MAINE AQUACULTURE INNOVATION CENTER

A Guide for Shellfish & Seaweed Farmers in Maine:

WORKING TOWARDS SOCIAL LICENSE TO OPERATE

EMILY WHITMORE, ANNE LANGSTON NOLL, AND CHRIS DAVIS IN COLLABORATION WITH THIRTY MAINE SHELLFISH AND SEAWEED FARMERS WHO SHARED INSIGHT INTO PRACTICAL WAYS OF EARNING COMMUNITY SUPPORT.

Introduction

Over the past decade, the aquaculture industry in Maine has experienced rapid growth. In fact, since 2014, the industry has doubled in both value and volume, with oysters alone becoming the fourth most valuable commercial marine species in Maine [35]. With this growth, aquaculture producers are facing new challenges—one being social acceptance. While broad perceptions of aquaculture are overwhelmingly positive [2], local opposition has created serious barriers to growth for new and seasoned farmers at varying scales. In response to this, farmers have been working hard to gain community support using a wide range of practices—acknowledging that this support is essential for the growth of their business as well as the broader industry.

This guidebook on social license to operate (SLO), a term describing this community support, is the result of a collaborative research project with 30 Maine shellfish and seaweed farmers who shared insight into practical ways to earn community support. Farmers contributed to the project at multiple points, from participating in an in-depth interview, to providing feedback on the final document. The photographs used in this guide were also provided by farmers.

The structure of the guide was dictated by themes brought up during farmer interviews and the content features quotes from farmers interspersed with prior research on social license to operate. The resulting document is an attempt to articulate the ways farmers are thinking about social license, how they are doing social license work, and how social license as a way of thinking can be beneficial to farmers and communities alike.

1.1 WHAT IS SOCIAL LICENSE TO OPERATE?

The term social license originated in the mining industry as a way of describing the informal, ongoing approval or acceptance of a project granted by communities [12,38,16]. Mining companies across the globe were experiencing varied community reactions to their projects. In some cases, communities embraced the mining activity, even incorporating it into their identity (i.e. a 'mining town'). In other cases, community members were organizing in protest, at times effectively shutting down operations. A mining executive started describing this as social license to operate, a continuum that captures community support for a project that is primarily gained through quality engagement and relationship building with stakeholders.

The degree of social license ranges from withheld/withdrawn to full social license, or what researchers have termed 'psychological identification' (mining town, fishing town, etc.) [38]. Tolerance, or lack of opposition, does not indicate any degree of social license. Social license occurs when communities show active support for a project. Amanda described this succinctly when talking about an ideal lease hearing. She says, "a lot of people think you're successful if no one shows up, but in my opinion, I think it's a success when everybody shows up and is in support and aware of what you're doing."

Social license is also dynamic, having been described as an "ongoing negotiation" between a community and company [34]. Farmers acknowledge this important aspect of SLO. For example, describing support as "little chips," Charlie said she would "love to collect all those little chips in the basket and keep them and use them in the future. But I think that sometimes when you propose a change, or something happens, that basket easily gets tipped over." She recognized that social license is slippery and can be easily withdrawn. While the work often clusters around certain events in the life of a farm, particularly when securing new or expanded leases, social license demands constant maintenance work.

Building and maintaining social license requires gaining trust from community members. While aquaculture-specific strategies will be discussed in section 3, researchers have statistically linked certain company actions and impacts (see Table 1) to SLO. While some actions influence acceptance directly, most influence acceptance through trust generation. For example, quality communication with stakeholders increases trust in the company, which in turn generates social license [24,36].

Table 1. Company actions that generate SLO in other industries.

COMPANY ACTION	SOURCE
Quality Communication	Moffat & Zhang 2014; Sinner et al. 2020
Distributional Fairness/Economic Fairness *(whether the community feels that the benefits are fairly distributed)*	Zhang et al. 2015; Moffat et al. 2016; Mercer-Mapstone et al. 2018; Sinner et al. 2020
Procedural Fairness *(whether the community feels that they had a voice in the process)*	Moffat & Zhang 2014; Zhang et al. 2015; Moffat et al. 2016; Mercer-Mapstone et al. 2018
Cultural Impacts	Sinner et al. 2020
Impacts on social infrastructure	Moffat & Zhang 2014
Balance of positive & negative impacts	Moffat et al. 2016; Mercer-Mapstone et al. 2018

Considering social license is intangible and fluid, measuring SLO is challenging. Researchers argue that it is easier to tell when a company does not have social license, than when it does [16]. Farmers echoed this, often describing the importance of gaining social license through the consequences of not having it. It is obvious when companies are struggling with social license when they are facing widespread community opposition. Yet if a company is able to proceed with their operations without facing pushback, it is difficult to gauge. However, farmers brought up several tangible benefits of social license that suggest that they have been able to secure some level of social license from their communities.

1.2 WHY IS SOCIAL LICENSE IMPORTANT?

Having a degree of social license from the community provides a variety of benefits to farmers. One important benefit is that high community approval can reduce the risk of social conflicts that often arise in resource industries [9,28,31,30,24,5]. In Maine, community opposition has created significant obstacles for farmers. Challenges to lease applications can be costly and the resulting delays can be detrimental to growth. On a state level, well-organized anti-aquaculture interest groups have been trying to limit aquaculture growth in the state through localized moratoriums and statewide regulatory changes. They have also been able to drum up local opposition to individual lease applications through their own outreach strategies.

In this sense, social license is an important tool for farmers who want to take an upstream approach to opposition, understanding social license work as a form of 'risk management' [9]. Like Bob describes, you can get a license from DMR if you meet all of the conditions outlined by 12 M.R.S.A. §6072, but "if you don't do the outreach responsibly and correctly, you're gonna have trouble." Dana made a very similar comment. Being accepted and supported by your community may not be mandated, but it is in a farmer's best interest to do the outreach and try to build relationships to limit pushback.

The people on the shore, and who might be likely to oppose you, they almost certainly will have more money than you. They can almost certainly out-lawyer you. They can slow you down, they can change up things. They can make your process much more difficult than it needs to be, first of all. So that's like a bare minimum. And then everything else is the good stuff to try to reach for. Ideally, we want to have an industry that is well known, that's understood and is supported by the local and State community, because they are our customers. And they also have a stake in the health of the resources that we depend on. Clean water, clean air, shorefront access, all that kind of stuff.

The "good stuff" that Dana refers to are the positives that come out of quality relationships between communities and farmers. Both can benefit from coexisting, with communities experiencing positive environmental effects, access to locally produced food, more local jobs, and a way to preserve and reimagine Maine's working waterfront in the face of a changing climate. Farmers benefit from active community support as well in several concrete ways.

