing equipment in the 1950's that the methods and gears used in today's fisheries were developed.

All of the advancements in fishing gear and equipment were designed to make the practice of fishing more efficient and result in higher **catch** rates. Unfortunately, with better gear and technology also came some disadvantages. After the 1950s, increased fishing **efforts** with more sophisticated gears led to significant increases of **bycatch** and **habitat degradation**. Although attempts to manage bycatch in the United States existed throughout the 20<sup>th</sup> century, it was not until the passage of the **Fishery Conservation and Management Act (now the Magnuson-Stevens Fishery Conservation and Management Act, MSFCMA)** (See National Management) in 1976 that initial regulations designed to control bycatch of foreign vessels were applied to U.S. fishing fleets. In 1996, **National Standard 2** was added to the MSFCMA specifically to minimize bycatch and when bycatch is unavoidable, to reduce the mortality of bycatch.

Gear development now focuses on selective fishing and reduced environmental impact, through modifications on existing gear or new gear designs. Such modifications include **bycatch reduction devices (BRDs)** in Shrimp **trawl nets** (See Fishing Gear – Trawl Nets), **turtle exclusion devices (TEDs)** in trawl nets, bird scaring devices on **longlines** (See Fishing Gear – Hook & Line), and **pingers** placed on **gillnets and driftnets** (See Fishing Gear – Gillnets & Entangling Nets) to minimize entanglements of marine mammals. For more information about these selective fishing gears click **here**.

## References

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