# The Opportunities and Threats of Coastal Development:

An MPR Roundtable Discussion

Moderated by Paul Anderson



In May, nine discussants—each with a unique perspective on coastal development—convened to explore changes occurring on the Maine coast, whether those changes are consistent with what Maine people want, and what looming issues invite further debate and creative problem solving. Their discussion spanned a range of sensitive issues including aquaculture development, the displacement of traditional economies, the effects of development on coastal wildlife populations, and the reality of diminishing public access to the coast. All agreed that with vision and careful planning we have an opportunity to shape the future of the Maine coast, but the jury is out as to whose vision and whose planning will prevail.

PAUL ANDERSON: Thank you for joining this forum on coastal development. As some of you mentioned prior to the start of this discussion, coastal development may be viewed through many different lenses. In its broadest context, coastal development encompasses any form of change in our coastal communities. For example, as Jay [Espy] points out, evidence of coastal development includes the rise in boating activity along the coast, which is placing pressure on islands and on the mainland coast. It means marinas are more crowded. It means there is more traffic on state highways and along the Route One corridor. It means trying to get on or off Mount Desert Island on a Friday or Sunday may be difficult. Coastal development also refers to the intensity of economic use and, in this context, as Chris [Hall] points out, we need to get over our reticence in applying a qualitative filter to various economic uses. Why do we consider Camden, Maine or Venice, Italy to be good economic development, and Scarborough, Maine or Newark, New Jersey to be bad economic development? Although we won't explore this question directly, it does raise the following questions, which we will explore: What changes are occurring along Maine's coast? Are they consistent with what the people of Maine care about? What are the looming issues that invite, or perhaps even demand, further debate and creative approaches to problem solving? Finally, how do we measure the achievement of our goals? Every decision we make today brings us one step closer to an end state. Yet do we know where we're headed, and is it the direction in which we want to be going?

To begin, development is often linked to economic opportunity. Along Maine's coast it's obvious that economic opportunity has "found" some residents and some communities, and has "missed" others. What are your thoughts?

JILL GOLDTHWAIT: The district I serve [covering coastal Hancock County] is often presumed to be one of the wealthier areas of the state, but it isn't, not even Bar Harbor. The last Census indicated that roughly 23% of the people in Bar Harbor were at or below the poverty level. This is because many of the jobs in my area are seasonal, low paying, and lacking

in any benefits.

Along Maine's coast, when you talk about economic opportunity, access becomes a really important issue in a way that it might not be in other areas. There is some sense of public right to the shoreline, yet ability to exercise this right is rapidly diminishing in the state of Maine. If you have the money to buy a home on the shorefront, it eliminates the opportunity for those without the ownership right to get to the shore—to swim, boat, or whatever. Unlike California, which has a lengthy shoreline that's almost entirely visible and accessible, Maine's coastal frontage is rapidly being bought up and put into private hands. This means a significant public resource is not accessible to the majority of people in the state.



Paul Anderson is Associate
Director of Maine Sea Grant
and Marine Extension
Program Leader for the
University of Maine
Cooperative Extension and
Sea Grant Programs. He spent
the last ten years working
for the Maine Department
of Marine Resources on coastal
pollution and seafood safety
issues, where he gained knowledge of many marine-related
issues along Maine's coast.

STEVE MILLER: In addition, it seems to me that we're experiencing a change in land-use ethic. I'm seeing a lot more "No Trespassing" signs, and those of us who live on the coast no longer feel welcome to traverse properties that we have had access to for years. Not only are there more people, they are making access more difficult. There's an attitude change going on along Maine's coast that, in some cases, is inhibiting and even prohibiting access to the shore for recreation and other kinds of uses that aren't protected under Maine law. I think that's a real problem.

CHRIS HALL: To me there's an interesting link between this attitude change and the economic changes that the state is going through as a whole. There's a lot of talk about the state's two economies but I think of Maine's economy in terms of at least three overlapping economies; in southern Maine and expanding eastward we have a knowledge economy where adding value to

Jill Goldthwait (no photo available) has served three terms in the Maine Senate representing District 5 (coastal Hancock County). She is Chair of the Marine Resources committee and was appointed by the legislature to be a member of the Atlantic States Marine Fisheries Commission. Prior to her tenure in the legislature, Goldthwait served three terms on the Bar Harbor Town Council, eight of those nine years as chair.

information is key. This is encroaching on a traditional resource-based economy in the rest of the state, where adding value to materials is key, whether they're harvested, caught, mined, or whatever. Then, superimposed on the coast, we have a tourism and retirement economy consisting of people who have made their money elsewhere and who have brought it to Maine to spend. Consequently, along the coast, the traditional economy is being squeezed from two directions. Moreover, the people who move to and reside along the coast typically have made their money in suburban or urban environments, and they bring a different mindset: "I have a small private plot. I have no interest in the commons." This attitude flies in the face of what has been a traditional ethic.

JILL GOLDTHWAIT: Of course, there's a flip side. Sometimes those "No Trespassing" signs are put up because, when the land was shared, people failed to show any respect; they would go down to the beach, make a lot of noise, leave behind their garbage, leave behind their human waste. Sometimes, they would walk up and picnic on the owners' lawns—in some cases even walking up on porches to look in the windows of houses. It's quite extraordinary. So, I think it's not always a new ethic that says, "I don't want to share my land."