First, farmers brought up numerous examples of local stakeholders helping care for their site or equipment because of positive relationships they had built. For example, Alicia talked about a riparian landowner offering to paddle out and shut off navigation lights that were accidentally left on. Chris talked about his relationship with a landowner who was initially fearful that the farm would grow too large. A simple phone call opened the door for communication and Chris was able to ease fears and in turn gained a supporter who would reach out if he noticed anything "awry." He said that one time "he called me and said, hey, it looks like something's wrong with one of your lines. It was after a blowout gale or something like that. And I was like, Oh, thanks Ed." Chris was able to go out and fix the line, and dropped some oysters off to Ed as a thank you. Through relationships, these stakeholders became stewards of their local farms.

Second, social license can also be protective when farmers' livelihoods are threatened. For example, several farmers discussed instances when their supporters voluntarily showed up in their defense when they were under fire. Keith discussed a time when a genuine regulatory mistake had left him in a "pickle," but his supporters–specifically those who were most impacted by his operation–went to bat for him.

They wrote letters to DMR (Department of Marine Resources) for me. Three landowners that abut me, the three closest people to me, wrote letters. And then I also had just a crew of people who have become friends that buy my oysters or visit my farm, and I let them know about this. And some of them wrote letters, and some of them said I'm on standby. When you need me, I'll be happy to either write a letter or make a phone call.

Others who experienced more contentious lease hearings talked about how the positive support made a difference in both the outcome of their lease decisions and in their wellbeing. Dan discussed the "volumes" of testimony from lease hearings, citing that many of those testimonies were in support of the proposal and that "having their support certainly helped the department make decisions. It definitely helped us and our families and our crew."

Andrew brought up Dan's lease hearing as well as an example of the ways social license can benefit farmers. He said that the anti-aquaculture groups that had mobilized "went out to top media saying there's a problem," but that Dan and his partners "had done their ground work and people in their community weren't talking to PBS or CBS or whoever because they knew what was going on." In this case, the support that they had from their local community helped prevent negative press. According to Andrew, this was a result of them going "from the community level up."

Third, though social license work does have a cost–even if just in time and labor– farmers acknowledged that there are monetary gains to be made from building relationships. Like Dana said, these people are also "customers." Annie discussed this as well, describing how giving away product to neighbors led to some of them becoming regular buyers.

We had a few that were just about big enough. We get these ones that double up, oysters that aren't really any good for sales. And we had a bunch of those. And so instead of putting them down for the winter and feeding starfish with them, we decided that we would just go knock on doors, all the doors on the neck, the houses on the neck that overlook the farm. And the people that answered, I sat and chatted with them for a while, I gave them some free oysters. And some of those have become customers.

Lastly, though the concept of social license focuses on relationships between individual farms and their stakeholders, social license work can also facilitate statewide industry growth by creating positive public perceptions. Increased knowledge and awareness of aquaculture–often a result of farmer engagement–has been consistently linked to support for aquaculture development [3,33,37,42]. Higher engagement with shellfish farms in particular has been linked to higher SLO [36]. Farmers are well aware of this, citing the importance of working "the ground game," which Andrew argues is "vital" for the development of the industry.

Further, successful development of a truly sustainable industry requires social considerations. To achieve social license, farmers have to put community considerations and concerns at the forefront and find meaningful ways to engage and provide benefits. Ultimately, it is the community that controls social license, so farmers must genuinely invest in order to secure it [16,17]. This can create long-term benefits for the host community.

Study Methods

To investigate social license in aquaculture we designed a qualitative study consisting of semi-structured interviews with 30 Maine seaweed and shellfish cultivators. Using a list of all Standard and Experimental leaseholders and commercial Limited Purpose Aquaculture (LPA) license holders from the Maine Department of Marine Resources website, we were able to draw a random sample of farmers stratified by type (standard and experimental vs. LPA), region (southern, midcoast, and downeast), and aquaculture product (shellfish vs. seaweed). In total, there were 184 active and pending standard and experimental leases in Maine. After removing finfish farms and deleting duplicate leaseholders, we were left with 106 standard or experimental leases. We then stratified by region and aquaculture type and randomly selected 3 shellfish farms and 3 seaweed farms per region, resulting in 18 total leaseholders. Quotas for sampling were adjusted when there were no farmers left in a particular category. For example, there were very few seaweed farmers in Downeast, Maine, so some of these slots were filled with Midcoast seaweed farmers.

We opted to select more standard leaseholders than LPA license holders because of the more extensive public process involved with securing a standard lease. In Maine, standard leases require scoping sessions and public hearings. Standard leases can include a maximum of 100 acres and are secured for up to 20 years. LPAs, on the other hand, are less than 400 square feet and are renewed yearly, requiring minimal public input aside from getting approval from the town harbormaster and landowners within 300 feet. Our original list of all active LPAs consisted of 696 licenses. After removing all non-commercial operations and deleting duplicate applicant names, 234 active commercial LPAs remained. We randomly selected two shellfish farms and two seaweed farms per region resulting in 12 LPA license holders. Participating farmers, their product, type and region are listed in Table 2.

Table 2. Participating Farmers

FARMER	PRODUCT	TYPE	REGION
Alicia	Oyster	LPA	Southern
Brian	Oyster	LPA	Southern
Amanda	Oyster	Standard	Southern
Phoebe	Oyster	Standard	Southern
Charlie	Oyster	Standard	Southern
Keith	Oyster	Standard	Southern
Matt	Mussel	Standard	Southern
David	Oyster	LPA	Midcoast

FARMER	PRODUCT	TYPE	REGION
Chris	Oyster	LPA	Midcoast
Dana	Oyster	Experimental	Midcoast
Pat	Oyster	Standard	Midcoast
Dan	Oyster	Standard	Midcoast
Paul	Oyster	Standard	Midcoast
Annie	Oyster*	LPA	Downeast
Graham	Oyster	Standard	Downeast
Joanna	Oyster	Standard	Downeast
Fiona	Mussel	Standard	Downeast
Marsden	Scallop	LPA	Downeast
Inga & Krista	Seaweed	LPA	Southern
Mitch	Seaweed	Standard	Southern
Carrie	Seaweed	Standard	Southern
Gail	Seaweed	LPA	Midcoast
Karen	Seaweed	LPA	Midcoast
Hugh	Seaweed	LPA	Midcoast
Peter	Seaweed	Experimental	Midcoast
Bob	Seaweed	Experimental	Midcoast
Jodi	Seaweed	Standard	Midcoast
Scott	Seaweed**	Standard	Midcoast
Andrew	Finfish***	Standard	Downeast
Elijah	Seaweed	LPA	Downeast

*Was selected as part of the seaweed sample, also is licensed for seaweed but not currently growing.
**Also produces oysters.
***Was selected as part of the seaweed sample for past IMTA methods

Photo provided by Krista Rosen and Inga Potter

Farmers were contacted via email to participate in a semi-structured interview focused on their planning and permitting process, stakeholder outreach, community engagement, and specific ways they have worked to gain the community's trust. Farmers were provided with a consent form explaining the risks of participating (IRB #8414, see Appendix A) which they read and consented to prior to the interview. While given the option to choose a pseudonym, nearly all farmers chose to be identified by name. We conducted most interviews using recorded Zoom video calls, though some were recorded phone calls or in-person interviews. We then transcribed all interviews and then thematically coded using Nvivo qualitative data management software.

