



Shrimp Aquaculture and Social Conflict: Socioeconomic Dynamics in Seliat, East Lombok

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Abstract: This study examines how shrimp-aquaculture expansion shaped socioeconomic change and social conflict in Seliat Hamlet, Menceh Village, East Lombok Regency. It applies a qualitative historical case-study design using in-depth interviews, field observation, village documents, agreement records, and relevant literature. The materials were examined through heuristic source collection, external and internal source criticism, interpretation, historiography, and an interactive qualitative cycle of data condensation, display, and conclusion drawing. The findings show that the farm generated employment, social assistance, and new economic activity for some residents, but benefits were unevenly distributed. Conflict originated in limited community participation, disputed land transactions and unfulfilled promises, reported water and air pollution, declining fishing catches, and weak governmental mediation. It developed vertically between residents, the company, and village authorities, and horizontally between groups supporting and opposing the farm. Protests, petitions, formal complaints, and road blockades became channels of collective mobilization when dialogue forums failed to address substantive grievances. The study argues that aquaculture sustainability cannot be evaluated only through output and investment; it must also include procedural, distributive, and ecological justice. Future governance requires participatory effluent monitoring, a traceable grievance mechanism, independent review of social commitments, impact-based compensation, and an inclusive multi-stakeholder mediation forum.

Keywords: blue justice; coastal community; community participation; shrimp aquaculture; social conflict

Abstrak: Penelitian ini menganalisis bagaimana ekspansi tambak udang membentuk dinamika sosial-ekonomi dan konflik di Dusun Seliat, Desa Menceh, Kabupaten Lombok Timur. Penelitian menggunakan studi kasus historis-kualitatif dengan sumber berupa wawancara mendalam, observasi lapangan, dokumen desa, arsip kesepakatan, dan literatur terkait. Data dikaji melalui heuristik, kritik sumber, interpretasi, historiografi, serta analisis interaktif yang mencakup kondensasi data, penyajian, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa tambak menciptakan peluang kerja, bantuan sosial, dan aktivitas ekonomi baru bagi sebagian warga, tetapi manfaat tersebut tidak terdistribusi secara merata. Konflik berakar pada minimnya partisipasi masyarakat, ketidakjelasan transaksi lahan dan janji perusahaan, dugaan pencemaran air dan udara, penurunan hasil tangkapan, serta lemahnya mediasi pemerintah. Konflik berkembang secara vertikal antara warga, perusahaan, dan pemerintah desa, sekaligus secara horizontal antara kelompok pendukung dan penolak tambak. Protes, petisi, pengaduan, dan blokade menjadi saluran mobilisasi ketika forum dialog tidak efektif. Temuan ini menegaskan bahwa keberlanjutan tambak tidak cukup diukur melalui produksi dan investasi, tetapi harus mencakup keadilan prosedural, distributif, dan ekologis. Pengelolaan ke depan memerlukan pengawasan limbah yang partisipatif, mekanisme keluhan yang dapat ditelusuri, audit atas komitmen sosial, kompensasi berbasis dampak, dan forum mediasi multipihak yang independen.

Kata Kunci: akuakultur udang; keadilan biru; konflik sosial; masyarakat pesisir; partisipasi masyarakat



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Introduction

Aquaculture has become a central component of contemporary food systems and coastal development. Its expansion is commonly justified by rising demand for aquatic food, employment creation, export earnings, and the pressure to reduce dependence on capture fisheries. Global reviews nevertheless emphasize that aquaculture is not a single technological pathway. Its social and ecological consequences vary according to species, production intensity, location, regulation, and the distribution of decision-making power (Boyd et al., 2020; Naylor et al., 2021). Shrimp farming illustrates this ambivalence particularly clearly. Intensive and semi-intensive shrimp systems can produce high-value commodities in relatively small areas, but they may also generate concentrated effluent, alter land and water access, and reorganize coastal labor and property relations. The central policy issue is therefore not simply whether aquaculture grows, but whose livelihoods are strengthened, whose risks increase, and who has authority to define acceptable change.

Recent research has shifted from farm-level efficiency toward broader social-ecological analysis. Ottinger, Clauss, and Kuenzer (2016) showed that aquaculture impacts extend beyond pond boundaries through land conversion, water use, nutrient discharge, habitat modification, and cumulative spatial effects. Macusi et al. (2022), in a systematic assessment of shrimp farming in the Philippines, similarly found a recurring combination of income opportunities, employment, environmental degradation, and unequal exposure to costs. Studies in the Mekong Delta demonstrate that production models interact with salinity, wastewater flows, climate hazards, and livelihood transitions at landscape scale (Hua et al., 2024). More recent social-ecological reviews argue that sustainable shrimp farming must connect technical indicators with social legitimacy, livelihood security, institutional capacity, and ecosystem resilience (Taiyebi, Welden, & Hossain, 2025a, 2025b). These findings challenge an approach that treats pollution or community opposition as isolated externalities after a project has already been approved.

