East Coast Shellfish Growers Association

The East Coast Shellfish Growers Association represents over 1,300 shellfish farmers from Maine to Florida and the Gulf states. These proud stewards of the marine environment produce sustainable, farmed shellfish while providing thousands of jobs in rural coastal towns.

The ECSGA informs policy makers and regulators to protect a way of life.

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The Mouth of the Bay

Diving Into Social License

Exec. Director Bob Rheault

As summer winds down, most of you are probably too busy to read this edition, but hopefully you'll save it for when you have a few extra minutes because it's packed with important information. We have several articles on the social license to operate and best practices—they cover what growers should be doing to secure their privilege to lease the commons to grow shellfish.

Many growers are convinced that leasing should be a right since we provide so many ecosystem services and environmental benefits, but in reality most growing areas are shared by many other users who might take a different view. If you want to get other stakeholders to support your farm, you need to convince them you're a good neighbor and that you won't significantly impair their use of the water.

If you already have a lease, maybe you're less concerned about placating other users, but that attitude could make it harder for new growers to get a lease, or come back to bite you if you ever need to apply for a lease expansion. Emily Whitmore has been studying the dynamics of several highly contentious lease applications in Maine and offers sound advice on how to do the work needed to navigate the lease application process.

I offer a synopsis of some of the work I've been doing to update our Best Practices Manual following a series of The Nature Conservancy's SOAR-funded workshops. Following these tips will not only help you become a better farmer, but will also help the industry at large preserve their social license to operate. In an ideal world best practices avoid the need for hard-and-fast regulations. In my dive into the literature I learned why best practices are often more effective at getting people to do what regulators want than regulations, laws and rigid penalties.

Adriane Michaelis gives us an introduction to her work on the often overlooked realm of social and cultural ecosystem services. You might not have given much thought to the value of living in an area where shellfish and seafood are a part of the local culture. But think about the social and cultural value of the South Carolina oyster roast or the Maryland crab boil. What about growing up in Shell Pile, New Jersey, or being a third-generation waterman in Chesapeake Bay? Once your community starts to view your activities as an integral part of the social structure, that value can be described and estimated, much like the value we assign to improving water quality or fish habitat.

We continue to work hard to keep the world safe for shellfish farming. Thanks for your support!

Worth the Work: Social License for Aquaculture

By Emily Whitmore, Social Scientist, Maine Aquaculture Innovation Center

We've all heard the stories. Contentious public hearings, lengthy and expensive legal battles, angry riparians. No one wants to fight their way into a site—or fight to keep it. Yet this is one of the risks of operating in a shared resource. While you can't always avoid conflict, there are certainly ways to reduce the risk.

Social license to operate is a term that has recently gained popularity in the aquaculture industry, and for good reason. In its simplest form, social license describes the informal, ongoing community acceptance and support of an operation—something that every farm could benefit from both in the permitting process and as they grow and expand. Yet gaining social license and building trust with the community requires real work. For the past few months, I've been interviewing shellfish farmers about their social license "work," and here is some of their advice.

Permitting: know your site *AND* your stakeholders

Put considerable effort into identifying who you need to connect with—and do it before you submit any applications. Depending on your site, this can be other ocean users, riparian landowners, local community leaders, and even local or regional NGOs. If you are new to the area, connect with folks who know the waters and can introduce you to other users. Identify riparian landowners and share your plans. Make sure you connect with them before they receive any formal notices—it can take folks a while to warm up to changes, and it is important that you make the first impression and are there to answer questions and allay fears. When future questions arise, you want stakeholders to feel comfortable reaching out to you directly for answers. Identifying key NGOs that might oppose your operation is also important. One oyster farmer had a great piece of advice about this: follow along with public hearings for other local farms. If there are anti-aquaculture groups in your area, you will likely see them at these hearings. Do your research to figure out what they might take issue with and be prepared.

In most cases, when you reach out to folks about your plans well ahead of time, genuinely listen to their concerns, and make reasonable accommodations, they will be supportive. However, you can't always win everyone over. Anti-aquaculture campaigns aren't always personal. Continue to be transparent, honest and upfront, and try to focus on the on-the-fence folks.

Continue to engage

While we often think most about stakeholder perceptions during the permitting process, social license isn't something you check off the list and forget about. The most successful farms continue to do social license work year

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Senators Visit Northeast Aquaculture Facilities

Rhode Island Senator Jack Reed visited the Ocean State on August 31 to offer his support for an initiative called America's Seafood Campaign. Americans are falling far short of the American Medical Association's recommended two seafood meals a week, and the campaign aims to use $25 million a year (over five years) in congressionally directed funds to support an ad campaign reminding consumers of the health and environmental benefits of replacing some of their beef, pork and chicken with seafood. The campaign is a cooperative effort led by the Seafood Nutrition Partnership with support from almost 100 fishing groups, seafood marketing firms, seafood importers and aquaculture producers.