PAUL ANDERSON: Dianne, access to the coast in Washington County may be less of an issue than it is along other parts of the coast, but access to opportunity is not what it is elsewhere. Would you agree?

**DIANNE TILTON:** Actually, access to the coast is access to opportunity, and it is becoming an issue. Historically, in a lot of towns, fisherman have been able to access the water over somebody's private land because their grandfather did before them, and their grandfather's grandfather did before them, and it's just always been that way. Now, the landowner is saying, "Wait a minute. If I develop this land or sell it I could get a lot of money for it. So why am I letting these fishermen drag their boats across my land? Why not charge them when they haul their boats out on my land for maintenance? I should be benefitting from that somehow." So, access is becoming an issue in Downeast Maine.

PAUL ANDERSON: In our planning, how can we assess whether a certain type of development is desirable or whether it will have negative impacts?

JAY ESPY: We have to start with some benchmarks. What do we care about? I think most people would agree that we do not want a highly developed coastline as is found in some other parts of the world. We want access; we want to be able to go to those places where we have traditionally gone, whether they be on the coast or in the north woods. There are some traditions that have built up in Maine that are very different from other places. We really have to define what we value—what we truly care about—before we can decide what direction we want development to go in.

JILL GOLDTHWAIT: One of the difficulties in answering that question is that the culture of meetings and committees and all of that is generally not a Maine culture. If you were to have a local meeting—as my community did last night—to talk about development of the town, the people who would show up are almost always from "away." They are people who are used to a culture of meeting rooms and subcommittees. This contrasts with the Maine culture, where work gets done at the coffee shop or in the post office or on the street corner, and gets conveyed sort of through osmosis to the selectmen. Until we had the parameters we have now around local government, a selectman would

sit down in somebody's kitchen and say, "here is what I have heard and here is what I think," and decisions would be made on this basis. This worked very well, and it still does in isolated towns where this culture has not been diluted or perverted with our ideas of public hearings and due process and right-to-know and so on. So, there's a bit of a culture clash.

**PAUL ANDERSON:** So, how can we include the needs and values of the "under-represented" in our assessments of coastal development?

JOHN HOLDEN: You have to take the work to the people. I've been working on a tourism initiative in Piscataquis County, and I've spent a lot of time just trying to understand the local culture and the residents' desire for the project. There is an entire art and science to gathering this deeper understanding, a process many of us in the development world are only now recognizing. As a very practical matter, you not only need to go to the people, but you also need to speak their language. I mean, I could go in and say sprawl is an issue, but a lot of people in the communities where I work would love to have sprawl as an issue.

JAY ESPY: I never would have imagined ten years ago that the Maine Coast Heritage Trust would have been involved in an affordable housing project in Cutler and now in Frenchboro. It came from being forced to stay in those communities long enough to begin hearing things we hadn't heard before. By staying we understood things that we didn't initially and, as a result, I strongly believe that any discussions about development are best kept local.

However, it's also true that a local community doesn't always have the models or examples to draw from to be able to do things better. There needs to be a way for people to see beyond their immediate horizon. I've always dreamed, for instance, of being able to bring school children from Washington County down to York County, and vice versa.

It seems to me that policy-minded people should be helping to put people from local communities in touch with one another. We need more ways of bringing people together so they can learn from one another. This is what the Land Trust community has been trying to do by reaching out to new constituents. It's one thing for all of us to sit around and talk about how wonderful it is to protect that next piece of land. It's another thing for us to sit down and have a conversation with someone who is making his or her living working that land.

### ANNE HAYDEN:

Brunswick is at a cultural crossroads in terms of having residents from away, like me, and having residents who go back generations and who see Brunswick as their community. Historically, there's been some tension between these groups. But recently I was a member of

a group that was charged with updating the coastal protection ordinance for Maquoit Bay. We adopted a stakeholder approach, and we brought together local people from all walks of life. We involved people who were concerned about property rights and people who were concerned about the rights of clam diggers, and even people from away who think we should figuratively "blow up the bridge" now that they've moved to Brunswick. We worked for two years coming up with a scientifically viable ordinance that we believed would protect the water quality in Maquoit Bay.

Unfortunately, when it came down to it, the Brunswick Town Council could not live with what we proposed. The ordinance called for reducing housing density in the designated rural part of the town from one-unit-per-two acres to one-unit-per-four acres. Although we had worked very hard to build in a lot of flexibility so



Stephen Miller is a lifelong resident of Maine and father of two sons. Since 1974 he has called home an island in Penobscot Bay, where he is Executive Director of Islesboro Island Trusts—a nonprofit land conservation organization—as well as the chairman of the municipal comprehensive planning committee, a member of the board of directors of Islesboro Affordable Property, and an advocate for all of earth's communities.