Governance scholarship offers a parallel critique. Formal permits and farm standards are necessary, but they are insufficient when environmental performance depends on collective water systems, shared coastlines, and relations among farmers, companies, government agencies, and neighboring communities. Brugere, Aguilar-Manjarrez, Beveridge, and Soto (2019) argue that aquaculture adaptation requires governance capable of learning across sectors and scales. Bush et al. (2019) describe this as beyond-farm governance: environmental outcomes are shaped not only by producers' practices but also by markets, infrastructure, public institutions, and the vulnerability of affected groups. When governance focuses narrowly on production units, the cumulative effects on fisheries, groundwater, agriculture, and settlement areas can remain institutionally fragmented even though residents experience them as a single disruption.

This problem has a strong justice dimension. Blue-economy strategies frequently present marine and coastal investment as simultaneously sustainable, profitable, and inclusive. Yet the distribution of benefits and burdens is rarely automatic. Coastal grabbing literature documents how access to land, shorelines, and environmental quality can be appropriated for capital-intensive uses, even where ownership is formally legal (Bavinck et al., 2017; Barbesgaard, 2018). Blue-justice research identifies several recurrent risks: displacement, pollution,

degradation of ecosystem services, loss of small-scale fishing access, uneven benefits, cultural disruption, and exclusion from governance (Bennett, Blythe, White, & Campero, 2021). Environmental justice in the ocean thus requires attention to recognition, procedure, distribution, and ecological integrity rather than treating compensation as a substitute for participation (Bennett et al., 2023). For small-scale fishers, development is just only when they retain meaningful space, political voice, and the capability to sustain their livelihoods (Cohen et al., 2019; Jentoft, 2017).

The idea of a social license to operate provides another useful lens. Legal authorization is granted by the state, whereas social license refers to continuing acceptance, trust, and legitimacy among communities and stakeholders. In marine sectors, social license depends on perceived fairness, transparency, environmental performance, and responsiveness to local values (Kelly, Pecl, & Fleming, 2017). Aquaculture research shows that community identity and corporate identity shape whether residents regard a company as a legitimate local actor or an external beneficiary (Ford, Billing, & Hughes, 2022). A community-focused framework therefore treats social license as dynamic: it can be strengthened through credible engagement and weakened when promises, monitoring, and complaint handling are inconsistent (Whitmore, Cutler, & Thunberg, 2022). This distinction is important in cases where a company may possess formal permits while facing persistent social resistance.

Participation is not valuable merely because meetings are held. Its quality depends on representation, access to information, influence over decisions, recognition of local knowledge, and the ability to review implementation. Comparative governance research identifies causal mechanisms through which participation may improve environmental decisions, including wider representation of environmental concerns, integration of situated knowledge, and deliberative learning (Newig, Challies, Jager, Kochskamper, & Adzersen, 2018). Reed et al. (2018) similarly stress that engagement outcomes are shaped by context, process design, power, values, and scale. A consultation that occurs after critical decisions, communicates only projected benefits, or provides no response to objections may function as procedural compliance without producing legitimacy. In resource conflicts, this gap between formal participation and effective influence often becomes a grievance in itself.

Indonesia's coastal regions reveal the same tension between production opportunity and livelihood vulnerability. Intensive shrimp cultivation can generate higher output and revenue than traditional systems, but its capital, infrastructure, and management requirements also change who can participate and who captures value (Farionita, Aji, & Supriono, 2018). Local research has documented social change and environmental concern around shrimp-pond industrialization, including altered livelihoods and community relations (Hidayatillah, 2017). Research on small-scale fisheries in Indonesia also underlines that resilience depends on diversified assets, collective institutions, ecological conditions, and governance, not solely on individual adaptation (Handayati et al., 2025). These insights are relevant to East Lombok, where coastal communities combine fishing, farming, wage labor, and informal enterprise while facing growing pressure on land and water.

Seliat Hamlet in Menceh Village, East Sakra District, became the site of conflict following the development and operation of a shrimp farm managed by PT Sinta Aqua Culture. The original study records a dual transformation. Some residents obtained employment, business opportunities, scholarships, social assistance, mosque support, and proposed clean-water facilities. At the same time, residents reported limited involvement in planning, disputed land values and promises, unpleasant odors, salinization or contamination of wells, declining marine catches, and inadequate responses to complaints. The conflict did not remain a simple confrontation between a unified village and a company. It produced vertical tension involving

residents, corporate management, and village authorities, while also dividing residents into groups that supported the farm for economic reasons and groups that opposed it because of environmental and livelihood impacts.

Classical conflict theory helps identify the structural dimensions of this case. Dahrendorf (1959) locates conflict in unequal authority relations between groups that command institutions and groups subject to their decisions. Coser (1956) treats conflict as a normal element of social organization that can reveal suppressed grievances and redefine group boundaries. Resource-mobilization theory explains how dissatisfaction becomes collective action when people develop shared claims, networks, and repertoires of protest (Tilly, 1978). Social-identity theory further clarifies how a local issue can generate opposing categories of 'supporters' and 'opponents,' intensifying mistrust even among neighbors (Tajfel & Turner, 1986). These perspectives are complemented by the social-ecological systems approach, which treats resources, users, governance arrangements, and ecological processes as interconnected rather than separable domains (Ostrom, 2009).