JOSH BEHAN/BEHAN PHOTOGRAPHY

Sen. Jack Reed (D-R.I.) rolled up his sleeves at a visit to American Mussel Harvesters in Quonset, Rhode Island, to learn how to shuck oysters, something we wish everyone in America would do. After a few tries he nailed it and had a fresh Quonset oyster for breakfast—delicious, nutritious and sustainable! Thankfully, no one was injured (though more than one of the pros on hand held their breath for a minute there.)

RENEE MERCALDO-ALLEN/NOAA

Posing at the Milford Lab in front of two bioreactors from longtime ECSGA supporters Industrial Plankton (l to r): Gary Wikfors, Chief of the NEFSC's Aquaculture Sustainability Branch; Jon Hare, NEFSC Science and Research Director; Sen. Richard Blumenthal (D-Conn.); Dina Proestou, ARS National Cold Water Marine Aquaculture Center Research Geneticist; Bob Rheault, ECSGA Executive Director; Nicole Cabana, NEFSC Deputy Director.

Sen. Reed stopped by the American Mussel Harvesters processing plant in Quonset to take a look at their de-byssing/sorting/packing operation and large-scale, wet-storage facility. The shop was a beehive of activity, with dozens of workers sorting and packing oysters, clams and mussels for delivery all across the country.

While he was in town, I took advantage of the chance to thank Sen. Reed for his decades of unwavering support for aquaculture in the Ocean State, and brought him up to speed on the recently signed cooperative agreement between the USDA's Agriculture Research Service (ARS) and NOAA's Northeast Fisheries Science Center (NEFSC) that will field a team of USDA geneticists working at NOAA's Milford Lab facilities to spawn up to 100 families of oysters. The project is slated to breed dozens of oyster families for deployment in five New England states so that ARS geneticists can see how they perform in different environments.

Earlier, on August 22, Connecticut Senator Richard Blumenthal paid a visit to the Milford Lab and pledged his enthusiastic support for the Nutmeg State's oyster industry. We updated him on the ARS/USDA cooperative oyster breeding agreement and posed for a group pic in front of two algal bioreactors from longtime ECSGA supporters Industrial Plankton. These investments in genetic research promise to accelerate efforts to develop disease-resistant lines that are well adapted to New England waters. The oyster breeding project represents the culmination of 13 years of work by the ECSGA with support from many key congressional allies, led by Sen. Reed and Connecticut Sen. Chris Murphy.

Cultural Benefits and the Social Impact of Shellfish Aquaculture

By Adriane Michaelis, Social Scientist, ECS in support of NOAA's Southeast Fisheries Science Center

As shellfish growers and industry supporters, most readers are probably aware of the impact the industry has on local water, on communities and beyond. But have you thought about *all* of the impacts?

Through the discussion of ecosystem services (the benefits obtained from an ecosystem) you're likely familiar with benefits provided by shellfish, ranging from the food product (a *provisioning service*), to contributing to water clarity (a *regulating service*), to providing habitat for other species (a *supporting service*). This is just a sample of the benefits provided by farmed shellfish, representing three categories of ecosystem services.

MICHAEL LUDVIGSEN

Aquaculture can continue a family heritage of working with oysters, as illustrated in this image of family members in front of a shell pile. (Photo submitted as part of the research project highlighted and used with permission.)

The fourth category, *cultural services*, has not received as much attention, but these are important and may offer a better means of connecting to a wider audience. In their most basic definition, cultural ecosystem services are the "nonmaterial benefits of an ecosystem." A more translatable definition describes cultural services as the contributions ecosystems make to human well-being through the identities they frame, the experiences they enable, and the capabilities they equip (Fish et al., 2016).

All of these benefits are created through the interaction of cultural practices (farming oysters, for example) in an environmental space (like the flats of Wellfleet). This expanded definition has shaped research to detail the cultural ecosystem services associated with bivalve shellfish (Table 1; Michaelis et al., 2021).

This list of benefits was created through on-the-farm interviews with more than 200 shellfish growers and others connected to the industry along the East Coast and Gulf Coast. The benefits showcase what shellfish farming—and in some cases, also a wild shellfishery—can provide for an individual and a community, beyond the positive environmental impacts.