Chris Hall is Managing Partner of the Portland consulting firm, Stafford Business Advisors, whose work for public clients covers the fields of transportation, economic development and planning. His clients include municipalities and regional agencies in six of Maine's eight coastal counties. An economist with a Ph.D. from Oxford University, Hall's most recent major publication is Steel Phoenix: The Fall and Rise of the American Steel Industry (St. Martin's Press, 1997). He lives in Bristol, Maine.

that, for example, the person who had owned a twenty acre lot for many years—and who wanted to give a lot to each one of his children—could still do so as long as a majority of the land remained protected. However, people saw this as a "takings," even though it would not be defined legally as such. Ultimately, the ordinance was voted down. Still, while the outcome was disappointing to me, I felt good about our process and about the fact that we got people talking about watersheds. Before we started, there was absolutely no understanding, even in a town like Brunswick, of what a watershed is and how it can impact the town's receiving water. Now people have some understanding of this issue and perhaps that understanding will influence future decisionmaking.

**STEWART FEFER:** We've been talking about decisions

being driven at the local level but the counter side to that is that sometimes it can be really hard to evaluate a situation at that small a scale. For example, consider seabird resources: A local planning group might look around and say, "well, there seems to be a lot of birds here so we don't need to worry about protecting them." But from a national perspective, Maine may be the only place in the country with those seabirds. While there are many examples of successful conservation at the local level, and we always need to engage the local level in the stewardship of its natural resources, sometimes the dialogue about what we value needs to occur at the regional, state or even the national scale.

**PAUL ANDERSON:** So, how do we measure the impact of development?

ANNE HAYDEN: My flip answer to that question is that currently we measure coastal development by the political clout of those whose ox is gored. My real answer is that there aren't any simple measures. For example, Brunswick was recently ranked fifth in the country as a location for retirees. On the one hand these retirees don't want to have a lot of industrial development but, on the other hand, they would love to have the traditional fishery continue. How do you capture in simple measures this type of incongruence?

JOHN HOLDEN: One thing that is endemic to the work of many of us who are sitting around this table is that we do projects; I move from one project to the next across different communities. Sometimes someone local will say to me, "we tried this ten years ago," and it makes we wonder whether I'm just going around in circles. What's missing is a systematic measurement over time of local values and local perceptions of development. We lack long-term feedback loops, which makes the determination of real progress difficult.

KATHLEEN LEYDEN: Currently, we measure coastal development by counting the number of building permits, or by miles of roadway constructed, or by acres of habitat protected, or by analyzing land use and land-cover change. Unfortunately, while we can put these types of pieces together, we can do very little analysis of the collective impact. Last summer, the State Planning Office published the report, "The State of the Maine Coast," but it was really a collection of facts and figures. I think the office learned more about what it doesn't know than what it does know. So, I would argue that we do not know how the patient is doing right now.

CHRIS HALL: From a macroeconomic stand-point, there are some yardsticks we can use to judge the right development. For example, we could assess plot value—the ratio of a similarly sized square on coastal frontage versus inland—or the rate at which these values are diverging, or shorefront size as it gets subdivided, or the percentage of public access to the coast. Certainly we can compare ourselves internationally

on these types of measures. In my native England there are fifty million people living in an area smaller than Maine, yet two thirds of the coastline is protected and open to the public. Economic development is channeled by centralized government fiat into inland areas and away from the coast. At the moment, Maine's coast is an economic driver for the whole of Maine. I would argue that we have to come to terms with whether we want to maintain the coast as an economic driver or to choke it off by channeling development inland, although I'm not sure we have the political culture to do what the Europeans are doing.

STEWART FEFER: Just measuring development on a broad scale from an aerial photo or a satellite image will tell you whether there is more development, but it's not going to tell you whether development is beneficial. From a wildlife perspective some habitats along the coast are more sensitive and/or more important than others. While we want to limit the development in those areas, we don't necessarily need to limit development in all areas.

ANNE HAYDEN: When I was involved with the Casco Bay Estuary Project we wrestled with this issue of how one measures the impact of spending millions of federal dollars in the region. Basically we came down to counting the number of times the project was mentioned in the press. All of the other measures were so confounded by other things.

DIANNE TILTON: Measuring development is a noble thing to do but it's easier said than done. A big part of our Sustainable Cobscook project involved developing measures, indicators, and benchmarks. Looking back on our efforts, I would say that the community was frustrated in this regard. On the one hand we looked for ease and consistency in our measures but, on the other hand, there were no data for the kinds of things we were concerned about. We would have liked to have developed an index for each of the areas we were concerned about, like environmental quality, economic quality, and how well each of our communities was doing. It seemed like the most impor

tant thing that could be present in any one of these systems was diversity; for instance, you need a lot of different kinds of industry, and a lot of different kinds of wildlife and marine life, and a lot of different kinds of people, opportunity and projects in a community. But we had a very difficult time getting at these things. We ended up learning a lot and incorporating measures into individual projects. Still, we had to go on to things we felt made more progress.

JAY ESPY: I wish we could measure how valuable the character of Maine is. For instance, I have family from Maine but I grew up in Ohio. Now, when's the last time somebody tried to market a product with the word Ohio in it? Or New Jersey? You know, who cares? But when you talk to somebody about being from

Maine, all of a sudden their interest level goes up. Whether we package a product from Washington County, or we bring somebody to our state to spend money in it, Maine is different from everywhere else. This is a strategic asset. Somehow, we need to be able to measure this asset, or at least recognize that Maine's strategic advantage comes from not having had many strategic advantages in the past. So, let's capitalize on this and figure out how to use it. Interestingly, our economic development models derive from those places that no longer have this strategic advantage because they developed differently. We don't necessarily have to follow in their footsteps.