Despite a growing literature on shrimp-farming impacts, three gaps remain relevant. First, many studies separate economic effects, pollution, and conflict, whereas affected households experience them as an interconnected historical process. Second, discussions of aquaculture sustainability often emphasize technological improvement without reconstructing how decisions, promises, environmental changes, and collective action accumulate over time. Third, Indonesian case studies remain limited on how vertical company-community conflict intersects with horizontal polarization inside a coastal settlement. A historical case-study approach is useful because it reconstructs sequences, compares accounts, and treats conflict as a changing relationship rather than a single protest event.

This article therefore asks three questions: what conditions produced social conflict around shrimp aquaculture in Seliat; what forms did the conflict take; and what socioeconomic, environmental, and institutional consequences followed? Its contribution is to connect historical reconstruction with social-ecological and blue-justice analysis. The article argues that the conflict was produced not by one pollution incident but by a cumulative legitimacy deficit. Limited participation, contested benefit distribution, environmental disruption, and ineffective mediation reinforced one another. The case demonstrates that sustainable aquaculture requires more than technical compliance and corporate assistance. It requires institutions through which affected residents can influence decisions, verify environmental performance, obtain remedies, and renegotiate arrangements as conditions change.

Research Methods

The study used a qualitative historical case-study design. This formulation integrates the two methodological orientations recorded in the underlying research: a qualitative case study based on interviews, observation, and documentation, and a historical method organized through heuristic collection, source criticism, interpretation, and historiography. The combination is appropriate because the research objective was not only to describe current attitudes but also to reconstruct the sequence through which shrimp-farm development, community expectations, environmental complaints, and collective action became a sustained conflict. The case was bounded spatially in Seliat Hamlet, Menceh Village, East Sakra District, East Lombok Regency, and substantively around relations between local residents, PT Sinta Aqua Culture, and village-level authorities.

Field research was undertaken during 2025, with the principal interview and observation records concentrated in June and July. Primary sources included in-depth interviews with people occupying different positions in the conflict: village officials, fishers, farmers,

community and religious figures, youth representatives, and residents living near or otherwise affected by the farm. Informants were selected purposively because they possessed direct experience of planning, land transactions, employment, environmental change, community meetings, company commitments, or protest. The source thesis does not provide a defensible total number of informants; accordingly, this article does not infer or invent one. Instead, it evaluates claims by comparing the role, date, and content of each available account.

Observation was used to examine the spatial relationship among ponds, residences, agricultural land, access routes, wells, and the coast, as well as visible indications of waste-management and community infrastructure. Documentary materials included village demographic information, correspondence, permits and recommendation letters available to the researcher, records of community-company agreements, minutes or evidence of commitments, photographs, and relevant media and academic sources. The agreement documentation was particularly important because several grievances concerned the difference between promised and perceived implementation. Documentary evidence was not treated as self-validating; it was compared with testimony and field conditions.

Analysis followed four historical stages. First, heuristic work identified and collected oral, written, and visual sources relevant to the emergence and development of conflict. Second, external criticism examined provenance, date, authorship, and contextual fit, while internal criticism compared the plausibility and consistency of substantive claims. Third, interpretation connected events and accounts into causal themes: participation, land and benefit distribution, environmental change, livelihood effects, conflict forms, and institutional response. Fourth, historiography organized these themes into a chronological and analytical narrative. This historical sequence was combined with the interactive qualitative model of data condensation, data display, and conclusion drawing described by Miles, Huberman, and Saldana (2014). Coding was iterative: an account could be classified under more than one theme when, for example, a complaint about well water also concerned health, trust, and government responsiveness.

Triangulation operated across sources rather than through numerical frequency. A claim was treated as stronger when it appeared in accounts from different social positions, was consistent with observation, or was supported by documentary evidence. Conflicting accounts were retained as part of the analysis because disagreement itself revealed polarization and unequal interpretations of the farm. Reports of chemical composition, health effects, coral damage, or regulatory violation were therefore presented as resident perceptions unless the source record contained independent technical verification. This distinction prevents the article from converting socially important allegations into laboratory or legal findings that the original research did not establish.

The analytical framework combined conflict theory, social identity, resource mobilization, social-ecological systems, social license, and blue justice. Dahrendorf's authority-based conflict perspective was used to examine asymmetry in decision making. Coser's approach helped interpret conflict as both disruptive and potentially corrective. Tilly's framework connected grievances to collective organization, while Tajfel and Turner's perspective explained pro- and anti-farm boundary formation. The social-ecological systems framework linked water, marine resources, land, livelihoods, users, and governance. Social license and blue justice were used to assess legitimacy through procedural, distributive, recognition, and ecological dimensions. The purpose of this theoretical combination was not to force all evidence into a single model, but to identify mechanisms operating at different levels.

The study has limitations. It is a single case based primarily on qualitative evidence, and it does not include laboratory testing of water, epidemiological measurement, a household income survey, or a complete corporate and regulatory archive. Some recorded testimony names informants, whereas other accounts are role-based. This article generally emphasizes roles and dates and uses names only where the original field record already attributes the evidence. The findings should thus be read as an empirically grounded reconstruction of conflict dynamics and perceived impacts, not as a technical environmental audit or judicial determination. These limits also identify a future research agenda: longitudinal water monitoring, participatory mapping, household livelihood analysis, and institutional evaluation of permit and grievance processes.