Bivalves shape a variety of identities: for some, continuing a family heritage of working the water; for others, creating an opportunity for a new legacy. In some cases, shellfish farming identities were specifically linked to greater reliability and security than other work on the water, particularly if wild harvest was restricted or unpredictable. For others, the heritage is not necessarily working the water, but perhaps includes family traditions roasting oysters, shucking oysters or simply eating oysters. Farming oysters offers an opportunity to connect to those positive memories.

Cultural Ecosystem Services Enabled through Work with Shellfish		
Benefit Category	**Sub-Category**	
Identities	Contribution to community	Responsibility of care – environment
	Cultural heritage	Responsibility of care – husbandry
	Family heritage	Sense of belonging
	Novel occupation	Sense of place
	Occupation	Sense of purpose
Experiences	Adventure	Safety
	Aesthetic appreciation	Security and reliability
	Challenge	Shared experiences
	Independence	Social capital
	Innovation	Spiritualism
	Job satisfaction	Therapy
	Lifestyle	Transformation
	Pride	Variety
	Relationship with nature	
Capabilities	Income	Physical health
	Knowledge	Skills
	Mental health	

Table 1. Cultural ecosystem services enabled through work with shellfish are presented as associated identities, experiences and capabilities. (Adapted from Michaelis et al., 2021).

Community identities are also formed by a sense of place tied to shellfish. This is evident in the naming of towns like Shell Pile, Bivalve, and Oyster, which signify long relationships with shellfisheries and a sense of place that shellfish farming can contribute to. It does not take a town named after shellfish, however, to associate its identity or notoriety with bivalves—think Apalachicola or Cherrystone.

In many communities, shellfish-centered identities are celebrated through oyster festivals, shucking contests and other events. Not only do these celebrations provide shared experiences—a benefit noted in interviews with growers—but they also contribute to local economies. Shellfish farms provide local, healthy and sustainable seafood and can further contribute to tourism-driven economies through shellfish trails, farm tours and oyster bars.

This list of benefits represents more than just a research pursuit, and more than just reasons shellfish farmers like their job. It also represents another way

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Why Best Practices? How Do They Differ From Laws and Regulations?

by Robert Rheault,
ECSGA Executive Director

A "best practice" (often called a best management practice or BMP) is broadly defined as a technique or methodology that, through experience and testing, reliably leads to a desired result. Best practices differ from laws and regulations in many ways, and each has its pros and cons. Regulators often find that laws and regulations can be too inflexible, while best practices can offer a better way to get the regulated community to do the right thing. Best practices are typically voluntary, and while it might seem counter-intuitive, they are often more effective at obtaining compliance than laws and regulations.

Best practices are quite different from laws, regulations and guidance. Laws are passed by the legislature and define the goals and objectives of government, usually providing justification and policy directives, and often dictating a range of appropriate penalties. Regulations are drafted by agencies to dictate precisely how to enforce the broader goals of the laws, and are typically drafted through a rule-making process that solicits public comment. And lastly, guidance is often offered by the agencies to help the regulated community understand the regulations and offer advice on compliance. Guidance does not require rulemaking and is typically not legally binding and does not have the "force of law" behind it. Laws and regulations usually cover requirements that ensure public safety and protection of natural resources and private property. They rely on enforcement officers and penalties ranging from fines to permit suspension to incarceration.

Industry best practices are usually formed through a consensus-driven process by industry members who recognize that regulations and enforcement don't adequately cover all of the things that growers should and could be doing. Best practices are enforced by peer pressure and expectations that industry members comply with certain "norms" for the benefit of the industry as a whole. Occasionally, best practices will be adopted as regulations. (Florida has adopted BMPs as regulations, but in my mind they are no longer best practices—they are now regulations.)

Aquaculture is broadly regulated by a variety of agencies charged with enforcing dozens of applicable laws. Often a law will mandate that an agency seek opinions or approval from other agencies before it can permit an activity. For instance, the Army Corps of Engineers has the authority to regulate structures placed in the navigable waters of the U.S. It examines aquaculture applications based on issues related to navigation, and seeks comment from NOAA's Protected Resources Division and the Department of Interior's Fish and Wildlife Service related to compliance with the Marine Mammal Act, Migratory Species Act, Magnuson Stevens Act, Endangered Species Act, the EPA's Clean Water Act, and many others.

Shellfish farming, harvest and sales are regulated by the FDA under laws described in the Federal Food, Drug, and Cosmetic Act, which sets regulations for the states under the auspices of the Interstate Shellfish Sanitation Conference (ISSC). Each state is required to implement the regulations of the National Shellfish Sanitation Program (NSSP) by monitoring harvest area water quality, enforcing harvest restrictions, implementing tagging and traceability requirements, inspecting dealer facilities and tracking landings and illnesses. States generally delegate their regulatory authority under the NSSP to their Health Departments, Departments of Agriculture, and/or resource management agencies, and then the FDA monitors each state's compliance.