ANNE HAYDEN: In our rush for economic development, we certainly don't want to undo this advantage.



Dianne Tilton has been Executive Director of the Sunrise County Economic Council since 1993. During that time she has explored many coastal development issues in Washington County. Prior to Tilton's work with the council, she was Executive Director of the Machias Bay Area Chamber of Commerce. A native of Washington County, she graduated from the University of Maine in 1981. Tilton lives in Harrington with her husband and two children.



Jay Espy is President and Chief Executive of Maine Coast Heritage Trust (MCHT), a non-profit organization dedicated to conserving lands that define Maine's distinctive landscape. Since 1970, MCHT has protected more than 105,000 acres of outstanding scenic, ecological, recreational and cultural land, including 315 entire islands and hundreds of miles of shoreline. Before joining MCHT in 1985, Mr. Espy served as an environmental planner in the Washington, D.C. and Boston offices of ERT, Inc., an environmental consulting firm. Espy lives in Freeport, Maine with his wife, Lynne, and their three children.

# JILL GOLDTHWAIT:

But how do we reconcile competing visions? There are some who would say that "Maineness" has to do with independent character, individual rights, and that whole thing. On the one hand, you have the Natural Resources Council of Maine which, according to a recent news article, is at or close to its fifty million dollar goal for land purchase in the state of Maine. On the other hand, you've got two guys who want to build an urchin processing plant on the shore in an area that the Natural Resources Council wants to buy and protect. Who do you think is going to win? Does that make it more Maine or less Maine?

## KATHLEEN LEYDEN:

I would argue that the urchin processing plant is more Maine, and that it would be nice to have an adjacent property in conservation ownership. Maybe the proposed site for the urchin processing plant is not the right place; maybe it needs to be relocated somewhere else. We need to retain rural places as

places that are organized for production.

JILL GOLDTHWAIT: In my opinion, constant relocation is what's happening in the fishing industry. We love our fishing communities and we love our fishermen, but if you build a house next to a pier, you realize that fish smell. So, fishing is great and we want to support it, but, since it might no be happening in the

right place, we keep pushing fishing activity from one place to another, until we push it off the waterfront entirely, as is the case in more developed communities. You don't see a lot of commercial fishing activity in Camden's harbor; it was pushed to Rockland, and soon it will be pushed out of Rockland. We like it but we don't want it next to us. Fishing is a community- and harbor-based activity, so once it's moved out of its harbor, it's not that it goes somewhere else, it just goes away and is gone.

ANNE HAYDEN: It's an incremental process, and the logical extent to supporting tourism over fishing is that eventually we find it more economically efficient to pay a few fisherman to ride their boats around and look picturesque, than to actually fish.

CHRIS HALL: I live on the mid-coast, an area that certainly has changed from being organized for production to being organized for consumption. The people who have made their money elsewhere trump the people who are still trying to make it locally because they have greater economic power.

**KATHLEEN LEYDEN:** I'd like to see working waterfronts elevated to one of those state-level policy areas like sand dune protection, or oil and gas development, where the state has made a policy statement, and has developed programs to support working waterfronts.

**STEVE MILLER:** These are important points, but I don't think we can ignore the fact that some of our fisheries have simply collapsed. This is as much a threat to fishermen as is tourism.

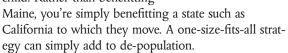
PAUL ANDERSON: Steve's comment suggests that change is occurring for many different reasons—some of them not fully understood. What are some of the changes along Maine's coast and how should we respond?

**JAY ESPY:** It seems to me that one of the things that's changed is the fact that there's simply more more of everything. Consider the increase in tourism along the coast. There's also more seasonal residential development, and there's certainly more money than there was in the eighties. Even if we lament the fact that a lot of businesses in Maine are now owned by out-of-state corporations, that's been the history of this state. Who owned the northern forest one hundred years ago? Who owned some of the canneries? Outof-state ownership isn't a new trend, there's just more of it today. This summer Mount Desert Island had a big hooplah over whether to grant a permit for a dock. The hearing with the Department of Environmental Protection lasted hours. I think this is an indicator of how much concern there is about the fact that there are more docks all along the coast of Maine. There's also a proposal for pay-for-rent moorings that's making it's way through Penobscot Bay. Each time we make these development decisions, we get closer to an end statein other words, we're shaping the way Maine will look one hundred years from now—and with each step the stakes get higher.

KATHLEEN LEYDEN: One of the things I've noticed is the vibrancy of a number of downtowns along the coast. Rockland, for instance, may be experiencing a displacement of its traditional economy, but it's an awfully nice place to go. Communities are developing their cultural amenities and offering more adventure tourism—activities like sea kayaking and hiking. This fits with the current trend in economic development, which emphasizes the attraction of talented people over business recruitment. We're learning that talented people often are attracted to the amenities of an area; this is what draws not only them and their families but also their business talent.