Research Result

The Structural Origins of Conflict: Participation, Authority, and Unequal Expectations

The earliest and most consistent grievance concerned how the project entered the community. Residents did not describe themselves as rejecting all economic development or all aquaculture. Rather, they questioned a process in which the scale, purpose, environmental implications, and distribution of benefits were not openly negotiated before construction. A youth representative, Hamdi Asrori, recalled that the initial development was accompanied by unclear or inadequate socialization and that some residents objected because they did not feel involved (interview, 1 June 2025). M. Arifin similarly stated that there had been no open socialization and that many residents only understood the project after construction had begun, leaving basic questions about beneficiaries and positive and negative effects unanswered (interview, 4 July 2025).

These accounts indicate a procedural deficit rather than a mere communication error. Information was important, but the deeper issue was influence. Residents expected an opportunity to evaluate effects on water, fishing, agricultural land, settlement comfort, and access to the coast. When consultation was perceived as limited or late, the project appeared to embody a hierarchy in which corporate and governmental actors could decide while affected people could only react. In Dahrendorf's terms, authority positions generated opposed interests: actors capable of authorizing and operating the investment had structurally different interests from residents who would live with its consequences. The conflict was therefore embedded in institutional relations before visible protest occurred.

Land transactions and promised benefits deepened this legitimacy problem. The evidence records dissatisfaction over differences in land prices and perceptions that owners did not receive equal or transparent treatment. Some households viewed land sales as an immediate opportunity; others feared the permanent loss of productive space and future access. Because land was also a social asset tied to family security, farming, and local identity, its conversion could not be reduced to a market exchange. Suhirman stated that, to his knowledge, there was no official initial agreement with residents and that operations proceeded without community approval; he also associated the farm with discomfort and more difficult access to the sea (interview, 6 July 2025). Whether every household shared this view is less important than the fact that no widely trusted process existed to settle competing interpretations.

Expectations regarding employment, profit sharing, compensation, scholarships, social assistance, mosque support, and water facilities created another layer of contention. The farm did provide or promise several community benefits, and these benefits help explain why some residents supported its presence. Yet assistance was perceived as selective, small relative to impacts, or inconsistently realized. Village head Idrus reported that the company did not adequately attend to residents' complaints and that assistance did not reach everyone (interview,

5 July 2025). In this setting, corporate social responsibility did not operate as a neutral benefit. It became part of the conflict because residents evaluated who received it, whether it matched prior commitments, and whether it substituted for environmental responsibility.

The divergence between support and opposition followed households' different positions in the new political economy. Workers and families receiving income or assistance could understand the farm as an opportunity. Fishers, farmers, nearby residents, or landholders dissatisfied with transactions could experience the same project as a transfer of costs. The issue was not simply that benefits and burdens were unequal; they were also difficult to compare. Wages and scholarships were visible and individualized, whereas odor, water insecurity, social division, and declining catches were diffuse and cumulative. This asymmetry made public deliberation essential, but the absence of a trusted forum allowed each group to interpret the other as unreasonable or self-interested.

The case thus illustrates the difference between formal authorization and social license. A company may continue operating through legal and administrative permission, but community acceptance is continually revised according to performance and fairness. Kelly et al. (2017) and Whitmore et al. (2022) emphasize that social license depends on trust and legitimacy rather than one-time approval. In Seliat, residents' accounts suggest that social license was weak from the beginning because the decision process was not experienced as inclusive. Subsequent complaints were then interpreted through an existing expectation that the company and government would act without adequate accountability. This path dependence is important: later technical measures could not easily restore trust because they were assessed against the history of exclusion and unfulfilled expectations.

Participation research helps explain why the meetings described in the record did not resolve the problem. Effective participation requires representation, early engagement, access to usable information, dialogue, and demonstrable influence (Newig et al., 2018; Reed et al., 2018). A meeting that records attendance but does not clarify alternatives, answer objections, or establish follow-up procedures may satisfy a formal requirement while failing to produce procedural justice. The Seliat case suggests that participation should be designed as an ongoing governance institution. Before construction, residents need access to plans and impact information; during operation, they need monitoring data and complaint channels; and when impacts emerge, they need authority to require corrective action.

The structural origin of conflict can therefore be summarized as a mismatch between the project's economic logic and the community's expectation of collective authority over local space. The company treated ponds as a productive investment governed through permits, land transactions, labor, and corporate programs. Many residents treated the affected coast, water, roads, and social relations as shared conditions of life. Conflict emerged where these two institutional understandings overlapped without an agreed mechanism for negotiation.

Environmental Degradation and Livelihood Disruption as Interconnected Grievances

Environmental complaints transformed procedural dissatisfaction into an everyday experience of loss. Residents reported offensive odors, changes in seawater and well water, salinity, skin or eye irritation, respiratory discomfort, and organic or chemical waste associated with pond operations. Muslim summarized the conflict as a combination of pollution, odor, wells becoming salty, declining catches, and company promises that residents believed were not fulfilled (interview, 30 June 2025). The village head also identified waste-related water pollution and strong odor as complaints that were insufficiently addressed (Idrus, interview, 5 July 2025). These accounts do not constitute laboratory proof of particular chemicals or causal health effects, but they establish that environmental quality became a central social fact:

residents connected changes in daily life to the farm and judged institutional responses inadequate.