Social License for Maine Shellfish & Seaweed Farmers

Though many of the SLO generating practices from previous research are applicable across industries, farmers that participated in the making of this guide show how SLO work can be highly sector-specific. Farmers are operating within a unique network of stakeholders, responding to a unique set of public concerns, and engaging in a unique and novel activity with its own set of impacts and benefits. At the same time, they emphasize a key part of social license that is ubiquitous–that social license work is context-specific and place-based. Being in Maine, farmers are contending with stakeholder groups that have competing values and have created strategies for connecting with each group in different but meaningful ways. They are also navigating how to work their way in alongside other long-standing marine industries that have been central to Maine's economy for hundreds of years and offer insight into ways to do so respectfully. The following sections are an effort to organize and present how shellfish and seaweed farmers are 'doing' social license in Maine.

3.1 LEARNING AND INTEGRATING

All Maine farmers discussed the importance of knowing the landscape–both physically and socially–and being able to seamlessly integrate into that landscape as a new user. This process of learning and integrating was evident during the planning stages, particularly in site selection, and in farmers' overall approach with their host community after permitting.

3.1.1 Site Selection

Farmers recognized that site selection has as much to do with growing conditions as it does the social fabric and culture of the host community. Connecting with other users, landowners, town officials and interested community members is an essential part of gaining insight into the community and in working towards early acceptance. Farmers suggested casting a wide net when determining your stakeholder network since neglecting groups, whether intentional or not, can be detrimental to gaining a community's trust [38]. Hugh talked about how they expanded their stakeholder network to include "every land-owner we could get our hands on" and "every lobsterman we thought might be in that particular area." Their team went beyond what was legally required by the permitting process to make sure that they connected with everyone who could potentially be impacted, or have an impact on the project. For Hugh and his team, this was made easier because their corporate business structure included shareholders who were local residents and fishermen. Hugh was also a local resident. Hugh and his shareholders were already integrated into the communities and were connected to different stakeholder groups, which helped them gain credibility and trust.

In many cases, farmers were farming in their own communities where they were already well-rooted. They had accumulated social capital–a term that describes a person's social network [32]. These networks provide certain resources that can be transformed into other forms of capital, like financial capital. In this case, farmers who had large social networks (social capital), primarily through living in their host community, were able to use those networks to gain support and grow their businesses. David experienced this in his town, which he described as "a good old boy community." He said "fortunately, we know a lot of the good old boys, so that helped us." Joanna talked about this as well, having grown up in the same town she is now farming in. Her husband and business partner also grew up there and was a lobsterman, which she said "helps." During site selection, she said "we just used our connections to find out if that specific spot would be problematic for any reason, and most people had no real reason to think that it was." Once her site was finalized and they started the application process, she talked about how people in her social network acted as advocates for her business and helped to spread the word.

Our family [knew], the fishing community knew, this attorney [knew], developers knew, other sea farmers knew. And so we had a handful of really meaningful conversations. And we were kind of known already in a small town. And so when a public notice goes out about that, there were a certain number of dialogue things that didn't actually have to happen, you know? My dad owns a bike shop, so they knew. So if we go in and we're talking about it at the bike shop, I feel like there were probably 20 conversations that were held about it that didn't actually directly involve me.

In this case, the resource gained from having these social connections was access to all of their connections' social networks. This in turn, increased community support for the project. So instead of having to go build these individual relationships, she was able to rely on her network to advocate on her behalf, and this was due to her history in the area and her work maintaining those relationships.

In cases where farmers were not from their host community, they used two primary strategies that required building these networks from scratch. First, was organic integration, where farmers would work their way into the industry slowly and in doing so, would build relationships and gain credibility. Peter talked about how his reputation earned through his "long history being around the seafood business and fisheries management" was key when starting his own operation. Over the course of his career, he spent time in the shrimp and groundfish fisheries, he worked for one of the largest lobster dealers, and even spent years as a fish cutter doing piece work. According to Peter, "you can't just expect to move to a new place and then take a piece of the bottom right off the bat. To me, that's asking a lot." While this type of slow integration isn't feasible for everyone, Peter was speaking to a key part of social license, which is the importance of genuinely getting to know your community.

A second strategy used by farmers who were coming in from other communities or who were new to the working waterfront was finding gatekeepers who were well connected to the waterfront. Phoebe suggested that aspiring farmers "start talking to the farmers in the area first and see if they have any advice" before starting the application process. Inga and Krista talked about how connecting with their local harbormaster gave them access to the local lobstering community. They were able to have a better idea of how their project would be received after he "ran it past" them and reported back. Overall, farmers reported that other farmers, harbormasters and fishermen were most useful in gaining insight into information key to site selection, including relevant stakeholders and competing uses of the potential lease area. "You need to know the people there," Bob said simply. He advised that while being an outsider "doesn't preclude somebody from out of town to getting involved if it's something they want to pursue, but they'd have to just take some extra steps in the beginning to get to know the community."

Alignment in Approach

A second way that farmers demonstrated the process of learning and integrating was through value alignment in their business approach. Farmers showed that they were aware of local values and consciously tried to reflect those values in their operations. Amanda talked about how local ocean users respected the way she grew her business "really organically… start[ing] with nothing" because "that's the way traditionally people worked their way up lobstering or in other fisheries here in Maine." She said "you start with a little boat, when you finally make some money you buy a bigger boat. I don't have any flashy things…so the way that I operated my business and how I live my life, they identified with." Andrew also talked about value alignment in his company's growth, saying "we've been very slow, methodical, cautious about how we do things, which is kind of like the coast of Maine. That's the way people are." He said that by going "from the community level up" and "focusing on things that are important to that individual community" their company has been able to integrate into Maine's working waterfront.

Farmers also reflected local values in how they structured their businesses. In many Maine coastal communities, fishing is central to community identity. Farmers in these fishing communities recognized this and saw aquaculture as a way of diversifying the working waterfront and giving watermen options. This alignment also benefited them in terms of social support [18]. For example, Pat's non-traditional cooperative business structure provided locals with the start-up capital and growing space to start their own oyster farm. This model was "a direct response to [his town's] comprehensive planning exercise"–one that prioritized bolstering the working waterfront to help "water men and women who want to stay in a marine economy" which was quickly disappearing. This project only offered spots to local residents, and Pat said that "after communicating that, we didn't have very much difficulty at all." Their alignment with the values of the local community–maintaining their heritage as a working waterfront–was essential to their local support.

In another community with a long maritime history, Jodi and her husband started their seaweed farm as "a way to help our fishing community because we had lost shrimping." They decided early on that they would only hire fishermen. They also worked closely with lobstermen to time their season and kept their farm open for fishing even when they had "the ability to say we don't want fishing in it at all." She aligned herself with lobstermen, knowing that watermen on the island are just "trying to make a living to support [their] families," so working together was a priority for her. Because of this effort, the fishermen were key in securing their lease. When they faced pushback at their public hearing from some seasonal landowners who claimed that their farm was going to displace fishermen, the fishermen "all stood up and said 'not going to hinder us. We think this is great.'"