CHRIS HALL: While business recruitment may be out of favor, it's still a viable economic development strategy for Maine. One of the problems is that economic developers and community planners don't

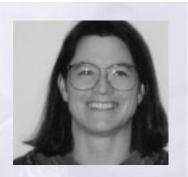
always understand what drives different economies, so they don't understand what businesses are looking for. I think we've got our strategy right in southern Maine, where education is obviously the infrastructure that drives a knowledge-based economy. But I don't think we've got it right in the balance of the state where there's what I call a materials-based economy. Transportation is the infrastructure that drives this economy because by definition you add value by moving stuff around. I fear that applying simplistic one-size-fits-all solutions will fail. For example, if an educational strategy based on laptop computers aims to educate every child in the state for an information economy, there's a danger that you educate a child in Houlton beyond the capacity of Houlton to employ that child. Rather than benefitting



I wish that we could get away from the image of Maine as being a lighthouse. Every state puts forward a visual image; for example, Vermont has happy cows. My wish for Maine is that we would adopt the L.L. Bean cobbler—the guy with the little leather apron and the peaked hat—who is working on his boot; it conveys pride in quality of production. It's a cultural statement that not only expresses a lot that's still true about Maine, but also is a lot more useful than a lighthouse in terms of bringing in businesses to the state. Clearly, only by going after high-quality production will we be able compete.



John Holden works for Eastern Maine Development Corporation as an economic development specialist. In addition to overseeing EMDC's data center and GIS services, he works closely with the communities of Winter Harbor, Gouldsboro, and Cutler, and serves as Director of the Piscataquis County Economic Development Council. Holden has a master's degree from the University of Maine's Department of Resource Economics and Policy.



Anne Hayden is a consultant to nonprofit organizations and government agencies on marine-related research, management, and policy issues. Current projects include the testing of satellite data applications to coastal management, and the development of cooperative, ecosystem-based research priorities for fisheries in the Gulf of Maine. Hayden resides in Brunswick, where she recently chaired a taskforce appointed by the town council to review Brunswick's environmental ordinances. Hayden is also President of the Maine Audubon Society.

# JOHN HOLDEN: It seems to me that the diversity of our fisheries' resources have expanded. Today, fishermen are harvesting alewives, sea cucumbers, sea urchins. This trend represents a new opportunity for people living in coastal Maine to enhance their

# JILL GOLDTHWAIT:

incomes.

Aquaculture is also an opportunity although there's literally an explosion anytime anyone says "aquaculture" on the coast. People don't want to look at somebody who's working. They say, "There are going to be barges and there are going to be trucks with flashing lights." So, what could have been, or could be, a really wonderful economic opportunity, is being shoved off by immediate warfare when anyone applies for an aquaculture lease.

**DIANNE TILTON: I've** heard about places in Vermont

that were having problems with people from "away" moving in and then putting up a fuss about the farm next door—sometimes to the point where the farmer stopped farming because his life had been made so miserable. Some of these communities started sending out letters to the people who were applying for building permits or who wanted to buy land or a home. Basically the letter said, "We live in a farm community, and this is the impact of having a farm in your immediate vicinity, so get used to it or go away." I'm sure the letters were worded kindly, but the gist was clear. Why can't we encourage our fishing communities to do the same thing? Part of their comprehensive plans could indicate that they've chosen to protect a traditional

lifestyle. Then, when people express an interest in property, they would know that town "X" is a fishing community that chooses to support aquaculture and traditional fishing. The message would be clear: If you choose to buy a home or land with views of the ocean, chances are, you're going to see some commercial activity; this is the way this community operates.

JILL GOLDTHWAIT: We do have a "right-tofarm" law that says if you have an existing farm and people move in around you, they can't restrict your farming activity because it's noisy or it smells or whatever. Maybe, we need a "right-to-fish" law.

ANNE HAYDEN: It's tough to regulate that though. One of the reasons Rockland is now a pleasant place is because it doesn't have the fish rendering plant anymore, and I'm not sure that the people of Rockland wouldn't say they like it better without the plant.

JILL GOLDTHWAIT: Fish are going to smell but I think processing has become technologically more advanced; the smell is not going to be as overpowering as it used to be.

JAY ESPY: I think we have to separate traditional fishing from aquaculture. One of the things that aquaculture is not, in many people's minds, is traditional fishing. I mean some people will object to aquaculture no matter what its context because it doesn't fit the image in their minds of the coast. On the other hand, some people are seeing drawings of proposed aquaculture facilities that aren't just black, low-profile, hardto-see pens. They're being shown pictures of plants on floats. This is a whole new industrial infrastructure that Maine hasn't seen before. So, some people are invoking their right to summer because the state's current regulations don't take into consideration all of the things that they're concerned about, such as visual impact, proximity to boating lanes, environmental impact, and even the cultural impact of this new industrial use of the ocean.

JOHN HOLDEN: I think in order to fulfill the potential benefit of aquaculture, we're going to need to adopt a local, community approach to its development. Each community needs to go through a valid comprehensive planning type of process where it comes to understand what aquaculture is and what it is not, and whether it wants to go forward in terms of developing it. This has been the approach taken in Nova Scotia. We should create a process where aquaculture specialists, with no vested interest in a given community, provide information about different kinds of aquaculture. Local or regional development and planning organizations could host informational meetings to gather local insights, ideas, and concerns. At the same time, community members could learn about new aquaculture technologies and processes. This might help remove the "fear of the unknown" factor. We then could work with communities to help identify opportunities for aquaculture development, much in the same way we already help communities consider whether other forms of economic development are appropriate for them.

ANNE HAYDEN: Unfortunately, a local community doesn't have any jurisdiction over the permitting process. The law would have to change.