Water was the most sensitive resource because it linked household consumption, agriculture, marine ecosystems, and health. In a relatively dry coastal setting, uncertainty about wells had consequences beyond inconvenience. Households could face higher costs and dependence on alternative supplies, while farmers worried about soil and irrigation. A proposed or provided bore-well response showed that the water problem was acknowledged in negotiations, but infrastructure alone could not settle the question of responsibility. Residents wanted assurance that contamination or salinization would be prevented, independently monitored, and remedied, not merely compensated through an additional water source.

Marine livelihood disruption was equally important. Muhaji, a fisher, reported declining income and reductions in fish, seafood, and seaweed after waste was discharged to the sea (interview, 6 July 2025). The source material also records complaints regarding shellfish and other coastal resources. For fishing households, a decline in catch is not only a loss of cash. It changes travel time, fuel expenditure, occupational security, food access, and the intergenerational value of local ecological knowledge. The farther fishers must travel, the more risk and capital they require. A farm can therefore create local wage employment while simultaneously raising the operating costs and insecurity of an established livelihood.

Research elsewhere shows why these claims require landscape-level attention. Aquaculture effects can move through shared water systems and accumulate across farms and seasons (Ottinger et al., 2016). Shrimp-farming reviews repeatedly identify wastewater, salinization, habitat change, and conflict over land and water as linked rather than separate outcomes (Macusi et al., 2022; Taiyebi et al., 2025a). In the Mekong Delta, Hua et al. (2024) demonstrate that more intensive aquaculture models interact with environmental hazards and neighboring livelihoods, making wastewater treatment and stakeholder cooperation central to system sustainability. The relevance to Seliat is conceptual: even when the production unit is privately managed, its receiving environment is shared.

The evidence also reveals the limits of a simple positive-versus-negative impact balance sheet. Jobs, business networks, and assistance were real advantages for some community members. Environmental costs, however, could undermine the productive base of fishers, farmers, and households not linked to the company. The same family could receive a short-term benefit while facing a long-term loss in water security or land access. Sustainability assessment must therefore ask about timing, reversibility, and distribution. A scholarship is immediate and identifiable; marine ecosystem recovery may be uncertain. A wage is paid to an individual; degraded water can affect a broader population. Treating these items as commensurable without public deliberation obscures their different social meanings.

The social-ecological systems approach clarifies the feedbacks. The resource system included coastal waters, groundwater, agricultural land, access routes, and pond infrastructure. Resource units included shrimp, captured fish, seaweed, shellfish, crops, and clean water. Actors included the company, employees, fishers, farmers, nearby households, village government, and external agencies. Governance rules included permits, land contracts, agreements, environmental obligations, customary expectations, and informal complaint practices. A change in one component altered others: pond operation affected water perceptions; water complaints reduced trust; reduced trust increased resistance; resistance shaped company commitments; and unequal benefits intensified group boundaries. This is precisely why Ostrom's (2009) framework is more appropriate than an analysis that isolates environmental, economic, and social variables.

Blue-justice scholarship adds a normative assessment. The Seliat grievances involved procedural justice because affected residents felt excluded; distributive justice because benefits and burdens differed; recognition justice because local experience was not always treated as authoritative; and ecological justice because marine and freshwater systems were regarded as damage-bearing spaces. Bennett et al. (2021) identify these risks across the ocean economy, while Bennett et al. (2023) argue that marine policy must explicitly address environmental injustice. In practical terms, this means that a sustainable shrimp farm cannot rely solely on production efficiency or end-of-pipe treatment. It must prove that affected groups can participate, that burdens are prevented or repaired, and that local knowledge is included in monitoring.

The conflict also reflects the danger of blue-economy blind spots. Farmery et al. (2021) caution that visions of ocean-based growth can overlook nutrition, access, and the position of small-scale producers. Cohen et al. (2019) similarly argue that small-scale fisheries need a just space within blue-economy development. In Seliat, residents' concern about sea access and catch decline shows how aquaculture and fisheries can compete within the same coastal system even when policy treats both as components of a unified marine economy. Without spatial planning and negotiated safeguards, expansion in one sector can externalize costs to another.

Environmental grievance became socially explosive because residents did not trust the mechanisms for verification. The source record does not provide continuous public monitoring data, agreed thresholds, or an independent grievance investigation. Where competing actors lack a shared evidence system, each new odor or water change reinforces prior interpretations. The company may regard complaints as unverified, while residents may regard the absence of verification as evidence of institutional neglect. Participatory monitoring is therefore not merely a technical recommendation. It is a trust-building institution that can distinguish incident, perception, cumulative change, and corrective performance through jointly accepted data.

Conflict Forms, Community Polarization, and Escalation

The conflict developed in both vertical and horizontal forms. Vertically, residents directed claims toward the company and toward village or regional authorities expected to regulate, mediate, and protect the public interest. Complaints concerned information, land, environmental impacts, compensation, access, and fulfillment of commitments. When responses were perceived as delayed, partial, or ceremonial, the dispute moved from private discussion to public contention. The research records written statements, petitions, complaints to external institutions, demonstrations, and road blockades. It also notes that heightened confrontation could involve damage to facilities. These actions should not be collapsed into one category: they ranged from institutional advocacy to disruptive protest and reflected different levels of frustration and organization.