These strategies demonstrate how farmers are actively trying to align themselves with local values in an effort to co-exist with other users and gain community support. SLO research across industries confirms the importance of this, arguing that value-alignment is key to trust-generation, which in turn generates social license [18,7]. In addition to learning, farmers also demonstrated an education component in their social license work that they said is important to their own social license as well as future growth of the broader industry.

3.2 ENGAGEMENT THROUGH EDUCATION

A significant barrier to aquaculture development and local SLO for aquaculture companies is lack of public knowledge and familiarity with aquaculture practices [33,21,22,8,1,27,37,3,42]. Lack of knowledge and uncertainty can feed into fears about development. Many farmers recognized this. Chris said "when people think about aquaculture, they get scared because they don't know." Joanna compared awareness of aquaculture to fishing, saying "Mainers know fishing, they get that, like it's kind of in our blood. We can picture it and we romanticize about it, it's what our grandfathers did, and sea farming is kind of something scary. It's just different. We don't know what it looks like."

Considering the prevalence of concerns over visual impacts, many farmers brought up strategies they used to reduce uncertainty. During initial planning, farmers brought up the importance of connecting with stakeholders and explaining their operations. Scott talked about how discussing the "actual" visual impacts with stakeholders makes a big difference.

Once you talk to somebody and explain to them what you're doing, and the benefits and the actual visual impacts, or maybe you can come up with ways that there could be a compromise, then all of a sudden, you realize that they shift 180 degrees, and they're excited to support it, because now they know about it.

Hugh talked about how one of their riparian landowners "was concerned that it was right in front of her property. So she was a riparian landowner, but that she was fine with it once she understood what it was going to look like. I think that was the big concern." Other farmers found that using visuals to help landowners get a better sense of what their farm would look like was helpful during the application process. If these farmers hadn't done the initial outreach, these stakeholders could have formed hardened opinions that were fear-based and opposed their operation.

Lack of knowledge can also create problems when the limited information community members do possess is negative. This was the case when Elijah applied for a lease site in Lubec. Initially, he experienced significant pushback because they weren't familiar with seaweed aquaculture. The only experience they had with kelp was when a research organization had placed data-collecting buoys offshore for potential biofuel kelp sites without involving the town. Though the research organization didn't legally need municipal permission, folks in town were alarmed that they hadn't been consulted before

the project began. According to Elijah, because the application was for kelp, it "raised reasonable concerns within many members of the working waterfront community" and they were "like oh, hell no, no, absolutely no kelp here." In response to this, Elijah explained what he was doing and was able to change minds.

I was like, listen, it's just two small lines. I understand these people came and dropped this mooring here for a data collecting buoy without your permission, but I'm coming here to talk to you about it. This is what I'm doing. It's small. This is my boat, I fish around people in your community too, I'm not trying to be some large corporate investment firm coming in to take up your bottom. And then it was a good conversation after that. It's just understanding any apprehension people might have to aquaculture and listening to them fully before you get defensive. Like I'm trying to have a small seafarm. Just listen to what they have to say first and see how you can console them the best you can. My first-hand experience.

As a result of this conversation, Lubec ended up offering him some alternative sites as a compromise, though he ended up siting his operation in Eastport for unrelated reasons.

Another consequence of this lack of knowledge is the risk that these knowledge gaps could be filled with information from anti-aquaculture interest groups, who according to Annie, are "trying to introduce a moratorium on aquaculture on a town by town basis." Dan voiced this concern as well, saying that communities that are unfamiliar with aquaculture are "very susceptible to the gaslighting that's going on, because they really don't know. All they know is what they're being told by the anti-aquaculture people." This emphasizes the importance of being "the one to tell people your side of the story before they hear somebody else's side," in Scott's words. Annie said that the difference between towns where moratoriums have been successful, and where they have not, is "because there's been an awful lot of time and effort put in by local farmers, liaising with their communities to raise awareness of why the industry is important."

So farmers were clear on the solution: work to actively educate the public. In the planning and permitting, this involved extensive outreach explaining the details of their operation. In addition to being transparent about any impacts, Carrie emphasized the importance of generating conversations about ecosystem services which she argued is "largely missing from our dialogue in aquaculture permitting."

There's four different buckets of ecosystem services. There's the provisional [services] (the food), but there's also the regulating [services] (the nutrient cycling), and the supporting [services] like habitat and biodiversity, and cultural [services]. Maine is so strong on that cultural component, that identity with working on the water, right? So I would like to see us start using that vocabulary to demonstrate some of the benefits, not just the impacts.

Once they were operating, farmers continued to educate community members via tours, interviews with the media and researchers, and involvement in schools and research institutions. Several farmers pointed out that this was an unexpected, but significant, part of their job as a farmer. SLO research also supports this strategy. Uninformed or uninterested community members do not contribute to social license–social license is about active community support [38,36]. Educating, then, is a way of creating more informed members of the community so they have the power to grant social license if they are in support.

3.3 TRUST GENERATING PRACTICES

Earning social license is a result of ongoing efforts to build trust with your stakeholders [38,16,24]. Researchers who study public trust in companies have identified two different types of trust: integrity-based trust, and competence-based trust. Integrity-based trust is rooted in moral or ethical alignment–whether the company adheres to a set of principles that the public finds acceptable. Competence-based trust is whether the public believes that the company possesses the knowledge and skills that are necessary to run their operation [4,20,14,29]. When asking Maine farmers about their trust-generating practices, they described actions that contributed to both forms of trust, demonstrating that they are aware that the public needs to trust their character as well as their ability to farm. Farmers also brought up the importance of providing tangible community benefits and how those benefits can help contribute to integrity-based trust generation and boost social license.

The following section dives into three categories of trust-generating actions that farmers identified as key to gaining social license. The first category is communication-related actions which includes voluntary communication, consulting and making accommodations, and honesty and transparency. The second category is operational practices, which includes reducing impacts, keeping a tidy farm, abiding by regulations, and being visible. The third category is community benefits, which includes helping others, filling community needs, employer/employee related actions and using your product to interface with the public. Table 3 describes these trust-generating actions, which form of trust they increase, and the percent of farmers who discussed each action in their interview.

Table 3. Farmer Identified Trust Generating Actions

TRUST GENERATING ACTION	AVENUE	% OF FARMERS
Communication		
Voluntary communication (not legally mandated)	integrity	100%
Consulting & making accommodations	integrity	35%
Honesty & transparency	integrity	31%
Operational Practices		
Keeping a tidy farm	competence integrity	38%
Reducing impacts	competence integrity	35%
Being visible	competence integrity	31%
Abiding by regulations	competence integrity	14%
Community Benefits		
Providing product	community benefit integrity	66%
Filling community needs	community benefit integrity	35%
Helping others	community benefit integrity	28%
Being a good employer	community benefit integrity	21%

3.3.1 Communication

The consensus among researchers is that quality communication plays an integral role in a company's ability to earn social license. This was confirmed in aquaculture as well in a recent study where they found that positive interaction with aquaculture companies was the strongest predictor of higher social license ratings [36]. Maine farmers confirmed the importance of this action and offered deeper insight into what can make communication most meaningful, beyond just being positive.