Which is better at winning compliance?

Since regulations are developed from the top down, they are often despised by the regulated community, who spend an inordinate amount of time and creative energy devising ways to skirt the regulations and avoid detection. Furthermore, since regulations depend on enforcement, it is often the case that there can never be an adequate enforcement presence to achieve the stated goals. The cost of maintaining an adequate police presence is often unsustainable or simply impractical. Some scofflaws perceive the chances of being caught as insignificant, or view the severity of the penalty as a cost of doing business.

Since best practices are developed from the ground up by industry groups deciding what is best for the greater good, they often have a better track record of compliance. Best practices rely on peer pressure instead of enforce-

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Best Practices

ment officers. Since industry members are often more abundant than enforcement officers (and more aware of each other's actions) it is often the case that self-regulation is quite an effective way to achieve compliance.

However, not all individuals are going to be swayed by peer pressure; some may fear that confrontation with other industry members will lead to recriminations and potential backlash. Some mature industry groups have gone so far as to establish standards for operations (sometimes called "Codes of Practice") and have enlisted third-party audits and an industry certification process that they hope will lead to increased customer confidence, and in some cases could result in the loss of licenses or permits.

Often, regulations allow shellfish farmers to do things that may not be in the best interest of the larger community. An example is the Right to Farm Law, which in many states allows farmers to make noise or generate offensive odors as long as they are conducting a "normal farming practice." Just because it's allowed by law doesn't mean it's a good idea for shellfish farmers to go out at dawn and run loud pumps or leave rotting shellfish out in the sun. Such activities would alienate the public and could make it harder for future farmers to acquire leases. Activities may technically be allowed under the law, but in practice they might not be prudent.

Aquaculture farmers operate in the commons and are granted the privilege of leasing grounds for farming when it suits the state. Most states are bound by their constitutions to manage tidal lands for the benefit of the sovereign (the people of the state). States make a public-interest determination that weighs the costs and benefits of the many uses of these waters, including commercial and recreational fishing, boating and navigation, mooring fields, marinas and often wastewater treatment plant discharge. States try to balance these many different uses in an equitable fashion that maximizes the benefit to the sovereign. If growers abuse the privileges afforded by leasing the commons, the state can revoke that privilege.

Best Practices are often better tools than regulations

Aquaculture practices are diverse and rapidly evolving. It is beneficial to be able to guide the industry with broad aims and goals, rather than with specific regulations that may not apply to future scenarios or that may hamper the development of novel approaches that solve problems in unique and unforeseen ways. It is incredibly hard to devise regulations that are nimble and adaptable. Laws usually take years to change and can often hamstring the ability to alter regulations to accommodate new innovations.

Industry best practices can be crafted in such a way as to incentivize continual improvement, which allows growers to experiment and develop novel solutions to prickly problems. The Maine Aquaculture Association used such a mechanism to develop novel means to reduce salmon escapes, and to deal with diseases. These adaptive best practices eventually led to zero escapes and zero use of antibiotics at Maine salmon farms over the past two decades.

Our industry is dynamic

I started growing oysters in the 1980s when we were just getting access to vinyl-coated wire and plastic mesh bags, which allowed us to grow shellfish in cages, avoiding massive losses to predators. Thirty years later the floating OysterGro® cage was developed. Now we have SEAPA oyster baskets, Hexcyl™ baskets, and the FlipFarm® system. These methods of growing were not even on the drawing board just 15 years ago. Now that we have to adapt to a changing climate, new predators and diseases, increasing storm intensity and a tripling in significant 6-inch rainfall events, I don't think we can accurately predict the next innovations in shellfish farming. The pace of change is staggering.

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Floating Gear Mortality Rates Lower Than Bottom Cages

by Robert Rheault, ECSGA Executive Director

Recently I was asked to conduct a survey of East Coast growers to estimate growth rates and background mortality of American oysters. I reached out to more than 43 veteran growers in 10 states, with a goal of getting a mix of growers using floating (or suspended) gear and bottom cages/rack-and-bag systems. Of the 20 usable responses, nine used floating gear, six used bottom gear and the rest used a combination of gear types.