Tilly's (1978) resource-mobilization perspective helps explain this transition. Grievances alone do not automatically produce collective action. Residents required shared interpretations, leaders, communication networks, meeting places, documentation, and recognizable targets. Environmental impacts supplied a common claim, while the perception that ordinary channels were ineffective increased the value of public protest. A petition could demonstrate numbers; a complaint could seek external authority; a blockade could impose immediate cost and visibility. These repertoires were not simply emotional reactions. They were strategic attempts to change an unequal bargaining relationship.

Nevertheless, frustration influenced escalation. Repeated complaints without a clear response created the perception that polite engagement carried little consequence. The source narrative states that the absence of a functioning dialogue forum encouraged residents to seek

alternatives such as demonstrations and blockades. In conflict terms, the opportunity structure rewarded disruption: when no traceable grievance process existed, visibility became a substitute for institutional access. The more public the action, however, the greater the risk of policing, confrontation, stigma, and division within the community. This dynamic shows why early mediation is not a public-relations exercise but a form of conflict prevention.

Horizontal conflict emerged because residents did not occupy the same economic and environmental position. Some supported the farm because it offered work or assistance and represented modernization. Others opposed it because they experienced pollution, declining fishing income, land concerns, or broken promises. One interview account described formerly cohesive relations becoming less harmonious as pro- and anti-farm positions generated tension among neighbors. Social-identity theory explains how a policy dispute can harden into group categories. Once people are identified as 'company supporters' or 'farm opponents,' their motives may be judged through group membership rather than the content of their arguments (Tajfel & Turner, 1986).

This polarization weakened collective capacity precisely when the village needed it most. A divided community has difficulty agreeing on evidence, priorities, negotiators, and acceptable remedies. The company can engage selected beneficiaries without resolving broader grievances, while opponents may regard any cooperation as co-optation. Supporters may perceive protests as threats to employment, whereas opponents may perceive silence as complicity. The conflict thus redistributed not only income and environmental risk but also trust. Coser (1956) noted that conflict can strengthen boundaries within groups; in Seliat, it strengthened both the identity of resistance and the identity of those defending economic opportunity.

The vertical and horizontal dimensions reinforced each other. Perceived governmental alignment with the company encouraged residents to suspect that formal institutions were not neutral. At the same time, village authorities faced pressure from groups with opposing preferences. When officials communicated assistance or agreements without resolving environmental evidence, opponents could interpret them as corporate allies. When officials recognized complaints, supporters could fear the loss of jobs or investment. Effective mediation therefore required more than inviting parties to a meeting. It required a process whose facilitator, evidence, agenda, and follow-up were accepted as legitimate by multiple groups.

The case also shows how conflict can produce constructive pressure. The later source material suggests that community demands became more focused on waste management, transparency, fulfillment of social commitments, environmental participation, and local empowerment. This change is consistent with Coser's argument that conflict can expose hidden problems and compel institutional adjustment. Pressure reportedly encouraged commitments related to social assistance, scholarships, bore wells, mosque support, compensation, and improved communication. These developments should be interpreted cautiously: the evidence is stronger for the existence of demands and commitments than for complete and sustained implementation. Even so, they demonstrate that collective action reshaped the agenda from simple acceptance or rejection toward conditions for accountability.

From a social-license perspective, polarization is a warning that community acceptance cannot be manufactured through benefit distribution alone. Ford et al. (2022) show that perceptions of both community and company identity influence aquaculture legitimacy. A company viewed as external, selective, or unresponsive may lose trust even when it provides jobs. Conversely, a company that becomes embedded through transparent conduct, locally credible representatives, and shared monitoring can build relational legitimacy. In Seliat, the priority is therefore not promotional communication but institutional credibility: promises must

be documented, deadlines visible, monitoring accessible, and complaints answered with reasons and evidence.

The historical sequence can be summarized in Table 1. It shows that conflict was cumulative. Each phase added a new layer rather than replacing the previous one: limited participation shaped interpretations of land transactions; disputed expectations shaped interpretations of environmental change; environmental grievances shaped mobilization; and mobilization shaped institutional commitments.

Table 1. Conflict trajectory and social-ecological consequences in Seliat

Phase/trigger	Observed conflict form	Principal consequence	Empirical basis
Project entry	Limited or late socialization; residents perceived decisions as already made	Procedural exclusion and weak initial social license	Youth and resident interviews, June-July 2025
Land and benefit arrangements	Disputed prices, employment expectations, compensation, and uneven assistance	Distributional grievance and differentiation between beneficiaries and affected households	Resident, village, and agreement records
Operational impacts	Complaints about odor, wells, seawater, health discomfort, and declining catches	Water insecurity, livelihood pressure, and declining trust	Fisher, resident, and village-head interviews; observation
Collective mobilization	Statements, petitions, complaints, demonstrations, and road blockades	Vertical confrontation and horizontal pro/anti-farm polarization	Interview narratives and documentary records
Institutional response	Dialogue, social aid, scholarships, water facilities, MOU/CSR and improvement commitments	Partial de-escalation but continuing concern over implementation and independent verification	Agreement documents and later interview accounts

Source: Research Data, 2025

Institutional Responses and the Limits of MOU and Corporate Social Responsibility

The response to conflict included negotiation, community assistance, educational support, religious-institution support, clean-water measures, and written commitments. These interventions mattered because they acknowledged that farm operation created obligations beyond wages and taxes. They also supplied concrete resources to residents. The central weakness was not the absence of all response, but the lack of an integrated accountability architecture. Assistance, environmental management, compensation, and dialogue appeared as separate initiatives rather than parts of a transparent system linking impacts, obligations, indicators, responsible actors, timelines, and remedies.