Voluntary Communication

First, was the importance of voluntary communication, or communication with stakeholders that is not mandated by regulations. While all farmers discussed using this strategy, 41% of farmers specifically linked this action to trust. Farmers shared examples of voluntary communication during their initial outreach and beyond.

During the leasing process, Hugh talked about casting a wide net when identifying potential stakeholders.

Well, I think it's not just following the requirements of the license, which is riparian landowners. It's thinking of your constituencies and anybody that might be impacted by it. Like the story of the wind turbines in Nantucket, which they weren't on anybody's property, but everybody complained about them because they could see them. So people are going to at least notice your farm, and notice that you're there working during certain times of the year. So I think our strategy was to talk to everybody we could get our hands on. And to make it very public and to do personal contact with the right people, fishermen and landowners.

Like Hugh, other farmers agreed that meeting the regulatory requirements for public involvement outlined in the leasing process is the absolute minimum. Nearly all farmers discussed the importance of being proactive with outreach and many specifically said to start outreach prior to submitting any application paperwork. Phoebe advised that it's never too soon to start, "but definitely before you submit your final lease application…you don't want that to be the first time the public's hearing about it."

Farmers also talked about the importance of being willing to talk with folks beyond the initial outreach period. Taking the "five minutes," as Scott said, to talk to folks makes a big difference because it's an opportunity to make a good impression. He pointed out that "it's really easy to start forming opinions about somebody that you never see, but when you see somebody and you get to know that person… you're gonna get to know the kind of person they are." This speaks to the way that taking opportunities to interact with others helps to build integrity-based trust. Annie shared similar advice when talking about other users.

Over the past few years we just made sure to try and be nice to them, you know, stop and talk to them, give them a history. We had one just on Saturday, a group came by, were kind of hanging out near the farm and they obviously were interested in what we were doing. So we just drove over and chatted to them. First, I think they were a little worried that we were going to shout at them to get out of here, but we weren't. It's like, hey, just saw you hanging out. And, yeah, they were interested and asked some questions.

It is this voluntary communication over time that gives stakeholders the opportunity to get to know farmers and develop trust in their character. Amanda talked about her primary engagement strategy. "Well personally," she said, "I walk right up to people and start talking to them, like when I see them at the dock, or when I see them on the water." She also attended town meetings to meet local community members. She said that "people needed time to get to know me, and still do. I've been operating seven years but that's nothing in comparison to the length of relationships on the waterfront."

Consulting & Making Accommodations

Consulting with stakeholders about plans, rather than simply informing, was another important form of communication that helped to generate integrity-based trust. This is most effective prior to any formal public hearing. Dana brought up an example of how running expansion plans by their neighbors prior to filing showed that they were "willing to talk and being open" and "just that simple communication has been helpful." Even further, farmers brought up the importance of making accommodations based on stakeholder concerns. Making real changes in response to feedback provides stakeholders with tangible evidence that farmers are listening to concerns and want to be good neighbors. This evidence helps to build the integrity-based trust necessary for SLO [38,24,39]. Marsden shared a story about moving his lines "20 feet under water so that guys can go over the top of them, and the windjammers can go down through" after some sailboats were catching the lines when he had them at 12 feet. Bob described how he changed his set up in response to some objections from other lobstermen in the area.

What I was originally going to use, which a lot of guys use, is big concrete blocks. 1000, 1800 pound blocks. I switched over to using all pyramid anchors and mushroom anchors. And they're all 200 or 250 pound anchors. I've got 40, well I just bought more, roughly 50 anchors I use. And so I go scalloping in the wintertime. So my boats rigged so I can get these up and down relatively easily. So it really works out well. It's a significant investment in all the anchors and the lines. But it just allows me to be in there during my lease time. And then during the offseason, because there's some lobstering going on there. Not much. It's just, I empty it right out. It takes me two days to construct the farm and two days to get everything up, so it works. It keeps everybody happy.

Though they required some upfront costs, to Bob, these accommodations were worthwhile. As a lobsterman himself, he respected their concerns and made real changes so that other users felt more confident about any potential impacts.

While Bob's example is a significant change, it is important to note that the changes farmers were able to make in response to community feedback varied in degree depending on their unique capacity. In many cases, pulling up moorings seasonally wouldn't be feasible. However, farmers demonstrated that even small changes can make a big difference.

Honesty & Transparency

Lastly, 31% of farmers brought up the importance of being honest and transparent in generating integrity-based trust, which echoes the research on social license [38,10,24,39]. Farmers described several instances where honesty and transparency is key, one of which is when conveying plans to stakeholders. Brian talked about how being upfront about potential growth is important.

I think it's all about communication and transparency. You know, I think it's important to talk about your goals of your farm and what you're long-term looking to achieve. It's one thing to say, 'Oh, hey, I'm just opening up a single LPA' when you're planning on putting in five acres in two years. I think that's important.

Photo provided by Karen Cooper

Social license is dynamic and can be easily lost through violations in trust. Though it may be tempting to downplay impacts and overemphasize benefits to allay fears, research has suggested that transparency and openness can lead to better social license outcomes [10]. One farmer described his experience with this during their expansion. In an outreach letter describing the change to neighbors, he said that they didn't include the final acreage, hoping that they would "be able to have that conversation face to face with people" at an upcoming farm event, the invitation for which was included in the letter. While this wasn't an attempt to keep folks in the dark, local opposition used this omission against them, claiming that they were being secretive–an attack on their character. Luckily, the farmers had a long-standing reputation to buffer this attack and had done their due diligence on the lease application, so they were eventually awarded their lease after a lengthy legal process. While there is no definitive way of knowing whether including the acreage would have changed the nature of their opposition, he said that "hindsight being 2020, I think I would have put the size in there."

Farmers also cautioned about overstating the benefits in an attempt to win folks over. Andrew said "try to not be promising the world out of the gate...don't promise that you're going to employ 10,000 people, all this sort of stuff." Others also encouraged farmers to be open about not having all the answers. Dana said he has found it beneficial to "communicate some of your own uncertainty as you as an operator grow and learn." Brian talked about how being open with "what's happening at the farm, good and bad" in his newsletter has helped with his connection with his customers.

I tell people all of my trials and tribulations, like this last year, I brought my oysters up from their winter's nap in March, and they looked fantastic. And I let some just loose on my farm all winter. And everything was great. And then I left, and I didn't come back probably for three or four weeks till the end of April. And when I came back, like April blew all month, not like storm blew, but just like consistently blew. And when I came back to the tide bank, the sand had shifted and had covered my entire oyster bed in about eight inches of sand. And you know, when you can only really address your farm at low tide, that gave me like an hour to try to excavate with a shovel. So I lost thousands of oysters. So you know, it's heartbreaking stuff like that. And so I just share that stuff.

