



One Industry, One Voice

August 31, 2001

Honorable Leon Panetta
Chairman, PEW Oceans Commission
2101 Wilson Blvd.
Suite 550
Arlington, VA 22201

RE: Marine Aquaculture in the United States

Dear Mr. Panetta:

We appreciate the opportunity to comment on the PEW Ocean Commissions Report "Marine Aquaculture in the United States: Environmental Impacts and Policy Options." The National Aquaculture Association (NAA) represents a diversity of aquatic animal producers from throughout the United States. Our members include producers of catfish, trout, salmon, striped bass, tilapia, ornamental fishes, shellfish and bait fish.

We believe the report includes some reasonable options to make U.S. marine aquaculture more environmentally sustainable. The NAA supports these options (see enclosed NAA policies) and has been actively pursuing many of them on behalf of our industry members. With the PEW Ocean Commissions interest in developing environmentally sustainable aquaculture, perhaps some collaborative efforts could be established between the Ocean Commission and NAA as we move forward.

We are concerned with some of the conclusions or environmental effects identified in the report. Several of these effects are highly speculative and not supported by scientific evidence. This can mislead policy makers causing inappropriate actions that could curtail aquaculture development in the U.S. The report also does not address several of the federal actions currently underway to address the concerns identified in the report.

The report identifies "biological pollution" (escaped fish, transgenic fish, and the spread of disease) as a concern. The actual impact of escaped fishes on native fishes remains to be determined. It is not at all clear that escaped fish, unless they are non-indigenous, would have any impact on indigenous populations. Similarly, the impact of transgenic fishes on native species remains to be determined. The NAA supports thorough testing of transgenic animals to determine ecological impacts prior to their use in production. There is no current commercial use of transgenic fish in the US. All of the fish pathogens affecting aquacultured species occur naturally. The close confines of net pens or other aquaculture rearing environments increases susceptibility of the fish to infection and disease. Aquacultured animals thus serve as the "canary in the mine" to alert specialists to the presence of the pathogens. These pathogens from the wild

have infected a variety of domesticated aquatic animals and have caused significant economic harm. While it is very debatable how ISA virus, shrimp viruses, the oyster drill or sea lice came to infect aquacultured or feral animals as identified in the report, it is important to note that significant steps are in progress to minimize the introduction of non-indigenous pathogens into U.S. waters. The USFWS, NMFS and USDA-APHIS all have ongoing programs to limit pathogen introductions. Most states, including coastal states, often have very restrictive programs to limit aquaculture animal pathogen introductions. The U.S. Joint Subcommittee on Aquaculture (JSA) has been working to coordinate federal agencies and state agency actions into a National Aquatic Animal Health Management Program. This effort has recently (June 2001) been re-invigorated. Dr. John Clifford (USDA-APHIS) is the committee chairman for this effort.

The report suggests aquacultured animals have adversely impacted marine ecosystems by utilizing fish meal. Many farm raised aquatic animals do rely on fish meal as a significant component of their feeds. The fish meals are also used by the hog and poultry industries in the U.S. and internationally. Total production of fish meals have been stable for the past 20 years. Aquatic animal use of fishmeal has increased proportionally with increases in production with economics dictating which animal industry is best able to purchase the majority of fishmeals. We support development of cost effective alternatives to fishmeal but believe fishmeal will continue to be a significant part of fish diets for many more years. In US waters, these forage fish are being sustainably harvested and any deleterious ecological impact of these harvests have not been documented.

The report identifies organic pollution and eutrophication as a concern. Many freshwater ecosystems are similarly impacted and there is a need to minimize pollution from all sources. It is in the best interests of aquaculturists raising marine fish in net pens to minimize organic pollution and grow fish in clean waters. Fewer disease problems occur and financial losses are minimized. The U.S. EPA is examining the need for aquaculture effluent guidelines. The EPA has enlisted the assistance of the JSA in collecting data. Many aquaculture industry representatives and university scientists are participating in the JSA Aquaculture Effluent Task Force. Various environmental organizations, including Environmental Defense, have been invited to participate in the effort but to date have elected not to. The EPA expects to propose effluent guidelines for all of US aquaculture in 2002.

The report identifies chemical pollution as a potential problem. The U.S. FDA and EPA have regulated drugs and chemicals in U.S. aquaculture for many years. There are only five drugs approved for use in U.S. aquaculture. Two of these are antibiotics (Terramycin and Romet-30^o), one is an anesthetic (MS-222), one is a parasiticide (formalin), and one is a spawning aid (HCG). The limited availability of antibiotics in U.S. aquaculture is in stark contrast to international competitors, e.g. Japan where at least 29 antibacterials are available. The report does not make a clear distinction between US and international therapeutic agent availability. The role of U.S. aquaculture in spreading antibiotic resistance factors or being a public health issue is unknown, but is believed to be negligible. The U.S. FDA is currently developing a program to address this issue. The U.S. EPA is evaluating the use of chemicals in U.S. aquaculture to determine if this use should be better regulated.

The report creates an image of U.S. marine aquaculture that is not in fact true. It relies on antiquated information (e.g. destruction of mangrove swamps), information from international practices that never occurred in the U.S., or on information that has never been peer reviewed. In

several cases the authors rely on highly speculative arguments that are not factually based. The report mixes freshwater aquaculture statistics with marine, potentially confusing the reader.

Nevertheless, the report serves a useful purpose. It reiterates concerns already identified by the U.S. aquaculture industry and the U.S. regulatory community. Many concerns are being thoroughly examined and addressed by federal and state agencies. The PEW Ocean Commission report encourages further examination and identifies various needs. The attention this report receives may ultimately help increase resources needed to help make marine aquaculture environmentally sustainable and economically viable. The NAA supports improved resources for this effort.

The NAA invites the PEW Ocean Commission to work with the aquaculture community and us in this effort. It might prove fruitful if we met to further discuss these issues and any opportunities for joint efforts.

Sincerely,

/s/

John R. MacMillan, Ph.D.
NAA President

Encl.