The data from the Carolinas and Florida were not included in the final analysis for two reasons. First, it was hard to find veteran growers whose crops had not been impacted by adverse events; and second, those growers don't always adhere to the seasonal planting strategies that most of the East Coast growers use (i.e., spring planting). Since their water temperatures are more moderate, growers in those states can plant at almost any time of the year, but this can result in highly variable growth and mortality that was impossible to compare with other states.

Growers were asked to estimate mortality starting after the seed were placed in growout gear, and then over the course of the first growing season, the first winter, the second summer, and so on until harvest, depending on the state. They were asked to report only data from years without adverse weather or harmful algal bloom (HAB) conditions.

It was hard to get veteran growers to share data because the survey was conducted in the busy growing season, so the data density was not as good as I would have hoped. In some states it was hard to find crops that were not impacted by adverse events, even for growers who had been in business for more than five years. (I didn't poll anyone with less than five years' experience, or growers who were free-planting on the bottom).

A few broad trends were evident from the survey results.

As expected, growers in Maine took longer to bring oysters to market (mostly 3 years) than those in warmer climates (South Carolina growers reported crops coming to market in about 9 months). Total crop mortality in floating gear was roughly half that of bottom gear, on average 18.2% vs. 39.4%. The data did not reveal trends in overall crop mortality based on latitude. Given how mortality rates often impact profitability models for growers, this result is perhaps the most significant finding from this study. The variance in data was less than I had expected, but perhaps that was because of the small dataset. Nursery mortality estimates were all over the map, with some growers reporting essentially no mortality in upwellers (land-based or floating), while some growers using fine-mesh (<3mm) nursery bags reported severe losses.

An Ocean Farmer's Journey

by The Oceanfarmr Team

Oceanfarmr (formerly known as SmartOysters) was founded in 2017 by Ewan McAsh. Although this pioneering farm-management app was originally intended for the Australian market, it has now expanded to become a true global phenomenon.

Ewan began oyster farming with his father, Kevin, on the Clyde River in southeastern Australia nearly 20 years ago. As time went on the pair developed better cultivation methods and established new premium markets.

But as the business continued to improve and expand, Ewan came to realize that the farm's success was threatened by an existential weakness: over the years he had created an environment where he was the only person who truly knew what to do and when to do it.

Over time, and with the help of experience and sometimes sheer grit, oyster farmers will customize their cultivation methods, and schedule tasks like grading, drying and selling in order to meet the unique challenges of their farm's location.

Keeping track of thousands of deployed oyster baskets, scheduling farm tasks and remembering the ins and outs of cultivation methods is a lot of information for one person to handle. Even if the farmer does have a system to help, it doesn't do any good if it's too complicated to be understood or used by anyone else.

For Ewan, all of the history and the best practices were in his head, trapping him as a farm manager, working in the trenches day-to-day. His efforts to grow the business became a burden instead of an opportunity.

So, in 2017 SmartOysters was founded with the goal of "getting the farm out of the farmer's head" and ensuring that farm management was digital-ready.

Since then, the team has grown to include experts in data analysis, app development, marketing, customer support and, of course, other forms of mariculture. More recently, and with the eagerly anticipated new version of the app nearing its release date, it was decided to rename the company to Oceanfarmr. (And yes, the missing "e" is intentional!)

OCEANFARMR

Ewan McAsh began his oyster farming journey nearly two decades ago, and founded the farm-management software company SmartOysters in 2017 to "get the farm out of the farmer's head."

The name change was intended to better reflect the growing diversity of services offered. The app now caters to mussel farming with a beta version being tested by the awesome folk at Offshore Shellfish down in Devon, in the south of England. Seaweed growers are also covered as a result of a collaboration between Oceanfarmr and the U.S.-based innovators Greenwave.

Oceanfarmr is also working closely with research and restoration groups such as the Wild Oyster Project in San Francisco Bay. By providing easy-to-use data-capture forms linked to the GPS map, projects such as this are able to engage citizen scientists and obtain consistent, reliable data. Very little training is required, and uptake has been excellent.

So, whether you're growing oysters, clams, scallops, mussels, abalone, seaweed or fish, or you just need a simple method for recording wild harvest or scientific data, Oceanfarmr is now at the point where it can help anyone, anywhere in the world. Not bad for a company started all those years ago by a farmer who was looking for the answer to that frequent lament, "There must be an easier way to do this."

Cool Videos on ECSGA.org.

We continue to add videos to our Cool Videos page (accessible from the main menu).

If you have some footage to share, email Ann Rheault for submission instructions.

Swap Meet

Looking for a job? Want to buy or sell seed or gear?