Lastly, while the amount of communication for each farmer varies depending on certain factors like sale method or where they access their farms, all farmers have the ability to build integrity-based trust by following through with promises.

Hugh said simply, "we do what we say we're going to do…we don't flinch on any commitment we have." Dana echoed this, saying "be good on your word." Fiona talked about how following through with promises repeatedly is what generates social license, and this has real benefits for farmers when those stakeholders are willing to go to bat for you.

So we made this arrangement, and we stick to it. And then the next time, we stick to it. And then the next time, you do what you said you're going to do. And then at the public hearing, they'll stand up and say, "these guys do what they say they're going to do."

This example demonstrates how gaining integrity-based trust through consistency in follow-through can generate social license.

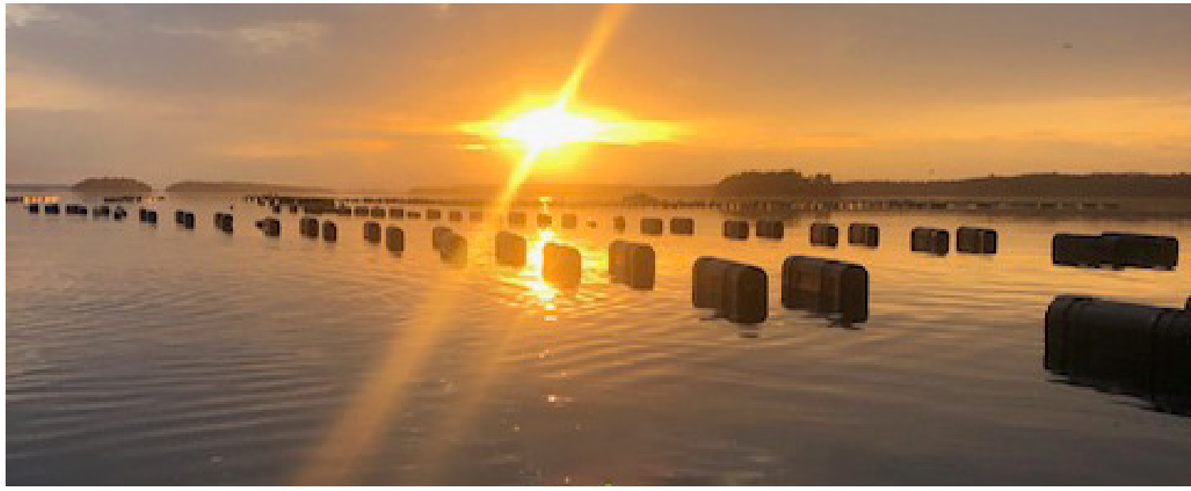
3.3.2 Operational Practices

Farmers discussed a variety of operational practices that helped generate both integrity and competence-based trust. Many of these practices were motivated by farmer's efforts to make a good impression and avoid being noticed for the wrong reasons. Compared to active outreach, these practices could easily go unnoticed in their role in trust generation, but according to farmers, they were key in establishing legitimacy and credibility within the working waterfront.

Keeping a Tidy Farm

Interestingly, the most frequently discussed trust-generating operational practice was keeping a tidy farm. Farmers were acutely aware of the importance of avoiding negative attention at this point in the industry's development. Graham said it simply.

We keep the farm clean. We tend our equipment. I guess another answer is we've never lost a piece of gear, because we way over build everything. We only use knots, we don't use long line clips, like we've never lost a cage, we've never lost a line. So I think obviously for the lobstermen to see this thing not become a snarl and also just be floating around the bay screwing everyone's lines up, I don't think that they notice, but I think they would definitely notice if we didn't do it right.



Chris talked about how he has consciously worked to incorporate this practice into their business. This practice helped to create positive impressions even when they were not around to talk with people about their operation.

I would say leaving our workfloat shipshape. This comes from my sailing career I guess. Kind of like how we tie our boats up at the end of the day, bow, stern and springs. But before that, back at the workfloat we do a thorough clean up. We hose off all the shell and slime and everything. And the tumbler, all the wood parts are painted white. We take a sponge and hose all the mud off and it looks like a brand new tumbler. The culling table has mud all over it, we hose it off and sponge it down, sponge off the legs and everything. We pack all the bags in tight underneath there. We pack them in on the ends so that they don't blow away. All the orange bushel crates get stacked and pushed aside. The hoses are coiled neatly. Everything's tight, shipshape, nothing's flapping and dragging around. If somebody comes by when we're gone, it looks like a well-kept workfloat. There isn't junk everywhere. There's no trash. Everything's well-kept.

Joanna agrees that a "good clean farm…goes a long way." Others say they try to avoid the farm being "too disheveled" (Paul), "an eyesore" (Phoebe) or a "mess" (Marsden). This emphasis on keeping the farm organized and tidy reflects efforts to gain competence and integrity-based trust from stakeholders–that farmers know what they are doing and are careful that they aren't creating unnecessary hazards with gear "floating away outside of the cove" (Elijah) or "having too much in the way that's going to cause an accident" (Annie).

Reducing Impacts

Another trust-generating action farmers discussed had to do with reducing or minimizing impacts (35%). Reducing impacts has been shown to influence successful aquaculture development in other places as well [13]. Similar to keeping a tidy farm, reducing impacts appeared to be motivated by wanting to avoid negative attention, yet this practice was broader and helped to generate both competence and integrity-based trust. Like keeping a tidy farm, these practices help farmers gain their stakeholder's confidence that they know what they are doing, but many of these practices also demonstrate elements of integrity–that farmers are considerate and respectful of others. Gail described how they are hyper aware of their volume in their cove.

We always try to keep our voices down because it's an open cove, and people do live on the cove. So we always try to respect them. Keep the volume down. And then if we do use anything that is loud, we usually try to take it off the ocean and do it at home. So when we clean the cages, we bring all the cages in and we take them to our house and that's when we clean them. And so we just try to keep the noise down. We try to do no wake, that's another thing.

Reducing noise impacts was one of the most frequently cited ways of reducing impacts (50%). Farmers also discussed reducing visual impacts through gear choice as a way of minimizing their impacts on other stakeholders (60%). Paul discussed both when describing his operation.

I use a plastic sorter and I probably always will. It's slower but it's quiet, you can't hear it 200 yards away. So that was just one of several things I did to try to accommodate the people that live around me. And perhaps, I don't know if you noticed, I don't use the cages to grow in. If you look out there I just use those bags, and if you look across the river, Dana Morse's lease is over there, and he likewise uses bags, and I'm sitting here and I can't see his bags.

Photo provided by Carrie Byron

Fiona talked about minimization in the design of a new system for collecting spat. She said that they "took a long time to try and find the least environmentally and socially impactful system." Brian talked about reducing his impacts by eliminating plastics.

