## **AQUACULTURE**



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION . UNITED STATES DEPARTMENT OF COMMERCE

omentum is building for the United States to use aquaculture to become more self-sufficient in the production of seafood—also known as fish and shellfish farming—and to help restore depleted wild stocks of fish, shellfish and other marine animals. NOAA's Aquaculture Program is critical in making sure this national goal becomes reality.

Re-established in 2004, NOAA's Aquaculture Program addresses coastal and onshore marine shellfish and finfish farming, as well as enhancement (hatchery) activities that support commercial and recreational fishing and the restoration of some endangered species. The goals of the program are:

- To help create additional domestic supply to meet the nation's growing demand for seafood;
- Establish aquaculture as a viable technology for replenishment of important commercial and recreational marine fisheries; and
- To create opportunities for the United States to engage the global aquaculture community through scientific and technological exchange.

The program is organized into three areas: regulation, science, and outreach/education. International activities are part of each of the three capabilities.

For more than 40 years, NOAA has been a leader in international scientific research and collaboration for the development of environmentally responsible aquaculture



Clams are among the top farmed seafood products grown in the U.S.

practices. NOAA-funded research in a variety of areas, such as feed, technology, habitat, and pathology, has spurred innovation and progress – allowing industry to develop hatcheries and commercial ventures that contribute to the social and economic fiber of coastal communities.

NOAA has made a compelling case to expand marine aquaculture production in the United States. Consider the context:

- The United States will need an additional two million metric tons of seafood by 2025, even with wild caught fisheries productivity at sustainable levels, most of the additional seafood will come from aquaculture, whether domestic or imported.
- The United States imports more than 80 percent of its seafood annually, and about half of that is from aquaculture.
- The United States seafood trade deficit is more than \$9 billion.
- The United States aquaculture industry produces 500,000 metric tons of domestic seafood annually, generating a farm-gate value of \$1 billion.
- Many marine species are overfished; and marine aquaculture could help to reduce pressure on these species and to restore their habitat.

NOAA estimates that domestic aquaculture production, both marine and freshwater, could increase by one million metric tons annually by 2025, generating 25,000 direct and 50,000 indirect jobs in the United States and \$2.5 billion in farm-gate sales, and enhancing regional food supply and security. However, a broad national aquaculture initiative is necessary for the U.S. aquaculture industry to substantially increase production levels. NOAA needs to leverage internal resources and work with external partners to develop an integrated framework of regulation, research, monitoring, infrastructure support, education, outreach and economic incentives to advance the development of aquaculture in the United States.

Numerous legislative and policy drivers call for NOAA to develop a comprehensive and robust marine aquaculture program to provide economic benefits and conserve wild fish stocks, including:

- The 1980 National Aquaculture Act;
- The 1998 and 1999 NOAA and Department of Commerce Aquaculture Policies;
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- NOAA's 2005 Annual Guidance Memorandum for Fiscal Years 2008-12.
- The U.S. Commission on Ocean Policy's Final Report to Congress;
- The U.S. Ocean Action Plan; and
- The National Offshore Aquaculture Act of 2007 (proposed)

Collectively, these drivers strongly call for NOAA to develop marine aquaculture through support of research, development of regulatory mechanisms, business incentives, environmental review and permitting, technology transfer, and outreach and education.