Join the ECSGA-SWAPMEET Google Group and keep the main ECSGA Listserv free for relevant issues, growing tips and news you can use. SWAPMEET is free for all and you don't have to be a member to subscribe.

ecsga.org/swapmeet

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Best Practices

Most enforcement officers have only a vague concept of what we do. They are often only familiar with regulating fisheries, where their tools consist of seasonal harvest restrictions, bag limits and minimum sizes to try to ensure a sustainable harvest. These tools have no meaning in aquaculture. Fisheries patrol officers are simply not capable of being in every harvest area every day. We can hope that the threat of stiff fines and penalties leads to good compliance, but judging by the frequency of fisheries violations I've gotten wind of, I have to believe otherwise.

Best practices alone are not likely to achieve full compliance either. However, there is a substantial body of literature suggesting that a prudent combination of regulations and best practices can achieve the goals of protecting natural resources and public safety much more effectively than either on its own.

Best practices are "living documents"

The ECSGA drafted a Best Management Practices manual in 2010, available for free on our website. Many of our members have found that the manual is easy to use and allows them to develop individualized farm-specific best practices that they find useful for marketing, permit acquisition and employee training. When we wrote the manual, we intended it to be a living document, since we recognized the dynamic nature of our industry. This past year the ECSGA won a grant from The Nature Conservancy's SOAR program to update the BMP manual to include floating gear (which was not yet a big deal way back in 2010). We have conducted a series of workshops and developed draft best practices for floating gear, and are now embarking on a full revision of our best practices manual.

If you would like to be a part of that process we can offer a handful of growers a stipend to help us update the manual over this coming winter, and we would love to have some experienced growers join the effort.

Send me an e-mail!

bob@ecsga.org.

Gross Sales vs. Net Profit

A few years ago I had the pleasure of teaching a class of eager new shellfish-farm workers, and began the course by showing them how the rapid growth of the industry was leading to more demand for workers to fill those jobs. At that time, 40 farms in Rhode Island were selling about $7 million of oysters a year. After the training class, one of the students went looking for work and was shocked to discover that the starting salary was just over the minimum hourly wage.

He did the math and figured that his boss was making hundreds of thousands of dollars on the backs of hard-working, low-wage employees. And because no good deed goes unpunished, I learned that he was hell bent on writing a Ceasar Chavez-style exposé on the rapacious shellfish-farmer robber barons.

What I had failed to explain to the students, (and have since added to the curriculum) is that while shellfish farms have some of the highest per-acre revenues of any crop (other than cannabis), they also have some of the highest input costs of any farms. When you add up the expenses of boats, insurance, cages and gear, boat slips, seed, labor and everything else that goes into bringing a crop to market, most growers are actually working on pretty tight margins (net profit). Smaller farms often can barely make ends meet, and the owners are far from getting rich.

For all you farmers out there, here's a pro tip: if you increase your ***sales*** by $1,000, you only increase your profits by (1,000 x your net profit margin, typically 5% to 20%), which works out to $50-$200. But if you can shave $1,000 off your ***costs***, you just added $1,000 to your net profit!

BARRIER ISLAND OYSTER CO.

Input costs for vessels, insurance, gear, seed, labor and everything else needed to bring a crop to market means high overhead and tight profit margins for shellfish farmers.

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Social License

after year. Farm tours, educational outreach, participation in community events—these are all examples of ways to engage with the community and build local support. Some farmers use their product as a point of connection. The cost of a few free oysters for a neighbor might benefit you down the road in more ways than one. Along with potentially gaining a customer, you may have just gained an advocate. Folks are much more willing to "share" resources (i.e., the ocean) if they feel as if they are benefiting.

Good practices build trust

Beyond engagement, good farm practices can also help build and maintain trust in your operation. Keeping a tidy site, being respectful of your neighbors, meeting all regulatory requirements and staying true to your word are all examples of the ways farmers generate trust. As one farmer said, these actions might not be noticeable, but if you weren't doing them, their absence would be.

Social license key points

- ❑ **Communicate**. Identify your stakeholders, have meaningful, face-to-face conversations.
- ❑ **Be transparent and honest.** Nothing rallies the opposition like a "secret" plan change. Work proactively by sharing plans before official announcements. Be honest and open.
- ❑ **Be accommodating and flexible.** When reasonable changes can be made to accommodate people's concerns, make those changes. Listening is important, but real changes are evidence that you care about their concerns.
- ❑ **Continue to engage.** After permitting, continue to engage with the community. Their support can buffer you when facing future challenges. Added bonus: folks invested in your business are also often customers.

Why do all this work?

Having the support of your community can make all the difference in the success of your business. For one thing, doing social license work before the permitting process increases your chances of a pleasantly uneventful lease acquisition. The outreach may seem excessive, but being able to avoid the time, energy and money that is spent dealing with opposition is well worth the initial effort.