Of course, farms also have to be profitable, so the decisions farmers made to reduce impacts varied based on what was feasible for each farm. Yet no matter the degree, these decisions–when made with the community in mind– helped cultivate both competence and integrity-based trust. These efforts gave stakeholders confidence in their ability to farm without excessive impacts, and it demonstrates that farmers care about how their operations impact others, which speaks to their character.

Visibility

A third practice brought up by farmers was simply being visible as members of the working waterfront. According to Scott, being out on the water or at the local dock putting in the work "giv[es] them the opportunity to see what you're doing and how hard it is." Chris echoed this, saying "if anybody has a problem with this…it's not going to be the public. Because we are out there, and they see us." Alicia touched on this as well. Being seen working hard every day on her farm has helped her gain the support of riparian landowners. She said "they see me working from that mooring field. They could see me in the morning dragging my bags down and my generator, all the things…and they see me when I'm coming in at sunset dragging coolers or bins of oysters up the dock." For shellfish farmers operating during the summer months, this has proved an easy task, especially in more populated areas or when farmers access their farm using a shared dock. The hard work is a given.

For seaweed farmers, farm visibility can be more challenging due to seasonality and minimal gear. Like Bob described, "there's nothing on the shore, storage stuff, like any kind of oyster farm would have, it's just buoys in the water and polyballs on the corners," so it's less noticeable. Regarding seasonality, Karen said "in the wintertime, we have such a small community and usually no one's even around," yet she still brought up visibility when talking about gaining her community's trust. She said that during their harvest, "people are interested, you know, if we bring it to the dock and we're loading it onto the boat or something, people are interested." Hugh talked about using the local fisherman's co-op facility when they land their crop. He said that "being there at the co-op exposes us to, I think there's 40 members, 40 fishermen at the co-op. So they know we're there, they know they're helping us with their facilities, using their facilities." That visibility "helps." Inga and Krista increased their visibility by renting greenhouse space at a local community farm to dry their product. The farm gave formal tours, and apparently "people were most interested in the kelp drying aspects of the tours." According to Inga, this gave people the opportunity to "see what we were doing."

While visibility helps farmers on a social license level, it also helps build positive perceptions more broadly by increasing familiarity and normalizing aquaculture as part of the new working waterfront. Peter said that it's important to "have it out where people can see it, and maybe the kids see it and go home and explain it to their parents or something." He said "you don't want to be doing this stuff with a bushel basket over it."

Abiding by Regulations

Lastly, a handful of farmers brought up abiding by all regulations as a way they earn trust from their stakeholders. Amanda said that "those regulations are there for a reason" so to "put the reflective tape on. Make sure people know that it says seafarm and your name, and where it is." Dana and Phoebe both discussed the importance of keeping your site well marked. Phoebe specified that this was to alert other users who are often in their lease site of potential hazards, although she specified that "it's not like 'don't come here,' it's 'come here, but know there's a farm,'" and this "helps to keep that trust." Charlie also said that being "rule followers in most every regard" helps to maintain the community's trust in her company.

This practice helps to build both forms of trust. Following the rules demonstrates that farmers are knowledgeable about the requirements of their lease, that they are aware of other users and how disregarding rules like proper marking could be hazardous, and it also demonstrates aspects of their character, like Charlie's comment about being "rule followers."

3.3.3 Community Benefits

Researchers agree that in addition to quality engagement, stakeholders also need to experience tangible benefits that help to offset the risks associated with the project [19,10,43,25]. In aquaculture specifically, community benefits that are often cited include contributions to the local economy like job creation and tax revenue. Farmers did cite their role as employers as an important community benefit, but brought up a variety of other benefits that they provide to community members that help boost support for their operation.

Product as Interface

Compared to other industries that rely on shared resources like mining or green energy, aquaculture has one key SLO advantage–the output is food, which is a tangible and accessible product that is desirable to a variety of stakeholders. Simply by selling locally, farmers are providing access to a high-value food during a time when locally-grown is especially meaningful. Some farmers chose to sell directly to restaurants or locals because they "wanted to be hyperlocal," like Brian. David talked about how he set up a pick-up spot at his dock where neighbors would boat in and be able to buy oysters on the honor system. He said that his neighbors enjoy the availability and they "like that whole game of picking their own." Yet even those who sold mostly wholesale found opportunities for face-to-face exchanges over their product. Charlie talked about participating in the Maine Oyster Festival and how despite their preparedness for questions about the farm, "all they want[ed] to do [was] eat the oysters. They just wanted to know that these oysters came from Maine. And they were awesome."

Additionally, farmers often gave discounted or free product to neighbors to "maintain relations" as Paul described. This kind of offering helps to generate social license in three ways. First, it is a direct benefit to locals who are often most impacted by the operation. Wealthy riparian landowners may not value aquaculture as a job generator, but they may see value in having access to local oysters delivered to their dock. Second, the gesture helps to build integrity-based trust by demonstrating that farmers are even willing to lose a little bit of money in an effort to provide benefits to neighbors. Third, this aids in relationship building.

Interestingly, these practices were just as common with seaweed farmers as they were with shellfish farmers. Kelp farmers found opportunities to share their product with locals. Hugh sold their dried kelp at a local "truck farm," saying it was "very popular." Jodi said that they give extra product away to neighbors and have even sold to a local restaurant who features it in their specials. Elijah talked about giving away samples of his dried kelp to locals. He recognized that if he "ever wants to expand one day into like, big big, I will need the community. They can have an opinion on whether they think I can expand or not. And so it is important that they like what I'm doing."

Fulfilling Community Needs

Farmers also talked about how fulfilling community needs was an important practice for generating trust, from serving on committees and boards, to coaching local sports teams. Fiona said that she has "spent time and time and time serving on I don't know how many committees at state level and municipal level." Several farmers brought up their involvement with local schools. Joanna said she has "never turned down a school group," and Hugh talked about how during their first year, they participated in a school "kelp night" and that "it really helped introduce us into the community and the whole idea of kelp in the community." Dan and Chris both talked about coaching local youth sports. Dan said that being "active in our community" helped because "people knew our character."

All of these examples were acts of service. Though farmers do benefit, as these practices help them become better integrated into the community, gain trust from stakeholders, and increase public awareness of their operation, the primary beneficiary is the community. Empty committee seats need to be filled, youth programs need coaches, and schools need support. These benefits are tangible, and in many ways are more meaningful and affect more community members than job creation.

Helping Others

Looking out for others on the water was a third community benefit that many farmers discussed. Graham talked about how he notices when people are in trouble because he's out on the water all day.