An MOU can clarify expectations, but its existence does not guarantee legitimacy. Residents evaluate an agreement through implementation: who signed it, whom the signatories represented, what standards were specified, how compliance was measured, and what happened when deadlines were missed. The Seliat evidence indicates that the community continued to

question fulfillment and responsiveness. This means that agreements should be treated as living governance instruments. Each commitment needs a public implementation matrix, supporting evidence, a review date, and a procedure through which affected residents can challenge incomplete performance.

Corporate social responsibility faced a similar limitation. Scholarships, social assistance, mosque support, or empowerment programs can improve welfare, but they cannot compensate for preventable pollution or replace the right to participate. If benefits are discretionary, recipients may depend on corporate goodwill and opponents may regard them as instruments of division. A justice-based approach distinguishes three obligations: prevent and mitigate environmental harm; remedy verified loss; and contribute voluntarily to community development. Combining these categories under a single CSR label risks obscuring responsibility. Environmental compliance should be mandatory and independently verifiable, compensation should correspond to demonstrated impacts, and community investment should be designed through participatory priorities.

The role of government was especially important because neither the company nor the opposing community could credibly act as neutral arbiter. Residents expected village and regional authorities to facilitate information, inspect environmental performance, protect access to essential resources, and mediate disputes. Yet the source material repeatedly describes limited or ineffective mediation. In the absence of a trusted public institution, the conflict became bilateral: residents confronted the company directly, while the company could interpret government permits as sufficient legitimacy. This institutional gap intensified both protest and suspicion.

Beyond-farm governance offers a practical alternative. Bush et al. (2019) argue that aquaculture performance should be organized through networks that connect producers, public agencies, markets, and vulnerable groups. For Seliat, this implies a permanent multi-stakeholder forum rather than ad hoc meetings after protest. Membership should include affected households, fishers, farmers, workers, women's and youth representatives, village government, technical agencies, the company, and an independent facilitator. The forum should approve monitoring locations, review data, maintain a grievance register, track agreements, and publish brief periodic reports. Representation must rotate or be openly selected to prevent capture by a small number of intermediaries.

Environmental monitoring should combine professional testing with community participation. Parameters and sampling schedules must be determined by competent environmental authorities, but residents should be able to observe sampling, identify incident locations, and access results in understandable form. This arrangement addresses two problems simultaneously: it improves the evidence base and reduces contestation over who controls knowledge. Where residents report odor or well changes, the system should record time, location, weather, operational conditions, and follow-up action. Where fishing decline is alleged, participatory catch diaries and spatial mapping can complement ecological surveys. The goal is not to make residents substitute for experts, but to connect technical credibility with local legitimacy.

A grievance mechanism should be traceable, time-bound, and escalation-ready. Each complaint requires a registration number, initial acknowledgment, investigation deadline, finding, action, and appeal route. Anonymous or collective submissions should be possible where residents fear social consequences. Unresolved cases should move to an independent mediator or relevant authority. This procedure would reduce the incentive to use blockades merely to obtain attention. It would also protect the company from repeated ambiguous claims by creating an agreed record of what was reported, examined, and resolved.

Livelihood restoration must be tailored to impact. Fishers facing increased travel and lower catches need different responses from households facing well-water insecurity, farmers facing soil or irrigation effects, workers seeking stable employment, or youth seeking training. A uniform package is likely to reproduce inequality. Impact-based remedy can include verified income support during disruption, restoration of access, clean-water guarantees, skills programs linked to real employment, local procurement, and support for fishing or farming adaptation. Handayati et al. (2025) show that livelihood resilience depends on multiple capitals and institutions; compensation should therefore strengthen long-term capability rather than provide only short-term transfers.

The company also needs internal governance capable of sustaining social commitments. A named community-relations unit should have authority to coordinate operations, environmental staff, and management. Public commitments should be included in performance evaluation rather than treated as charitable additions. Contractors and security personnel should receive conflict-sensitivity training, and company representatives attending dialogue should have authority to make or escalate decisions. Social license is damaged when meetings are attended by personnel unable to answer substantive questions or when commitments are repeatedly deferred.

These recommendations are consistent with contemporary sustainable-aquaculture research. Boyd et al. (2020) emphasize that sustainability requires continual improvement across environmental, social, and economic dimensions. Brugere et al. (2019) stress adaptive governance, while Taiyebi et al. (2025b) call for integrated social-ecological indicators. The Seliat case adds that indicators must be institutionally connected to rights and remedies. Data without influence can become another form of exclusion; participation without data can become an exchange of incompatible claims. Effective governance requires both.

Social-Ecological and Blue-Justice Interpretation

The combined evidence supports a cumulative-conflict model. Four mechanisms interacted. First, procedural exclusion created an initial legitimacy deficit. Second, unequal or disputed benefits created differentiated interests within the community. Third, environmental and livelihood changes converted abstract concern into daily grievance. Fourth, weak mediation encouraged collective action and hardened group identities. None of these mechanisms alone explains the conflict. Their interaction does: residents who already felt excluded interpreted environmental problems as evidence of disregard; uneven benefits made a unified response difficult; and failed dialogue made disruptive protest appear necessary.