Second, community support can help buffer your farm against potential threats. In a recent example, a community in Maine just voted down an aquaculture moratorium that would have delayed the construction of a recirculating facility that has been in the works for years. This company did a significant amount of social license work in their community, and their supporters showed up in their defense.

Lastly, when you do the work it takes to generate social license, you are not only boosting support for your business, you are boosting support for the broader industry. The research is clear: positive experiences with aquaculture increase people's receptiveness to future growth. We can pave the way for a booming aquaculture industry one conversation at a time.

Deveraux Joins ECSGA Board

Dan Devereaux has joined the ECSGA board of directors as the Maine representative, replacing Jeff Auger, who was elected board president. Dan brings a wealth of experience, with a diverse background of working in the aquaculture and shellfish industries, and in federal, state and local government.

From his service in the U.S. Navy to becoming a local marine resource officer Dan has spent thousands of hours on the water. He retired as a resource officer in 2018 and began working as the local resource manager. Dan has experience with the ISSC and NSSP and graduated from the FDA 242 Growing Area Classification Course. He is also an owner of a mid-scale oyster farm in Maine. Dan has received several accolades over his career and most recently received a Water Hero award from the Friends of Casco Bay for his work to improve water quality.

Over the years, Dan has been involved in several successful state and local legislative efforts to improve fisheries management, advance sustainability, and support climate resiliency initiatives. He is a member of Casco Bay Estuary, Brunswick Marine Resource, Maine Harbor Master Association and the Rivers and Coastal Waters Commission.

In his spare time Dan enjoys spending time with his family and two dogs, as well as fishing, golfing and gardening. He is looking forward to working with the board to advance shellfish aquaculture and the positive climate future it provides.

More Thoughts on Social License

by Robert Rheault,
ECSGA Executive Director

In April the World Wildlife Fund (WWF) held a workshop focused on the social license to farm kelp in New England. Around 100 invitees from around the globe grappled with the question of how to get past some of the permitting obstacles impeding the expansion of kelp farming in coastal waters. I saw similarities between kelp-farm and shellfish-farm permitting challenges, so I was eager to hear the ideas the group came up with.

As with shellfish farms, opposition to kelp farming can come from those who object to the visual impact of buoys and work boats, or from those concerned about navigational impacts and conflicts with commercial or recreational fishing. Since kelp is in the water only from October til May and the longlines run six feet below the surface, it's hard to see how there is much of a navigation conflict, but if you have ever been to one of these lease hearings you'd think the applicants were proposing to pave the area under discussion. Although floating shellfish gear certainly has more of a potential impact on navigation than kelp gear, it can be hard to discern the difference between the two based on the vitriol often aired at these meetings.

The full report from the workshop runs over 50 pages with extensive sections on challenges and solutions, and communications and outreach. It notes that most of the solutions tend to involve elaborate communications efforts by lease proponents, often well in advance of submitting an application. Strategic messaging and outreach can help garner broader public support and reduce the recruitment of opponents who might be enlisted to spread misinformation.

The WWF advice on messaging is clear: stay consistent, be open and transparent, focus on the science, and try to bring all the interested parties to the table. From my own experience, I would suggest that if you can talk to folks one-on-one or in small groups you are more likely to have fruitful conversations than in large groups (or, God help you, on Zoom). The mob mentality can quickly get ugly. When you are going into a public hearing it is important to bring a few outspoken proponents who can support you and challenge the prevailing negativism.

Try to tailor your message to your audience and address false perceptions and fears about the unknowns. Talk about success stories where farms have found ways to fit in with their communities. Recognize and respect fear as a powerful emotion and try to work collaboratively on ways to address your opponents' concerns. Dismissing or diminishing those concerns is not likely to be a fruitful strategy. This advice makes a lot of sense, but it does sound exhausting, and for a small firm just getting started it can be a significant challenge.

At the workshop, Kim Thompson from the Aquarium of the Pacific (AOP) presented the results of bi-coastal surveys assessing the public perceptions of aquaculture. One of the key findings: the more a person knows about aquaculture, the more likely they are to be accepting of it. And in general, a person's perceptions of aquaculture can be shaped by educating them about it. While these findings were broadly true in survey responses of the general population, it was not always consistent when you asked waterfront homeowners, fishermen or boaters. These folks tend to have a more negative view of aquaculture broadly, often because they perceive potential use conflicts, and their opinions are less likely to be swayed by education.