**DIANNE TILTON:** I believe the law should change. I was talking with a guy yesterday who was interested in starting up an aquaculture operation in the town where I live, and I said, "Look, if you want to get anywhere, talk to the fishermen first, drag out a chart, find out where they don't go, and then see whether you can get a permit for that area." Asking first is a great way to diffuse potential conflict down the road. Unfortunately, the way this kind of thing is approached by the state often puts off the people who really should be participating in the process. For instance, meetings should be scheduled around the tides; the notice that goes out to people should be in plain English; and it should state right up front what's in it for them-why they should bother taking time away from their families, or their businesses to go to this meeting. The process has to be genuine from beginning to end if you're going to make a local approach work.

# JILL GOLDTHWAIT:

Another layer of new development on the water front is all of this high-speed stuff—jet boats, cigarette boats, and fast ferries. These things are transforming the look and feel of the coast. I've lived on Mount Desert Island for twenty-two years and when I first arrived, the boating activity consisted largely of fishermen, the Bluenose, and the occasional state ferry. Now, I see whale watch boats going back and forth all day long along the front coastline of the island. What used to be an amazing place where all you heard were waves and seagulls is now subject to the constant drone of motor activity. There's also the Cat, which neither looks nor feels like a boat, yet it is the image we promote of the marine experience from Maine to Canada. We continue to talk about increasing the number of high-speed ferries to get from one place to another. Yet we're talking about large boats in which people are encapsulated without the ability to go on deck or, if there is a deck, where it's too unpleasant to be because of the speed and the diesel fumes. When we make



Stewart Fefer is Fish and Wildlife Biologist/Project Leader for the United States Fish and Wildlife Service's Gulf of Maine Coastal Ecosystems Program, located in Falmouth, Maine. Fefer began his Fish and Wildlife Service career with Ecological Service's in the Northeast Regional Office. He also has worked as a refuge biologist and refuge manager of the Hawaiian Islands National Wildlife Refuge, and as an assistant refuge supervisor for northern refuges in the northeast region. Fefer has degrees in Natural Science and Wildlife Management, and has published more than fifty technical reports and publications on coastal biology and management.

use of the water in this way, we're doing it in a way that is so removed from the maritime tradition as to not be anything like a boating or water experience. Instead, it's a way to get really fast from point A to point B. Plus, they interfere with our existing maritime traditions. There are a number of people who are very, very anxious about what impact this trend will have on the lobster industry. It's one thing to have an occasional



Kathleen Leyden, with her dog, Connor, directs the Maine Coastal Program (MCP), which is housed at the State Planning Office. MCP promotes the conservation and sound development of coastal resources through policy development, local technical assistance and pilot projects. Leyden holds a master's degree in Urban and Regional Planning from the University of North Carolina and was a municipal and regional planner in Maine before joining the State Planning Office.

cruise ship that stays in the channel; it's another thing to have all these other boats transporting people, and looking for whales and birds. These boats are going to make a big difference to the water landscape in the next decade.

# KATHLEEN LEYDEN:

In fairness, the ferries are a response to the fact that more people are coming to the Maine coast and we need an alternative to get them out of their cars.

# JILL GOLDTHWAIT:

We might "want," but we don't "need." An alternative would be to develop carrying capacities. In Cape Cod's state and national areas, for instance, they've determined the carrying capacities of the natural features, and then they've built parking lots that correspond to these capacities. At each site they know when they've hit their carrying

capacity because the parking lot is full; if you don't fit in the parking lot, you don't stay there. You can't park all along the road, as you can in Acadia National Park, which has a become a linear parking lot from one end to the other.

JAY ESPY: This issue of "carrying capacity" is one "we"-in Maine and in the United States-really don't like to deal with very much. Great Britain has had to deal with this issue. Currently, they're working on a twenty year conservation project called Enterprise Neptune, and one of the things they've had to deal with is the establishment of carrying capacities. In Maine this means we might ask, "How many people can we put on Mount Desert Island? How many peo

ple can we put in Penobscot Bay?" This is different than asking how many buses or boats do we have. But in the United States we don't like to deal with this issue because it decreases our sense of freedom.

STEWART FEFER: Ten to fifteen years ago we were concerned about protecting the salt marshes in the southern half of the state. So, we went ahead and protected the salt marshes, but we didn't anticipate that soon thereafter all of the land around the salt marshes would be developed. Essentially there was a second phase of development after the ideal of deep water frontage was fully exploited. Developers began building these stately homes overlooking mud flats and salt marshes, and now a salt marsh is also a popular view. This is a change in the culture. A view of any shoreline is now valuable.

PAUL ANDERSON: Has this had an impact on coastal wildlife?

