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Forum Urges Targeted Investments to Secure Maine's Marine Industry

by Kathleen Ellis

What are the current opportunities to create jobs and economic growth in Maine's marine-related industries? What are the possibilities for partnerships among the private sector, government, and educational and research institutions? Although many agree that we need better science to maximize the potential in marine and other natural resource industries, what does this entail and how do we get it? How much will it cost and what opportunities will it create? And finally, can we measure the benefits?

These were questions the Action Committee of 50 posed to its audience at the Science, Research and Economic Development Forum held March 4 at Husson College in Bangor. Founded two decades ago, the Action Committee of 50 now consists of 150 members of the public and private sectors in the greater Bangor area. The group's objective is to promote economic development in eastern Maine.

Robin Alden, commissioner of Maine's Department of Marine Resources (DMR), opened the forum by reiterating Governor Angus S. King's vision statement from his State of the State address that Maine's marine future depends on becoming a world-class leader in cold-water marine research. Alden also noted that the creation of 1,500 jobs by the year 2001 is one of three goals of the state's Jobs From The Sea program, an initiative also announced by King during his State of the State address. Alden said a primary concern is to stabilize the existing 22,000 jobs in Maine's traditional fisheries by 2001, as well as doubling those jobs in aquaculture from 500 to 1,000. Other goals of the initiative are for the state to host an international marine symposium in 2001 and for Maine to take the lead nationally in marine education for the public.

Charlton Ames, chairman of Sea Run Holdings in Eastport and a member of the University of Maine (UM) Development Council, said Maine's aquaculture industry is fortunate to be accepted widely by the general public, unlike in Washington state where fish farmers are seen as a threat by environmental groups. However, Ames warned that Maine salmon farmers face tough competition from Chile, Norway, and other countries. Ames stressed that there is a need for team building, collaboration, and leveraging of funds to secure Maine's aquaculture future. He said the state's science community has a role to play in developing and securing new marine-related industries. "We need a marine science map of Maine to know where the marine institutions are and who can do what," he said. "We cannot survive on salmon alone. We need other species to grow."

The forum's industry panelists were quite diverse, from the owner of a Down East shellfish business to the chief executive officer of the Center for Innovation for Biomedical Technology. Their responses to how marine research can benefit industry also ranged widely.

Some of the discussion focused on competing successfully against Canadian rivals. "There are practical opportunities in crab, lobster, and salmon, but we need to figure out why Canada can process lobster and salmon more cheaply, and we need to fix this problem," said Albert Carver of Carver Shellfish on Beals Island. "Otherwise, crab processing will go over the border, too."

Dennis Frappier of the Portland Fish Exchange called for a more effective and cooperative fisheries management policy, emphasizing better working relationships among the state, researchers, and industry. The problems of declining groundfish resources, especially near the coast, are affected by much more than commercial fishing activities, he said. Understanding the impact other variables such as nonpoint source pollution and water temperature have on juvenile fish mortality will help to develop strategies for restoring stocks and maximizing the sustainable yield from the Gulf of Maine.

Frappier also noted the importance of gear technology in improving the escape capabilities of juvenile fish and the selectivity of fish that should be protected, which would enable the industry to maximize the potential of the natural resources available. In addition, local research must be emphasized, lest federal regulations result in harvesters and auctions alike not being able to survive. All research, Frappier said, should be done with the close cooperation of the commercial fishing industry, which can provide access to the research environment in a timely and cost-effective fashion, and with fishing experts whose insights can offer not only feedback but a reality check.

According to Joe McGonigle, director of the Maine Aquaculture Association, Maine's aquaculture industry is exploring other species such as cod, halibut, and sea urchins. "But the state needs to catch up with innovations just over the border in New Brunswick," he said. McGonigle also sees considerable merit in aquaculture research and development, but he has a strong sense for why it has lagged behind that of other countries. "Maine's aquaculture industry generates the most revenue after lobster, yet the United States is light-years behind the world's leading producers of finfish," he said. "The basic aquaculture science for salmon was done in the 1950s in Norway. Our nation is a Third World country when it comes to aquaculture. I think it's because the money isn't there."

Carver agrees that an investment in marine science and technology is required, particularly if that investment creates a more vibrant employment picture along the Maine coast. Those jobs produced could be secondary rather than primary in nature and pay, because either would enhance the regional and statewide employment picture. "What would it do on the Maine coast if we created five thousand \$10,000 jobs from Kittery to Eastport?" Carver asked. "This would put more than \$50 million into Maine's economy."

Building a dynamic marine biotechnology sector is critical to the creation of new jobs and economic growth in marine-related industries, as well as enhancing Maine's status on the global aquaculture stage, said Thomas V. Long II, CEO of the Center for Innovation for Biomedical

Technology. "There are three essential ingredients to building a successful marine biotechnology sector," Long said. "The first is a determination of the unmet demands that might be served by the sector; second, we must analyze the competition and establish where our competitive advantages lie; and third, we must produce a pipeline of entrepreneurs who can form strong management teams and build corporate structures--this is a role for Husson College and the University of Maine." Long also stressed the importance of developing access to capital for building a successful marine biotechnology sector--particularly equity capital for major opportunities--and the availability of adequate space for start-ups, typically wet laboratory space in the case of most marine biotechnology firms. Carver also called for more partnerships among those involved in Maine's aquaculture industry, though Lori Howell of the Maine Aquaculture Association suggested that many partnerships already exist, such as the relationship between her group and the Department of Marine Resources.

One other element that David Cousens, president of the Maine Lobstermen's Association, believes may enhance the goals of the industry is a focus on public awareness. "We need to publicize how valuable the marine industry is to the state," he said. "There needs to be more marine education. Since we don't have the collective power of Bath Iron Works or L.L. Bean, we need to let the state know how important we are."

Finally, Bruce Sidell, director of the newly founded University of Maine School of Marine Sciences, urged the state's business leaders and industry sector to "take ownership of your state university and ask what we can do for you." Sidell emphasized that the School of Marine Sciences needs an increased operating budget to house its faculty in one building and to conduct research important for the state's marine industry. Marine faculty presently are investigating potential species such as cod and halibut for aquaculture, marine economics issues, dredging in estuaries, marine mapping, the life histories and ecologies for multiple species in the Gulf of Maine, and DNA sequencing in marine organisms.

According to Sidell, for every \$1.2 million the state invests in education, \$5.8 million is provided by other sources, both federal and private. In addition, research at the university involves training and on-the-job experience for large numbers of postdoctoral scientists, graduate students, and undergraduates. These students become the skilled work force necessary for the support of high-tech industry and often are the entrepreneurs who use their science training for the formation of new businesses such as the state's shellfish aquaculture industry.

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