> *Because I'm not moving, I'm just sitting here, I notice when boats have lost power, when somebody's run aground, when a lobsterman loses a trap or like totes off the back of his boat. I'm not moving, I'm just sitting in one place all day so I notice a lot more stuff, and so on many occasions I've given somebody a tow, pulled somebody up the rock, run a lobsterman down and give him back his totes that I saw fly off the back of his boat. I think that definitely has given us a fair amount of cachet at least with the water going people here. And you know, word spreads, people are like 'hey I heard you helped out what's his name last week.'*

He acknowledged that this helped to boost his credibility with other users. Credibility is the foundation of integrity-based trust [38]. Other farmers told similar stories, from returning sand toys and beach balls to contacting the owners of a flipped sailboat to pulling a child out of the ice. For Charlie's farm, though they had a contentious lease hearing, "a lot of people spoke publicly on the record" about how they "really are guardians of the bay in a lot of ways." Though she cautioned that social license "changes on a dime," she said that it's important "to have the respect of the people." Being willing to help others is clearly an avenue to gain this respect.

Employee/Employer Related

Lastly, farmers did discuss employment related aspects of their businesses that helped to generate community trust. Mitch said that "creating a culture in the company of trust and a sense of community within the company has a big impact I think in terms of how you're perceived outside." Fiona was proud of how her farm treats their employees, saying that "people go away from us saying they're the best people to work for. I'm getting recommendations on Facebook from people who used to work for us saying 'I fully recommend them. They're wonderful people to work for.'" Their reputation as a good employer helps create positive impressions of their business.

Some farmers also brought up how employing locals helped to further integrate their business into the local community. Jodi talked about being selective of potential employees–limiting their hires to local fishermen who were in need of supplemental income. She pointed out that this practice also "really helps us in the public sector" but "that's not why we did it." Hugh talked about this as well when selecting shareholders. They "hand picked" local lobstermen who were "leaders in the fishing community. So they all have good reputations of being good citizens…and following rules and doing what you need to do to be good lobstermen. So that helps our credibility as well."

While the importance of providing local employment opportunities has been shown to increase acceptance of aquaculture operations more broadly in several studies [26,6,15,40,11,13], farmers have shown how this works on a local level–through integration and reputation.

Photo provided by Krista Rosen and Inga Potter

3.4 FACING OPPOSITION

While social license work can help prevent opposition, even farms who are well established members of the community and have done the work necessary to gain the community's trust have faced stakeholder pushback at certain points in their growth. Charlie experienced this first-hand when they applied for a larger lease. She pointed out that when "you want to make a change, then people will reevaluate that social license." Farmers agreed on the best way to manage these challenges—to take the high road, be respectful, listen and respond, and when you find yourself facing folks who are not willing to have a respectful dialogue, disengage. Like Jodi said bluntly, "there just comes a point where it's like, I can't accommodate you people anymore. It's not working." Though she reached this point with a handful of landowners, this didn't influence the quality of her interaction with them. She said that this past summer, her husband spent "probably four days helping [one of the opposing landowners] fix his waterline" to his island home. She said that "we could shake hands and walk away fine afterwards, and disagree about this one thing." This speaks to the value of integrity-based trust. The landowners were opposed to the operation itself rather than attacking the character of the farmers. This indicates that the SLO relationship is functioning well [38]. Other farmers also discussed similar strategies. Fiona talked about how she refused to engage in "mudslinging," and instead opted to "rely on the equity I have had historically for the last 17 years in the community." By continuing to focus on building support, rather than fighting with the opposition, farmers maintained respect and integrity in the face of challenges.

Lastly, it is important to note that research suggests that in some cases, there are certain communities that will be less willing to issue social license due to conflicting community values [41]. While values change—and the social license work that farmers are doing plays a role in that change—farmers pointed out that in some places, aquaculture operations just might not be a good fit. Amanda talked about how she was looking into a second potential lease site on a private salt pond. In an effort to gauge potential support, she sent "a letter and photographs" to all of the riparian landowners, nearly two years in advance of when she planned to submit an application. She said that she heard back from every landowner, "and everyone was opposed to it except one person." Due to the response, she said that she might look elsewhere.

Others told similar stories. Elijah talked about another farmer who was trying to start a mussel project in an area that "wasn't going to bother anybody." He said "there were just too many people that were just like, aquaculture? No. Nope. Not here." In Karen's community where lobstering dominates the working waterfront, she said that "I would love to do shellfish, but because it has to be in the water year-round, I would never take up fishing bottom with mussel rafts or anything like that." Her seaweed operation was a better fit for their area, since it did not conflict with their primary industry. Stories like these suggest that in the process of learning about the host community, farmers should also consider how their operation would be received based on community fit and how they could tailor their operation in a way that would better align with community values. This is no easy task. Communities are complex networks made up of various stakeholder groups all with their own values and priorities. An association of seasonal landowners will likely have vastly different concerns compared to the working waterfront community. Yet, the approach remains the same. Learn about the host community and assess whether community members would be receptive. Reach out, listen and learn, make reasonable accommodations, and if there is no room for negotiation, respectfully disengage.

Conclusion

With the growth in shellfish and seaweed aquaculture in Maine, social license is becoming increasingly important as the industry faces place-specific social challenges that require careful navigation and creative approaches. Farmers already operating in Maine are trying to carve out a place in a working waterfront dominated by industries that are "in our blood." They are also dealing with a rapidly changing coastline that is bringing a new, competing set of values surrounding acceptable use of the coast. Further, aquaculture as a practice, though not new, is relatively new in Maine, which presents additional challenges like public uncertainty and fear around impacts.

With these challenges, farmers in Maine are working hard to gain the community support necessary to grow their own businesses and the broader industry. They are doing this through social license work—regular practices that function as a way of gaining integrity and competence-based trust—both of which are necessary for social license. While these practices are wide-ranging, they cluster around the process of learning and integrating into the community, community education, communication, daily operational practices, and in offering community benefits. Certain strategies are more or less effective or valuable depending on local context.

While this research offers unique insight into how Maine farmers are doing social license, there are certain limitations that should be noted. First, this study focuses solely on farmer perspectives. Practices that farmers deem effective may be perceived differently by community members. Future research should include stakeholder perspectives as a way of validating farmer trust-generating practices. Second, this guide is specific to the Maine industry which is dominated by small to medium-sized aquaculture operations in rural areas. Most farmers are embedded in their communities, making organic social license work easier. Future research should investigate areas outside of Maine to include look for urban/rural differences in social license work. Further, the population in Maine is racially homogenous and the sample of farmers reflected this—all participants were white. Future work should include a more diverse sample of farmers. Lastly, this project focused on shellfish and seaweed farming, both of which are touted as environmentally benign forms of aquaculture. Future research should apply a social license framework to more intensive aquaculture operations to see the interplay of environmental and social impacts.

Despite these limitations, there is great utility to this work for Maine shellfish and seaweed farmers and the industry in Maine more broadly. While social license work is essential for farmers' individual success, this work fuels broader industry growth. Every positive interaction is an opportunity to create the experiences necessary for moving the needle on public perceptions, and Maine farmers are hyper aware of this connection. By working the "ground game," farmers are able to gain the support of their local communities, spread awareness about the benefits of aquaculture, and help to humanize what can be a "faceless" industry. Most importantly, Maine communities also benefit from this social license work because it puts community well-being at the center of conversations surrounding development, which is essential for growth of a socially sustainable industry that can provide food, livelihoods, and fill local community needs.

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