**STEWART FEFER:** There are declining populations of coastal wildlife and it is evident as to why. As the human population continues to increase in the coastal areas of Maine, coastal wildlife and fish populations have declined due to fragmentation of habitat, loss of habitat due to disturbance and degradation of water quality. The list of state endangered species includes piping plovers and least terns whose populations are endangered due to development and disturbance of sand beach habitats. I referred to the increase in development around salt marshes where the salt marshes had been protected. The increase in development around the marshes has resulted in a degradation of water quality in the marshes due to runoff from roads, driveways and rooftops, and from fertilized lawns and other landscaping. This degradation of water quality affects the health of the wildlife and fish that inhabit the wetlands. In addition, associated with the increase in development is disturbance of surrounding habitat by human activities and pets. Nesting birds and other resident wildlife are negatively affected by disturbance and by predatory behavior of pets. The

edge between the water and the land is an especially diverse and productive habitat for wildlife. This same edge is preferred by people. Wildlife and fish that are sensitive to human disturbance and habitat fragmentation have declined. We should provide special protection to places that support significant habitat for fish and wildlife—and direct development to places that are less sensitive—if we wish to maintain our present populations of fish and wildlife for future generations.

**PAUL ANDERSON:** Assuming we have an educated populace who want to make good decisions that promote opportunity and access, what can our policy people learn over the next period of time about creating sustainable development on the coast of Maine?

JOHN HOLDEN: It's not always clear where common property ends and private property begins. Coastal development is taking place right at the edge of this big common proper-

ty resource—the ocean.
There is a tension between
the rights of private property owners and the rights
of the users of this common
property, and I don't think
clarifying the legal aspects
of who has ownership
rights will eliminate this friction. There are some significant policy issues we need to
deal with as a state.

JILL GOLDTHWAIT: But they're not, and this is a really important distinction that has been drawn for us by the Department of Marine Resources. The whole system of licensing—even for aquaculture—is not a property right. The distinction is critical because we have no process in Maine that cedes a property right to a water user. They don't own bottom, they don't have an exclusive right to bottom, they simply have a license to pursue a particular activity.

ANNE HAYDEN: Whether or not a license is an actual right, people recognize it as such. Fishermen obtain a right to open access and, for the most part, believe they should have the right to fish where and when they want. Coastal property owners believe they have a right to view the ocean as wilderness. Yet in reality the ocean is far from a wilderness. If we were to map all the bald eagles' nests, underwater cables, moorings, docks, each of the water classifications, etc., all of

There is a tension between the rights of private property owners and the rights of the users of this common property, and I don't think clarifying the legal aspects of who has ownership rights will eliminate this friction.

ANNE HAYDEN: Many people operate with the principle in mind that everything on the land-side is private and everything on the water-side is public, but I think this causes a lot of trouble because, to a large extent, it's not true. There are certainly public-trust rights on the land side that it's the state's responsibility to protect. And there are a great many private property rights on the water side. In some ways you can think of a lobster fishing license as a private property right, and an aquaculture lease certainly is.

a sudden the ocean-side would start looking a lot like the shore-side. We need to consider the ocean- and shore-sides together because the two affect one another to a great extent.

**KATHLEEN LEYDEN:** We have the ability to do advance planning for our marine environment by mapping the types of waterside features that Anne describes. It would assist those proposing aquaculture licenses, and others, if they knew what areas are sensitive and not likely to be approved.

**STEVE MILLER:** In my community there are several people who have been concerned about either uneven or simply no enforcement of some very good state laws, such as the Natural Resource Protection Act and the Shoreline Protection Act. These are wonderful pieces of legislation with lots of bases for protection but we see virtually no real attempt to enforce these laws. If a potential developer approaches the Department of Environmental Protection, then there's a review and a process. But if that dialogue never begins, then there seems to be no apparent attempt to enforce the law.

move forward with new regulatory programs. The mantra seems to be that regulatory programs don't work, but think back to the Clean Water Act, which was very successful in cleaning up Maine's rivers. Regulation caused this to happen, not industry, individual homeowners, or state government. Same thing with Clean Air Act. I would argue that in addition to consensus-based approaches, there needs to be a stick in the closet to protect the bottom line. Often it's the existence of a regulatory program that forces people to work together, and to come up with solutions to managing resources.

Unlike land-use regulations, which have incorporated scenic and cultural considerations, it appears to me that the regulatory programs pertaining to docks, moorings, and aquaculture, are devoid of any of these more aesthetic or cultural considerations. Yet much of the argument is, and will continue to be, about those factors.

> STEWART FEFER: One of the more positive developments I've seen in recent years has been the growth of consensus-based approaches to managing resources. The collaborative, stakeholder driven approach adopted by organizations such as the Casco Bay Estuary Bay project and the Penobscot Bay group seem to be getting at solutions that otherwise may have been difficult to achieve. Still, I would echo what Steve said about the need for good government and the enforcement of existing regulations. I would hate to see government use the presence of these collaborative approaches as reasons to move away from the enforcement of existing regulations or, even worse, to not

CHRIS HALL: I agree 100%. If you look at international comparisons, there is simply no country I can think of where self-regulation or community initiatives have preserved coastlines and preserved a balance. Those that have been successful in preserving the coast despite large populations have all been achieved by what Winston Churchill called "the firm smack of good government."

JAY ESPY: Recently, I've been dealing with regulatory programs pertaining to three marine issues: aquaculture, docks, and moorings. While I'm not an expert on regulatory programs, it

seems to me that these programs rely, perhaps for good reason, strictly on hard science. Unlike land-use regulations, which have incorporated scenic and cultural considerations, it appears to me that the regulatory programs pertaining to docks, moorings, and aquaculture, are devoid of any of these more aesthetic or cultural considerations. Yet much of the argument is, and will continue to be, about those factors. As a society, we really haven't dealt with this yet. For instance, currently we don't have a site-location development law, or anything akin to it, to regulate the marine environment. A lot of these industries are moving very quickly in an extremely competitive environment. Unless there's a regulatory environment that considers all the relevant

aspects of the debate, and unless government gets on that band wagon quickly and comes up with some ideas, we will have huge battles on the waterfront.