The AOP surveys also showed that when it comes to winning hearts and minds, messages about aquaculture's environmental benefits are more effective than extolling the jobs and economic benefits; and the most trusted messengers are scientists, aquariums and other farmers (not lease applicants).

Another clear message to come out of the workshop was the damage that bad actors can do to the social license of the community at large. If a farm gets established and the operators do things that damage the image of farming in the eyes of the community, the offending lease holders can make it impossible for another farm to become established.

Building social license in the community involves recognizing that your "right to farm" is actually a privilege, not a right. Farms should be neat and orderly with uniform markings and well-maintained gear. No one wants a junk yard in their viewscape. Farm hands should be friendly, courteous and careful to follow regulations and norms. Escaped gear, loud noises and marine debris are going to alienate neighbors, and the entire farming community will pay for those transgressions.

Most of this advice comes down to being a good neighbor, and much of it echoes what we have outlined in our ECSGA Best Management Practices manual. I hope you will do yourself (and the farming community at large) a favor and take a look.

For more info on Best Management Practices visit ecsga.org/best-management-practices.

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Cultural Benefits

to engage community members, potentially those less supportive of the industry. Highlighting the full suite of benefits, environmental and cultural, enables a greater chance that something might appeal to a neighbor who was not yet convinced. For the resident not compelled by improved water quality, maybe memories of clambakes or the addition of local jobs will resonate more strongly.

Cultural benefits also create the opportunity to discuss the other side of that social and cultural coin. For example, this list was generated by asking growers what they like best about their work, which translated to what ecosystem benefits they received or enabled through their work. Thinking beyond the industry, one could use cultural ecosystem services to understand exactly what community members value about the system. Does shellfish aquaculture affect those benefits, and how? Is there a way to compromise or remediate the negative? What is the best way to highlight the positive?

ADRIANE MICHAELIS

In some communities, ordered rows of an oyster farm represent economic input, community heritage and local jobs.

The discussion of cultural benefits and community perceptions related to aquaculture ties to the broader idea of social impact. Understanding how these benefits are valued and the extent to which they affect a local community is one piece of the social-impact puzzle. Benefits in this list are a starting point to understanding the sociocultural implications of shellfish aquaculture, and to thinking about those community impacts at the industry level.

Cultural Ecosystem Services Info

References cited and resources related to shellfish and cultural ecosystem services are listed below. Please contact the author, adriane.michaelis@noaa.gov, if you have questions or difficulty locating articles. If you are interested in the social impacts of aquaculture—maybe you are already doing work in this area, or would like to—please reach out!

Michaelis, A. K., Walton, W. C., Webster, D. W., & Shaffer, L. J. (2020). The role of ecosystem services in the decision to grow oysters: A Maryland case study. Aquaculture, 529, 735633.

Michaelis, A. K., Walton, W. C., Webster, D. W., & Shaffer, L. J. (2021). Cultural ecosystem services enabled through work with shellfish. Marine Policy, 132, 104689.

Fish, R., Church, A., & Winter, M. (2016). Conceptualising cultural ecosystem services: A novel framework for research and critical engagement. Ecosystem Services, 21, 208-217.

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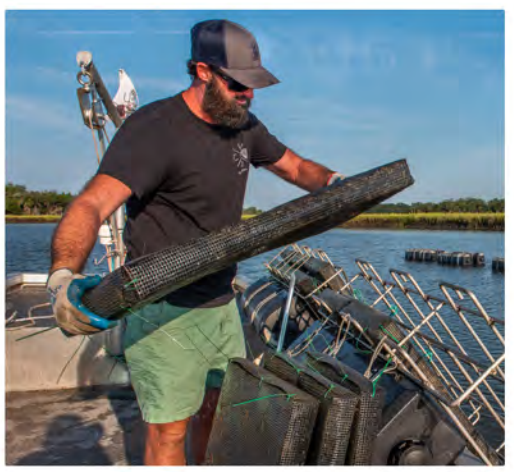

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ECSGA Dues Categories

Growers, dealers and equipment suppliers enjoy full voting rights. (If you are both a grower and a dealer simply ask yourself where most of your revenue comes from.) If you don't fall into one of these industry categories please consider joining as a non-voting associate member.

Member Type	Gross Annual Sales	Dues
Grower	$0 to 50,000	$100
Grower	$50,000 to $100,000	$200
Grower	$100,000 to 300,000	$500
Grower	$300,000 to 1 million	$1,000
Grower	$1 million to $3 million	$2,000
Grower	over $3 million	$3,000
Shellfish Dealers and Equipment Suppliers		$250
Restaurant Ally		$100
Non-voting Associate		$50

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