JILL GOLDTHWAIT: Dredging should be added to your list. Part of the problem is that the issues you mentioned cross jurisdictions. These issues are handled by the Department of Environmental Protection, the Environmental Protection Agency, the Army Corps of Engineers, municipalities, and so on. It makes it very difficult to coordinate.

**PAUL ANDERSON:** What about hazards to Maine's natural resources along the coast?

that the upland edges of Maine's salt marshes are hardening, and I think this is one area where we don't have any state policies. There's a gap in our regulations. We also haven't been successful in putting into law hazard disclosure statements. This is handled solely on a "buyer beware" educational basis. But it seems like no matter how hard we try to educate the public—by putting out written materials, etc.—we're still spotty in terms of our coverage.

Also, in southern Maine there is a big debate right now over development along beaches and beach regulations in general. The landowners see the beaches as a fully developed system, but current state regulations support a retreat policy that envisions the return of an integrated dune system. For example, someday those homes built on the frontal dune before 1970 will no longer be there. Yet every year in the legislature we see successful attempts to piece away at those protective regulations. People forget the 1978 storms that were the impetus for the creation of the Sand Dune Law, and the Marine Unit at the Maine Geological Survey. The planning horizon of many of these communities is part of the issue. They're willing to talk about issues that are consistent with the five to ten-year horizon of the comprehensive planning process, but they're unwilling to deal with the stuff that's fifty or one hundred years out, and there's still a lot of distrust in the science. JILL GOLDTHWAIT: I think the issue of pollution of coastal waters by shore-side uses, whether they be residential or commercial, is critical. We've taken a fairly narrow view of this issue. Probably most residents who buy waterfront property are sensitive to aesthetics and to environmental issues but there are some things they just don't know because of a lack of education. For instance, the amount of light along the coastline has increased enormously, and it drives herring to the bottom. People talk about why we don't have herring anymore, and they mention toxics and temperature and everything else, but the fisherman say it's the lights on the ends of piers.

**PAUL ANDERSON:** Are there legislative or policy solutions to some of these issues?

JILL GOLDTHWAIT: The challenge of trying to derive thoughtful, far-sighted state policy in a body of 186 people who have the option to introduce any legislation they choose prior to ever having set foot in the state house is immense. New legislators face a steep learning curve, and it probably takes two terms to get the whole system to a point where it's manageable. So, by the time they get the process sorted out to the point where they're potentially ready to submit some broader legislation, they're usually left with a "do-or-die" term in which to get it done. Unfortunately, big policy changes often take a couple of tries and a couple of terms. Then, there are people who may be there for two years only to disappear forever, which also represents a rather significant lack of continuity. Then there is the incentive for legislators to be constituent-driven rather than broad-based-policy-driven; the only way you get re-elected is if your constituents like what you did the first time. So, what is the likelihood of legislators taking the far-sighted view and making significant legislation that will restrict coastal development when the economic resources are in the hands of the people who own that coastal land? They wouldn't be too popular. The difficulty of developing legislation that has any controversial aspect to it cannot be overestimated.

...it is a challenge to design a more developed coastline that meets human as well as other needs.

CHRIS HALL: I'd just add that what you're saying suggests that from a political as well as from an ecological perspective, you cannot separate the coast from the inland communities. A healthy inland Maine will be a major contributor toward easing a lot of the tensions around the coast. The coast is the only action going now, and is the driver of so much of Maine's economy. With this being the case, it's a lot harder to resolve conflicts.

STEVE MILLER: Despite the political challenge, we face an unbelievable imperative to come up with some way of dealing with the cumu-

lative impact of development and, in a sense, the sprawl that has been created by having more people living and traveling to our coast. The impact over time is difficult to measure but I'm concerned about reductions in our quality of life, and quality of environment, and in losses to our heritage. Change is happening all over-it's just more intense along the coast.

KATHLEEN LEYDEN: I think it's important to remember the big picture. Relative to many parts of the world our coast is much less developed. We still have an opportunity to shape the future of Maine's coastline, but it is a challenge to design a more developed coastline that meets human as well as other needs. We've touched on municipal issues, but the topic of coastal development is first and foremost related to us being a home-rule state. Land-use decisions and decisions about the shoreline are primarily municipal issues, and I would just like to stress that anything we can do policy-wise or funding-wise to help communities make better decisions and to do decent planning, is ultimately going to be one of our answers.

JAY ESPY: It seems to me that when you get into a forum like this you look for the problems—and there's plenty of them-but I bet if you ask most people in Maine how they feel today versus how they felt in 1991, they'd say, "I feel great." Last November, the people of this state passed a fifty million dollar bond supporting land conservation, which suggests to me that people are thinking about their heritagetheir land heritage. They also passed a research and development bond, which suggests they're thinking about a new future. There's new economic activity in the state that we never even thought about before it came. What's happening in Rockland and Belfast is incredible, whether you think it's good, bad, or you're indifferent.