This interpretation avoids two simplifications. The first is an anti-development narrative in which aquaculture provides no local value. The evidence clearly indicates jobs, economic activity, assistance, and opportunities that mattered to some residents. The second is a modernization narrative in which opposition results from misinformation or resistance to change. Residents articulated specific concerns about decision making, water, fisheries, land, promises, and government responsiveness. Treating either side as irrational would erase the differentiated distribution of interests and impacts.

A historical perspective is essential because legitimacy is sequential. Early decisions influence how later events are interpreted, and unresolved grievances accumulate. A company entering through credible consultation may receive time to investigate an incident; a company entering through perceived exclusion may encounter immediate suspicion. Likewise, a community that sees agreements implemented can accept gradual improvement, whereas repeated delay can transform even beneficial programs into symbols of manipulation. Conflict

management must therefore address both present conditions and the institutional memory of prior interactions.

The blue-justice framework provides a clear evaluative standard. Procedural justice asks whether affected groups participate before and during operation. Distributive justice asks how benefits, risks, and remedies are allocated. Recognition justice asks whether fishers, farmers, women, youth, workers, and nearby residents are treated as legitimate knowledge holders with different needs. Ecological justice asks whether coastal waters, groundwater, land, and nonhuman life are protected as foundations of community well-being. Seliat's conflict involved all four. This explains why a narrow compensation package could not restore legitimacy even if it provided immediate value.

The case also illustrates coastal grabbing as a process that can occur without complete physical displacement. Bavinck et al. (2017) and Barbesgaard (2018) describe grabbing as the appropriation of coastal space, resources, or environmental quality that constrains community practices. Residents' accounts of more difficult sea access, declining catches, land conversion, and degraded water perceptions indicate a partial reorganization of local space around capital-intensive production. The issue is not whether the company legally acquired land, but whether the broader social-ecological consequences reduced others' effective access to livelihoods and environmental services.

From the standpoint of social conflict theory, the farm became a material and symbolic center of unequal authority. Dahrendorf's framework explains why conflict persisted around who could make binding decisions. Coser's framework explains how the dispute exposed previously muted tensions and generated demands for institutional reform. Tilly explains the movement from grievance to organized protest, and Tajfel and Turner explain the formation of opposed community identities. Used together, these theories show that conflict was neither accidental nor purely interpersonal. It was produced through institutional asymmetry, resource pressure, mobilization, and identity formation.

The findings also have implications beyond Seliat. Aquaculture expansion across Indonesia will increasingly encounter densely used coastal landscapes where farming, fishing, settlement, tourism, conservation, and infrastructure overlap. Farm-level environmental approval cannot fully govern these interactions. Spatial planning, cumulative-impact assessment, public information, and ongoing social institutions are required. Naylor et al. (2021) note that the next phase of aquaculture must address system-wide sustainability rather than merely expand output. The Seliat case demonstrates what is at stake locally when that transition is incomplete.

A practical social-ecological governance model for Seliat would contain five linked components. The first is shared knowledge: baseline and periodic monitoring of water, odor incidents, coastal ecology, and livelihoods. The second is shared procedure: early consultation, transparent representation, and access to documents. The third is shared accountability: a public commitment matrix and grievance mechanism. The fourth is differentiated remedy: responses matched to specific verified impacts and vulnerable groups. The fifth is adaptive review: the authority to revise operating and social arrangements when monitoring demonstrates new risks. This model transforms participation from an event into a continuing institution.

Such a model can also protect legitimate economic interests. Clear evidence and procedures reduce uncertainty for the company, workers, and investors. Early resolution lowers the risk of protest disruption, reputational damage, and escalating security costs. Community trust can improve local recruitment, information flow, and incident response. Social and ecological safeguards should therefore not be understood as obstacles to aquaculture. They are conditions for durable operation in a shared coastal environment.

Ultimately, the Seliat conflict shows that sustainability is relational. A pond may be technically productive while the surrounding relationship system is failing. Conversely, conflict can become a source of institutional learning when it leads to more transparent rules, credible monitoring, and fairer distribution. The decisive question is whether actors convert pressure into accountable governance or rely on temporary assistance and episodic negotiation.

Conclusion

Shrimp aquaculture in Seliat generated a mixed socioeconomic transformation. It created employment, assistance, and new economic connections for part of the community, but it also produced or intensified grievances concerning participation, land and benefit distribution, environmental quality, fisheries, and institutional responsiveness. The conflict originated in a cumulative legitimacy deficit rather than a single event. Residents reported that project information and consultation were inadequate, that agreements and benefits were uneven or incompletely fulfilled, and that complaints about odor, wells, seawater, and declining catches did not receive a sufficiently credible response. These conditions produced vertical conflict between residents, the company, and government, as well as horizontal polarization between supporters and opponents. Collective action expanded from complaint and petition to protest and blockade when dialogue lacked authority and follow-up. The case confirms that aquaculture sustainability must be assessed through social-ecological and justice criteria in addition to production. Procedural justice requires early and continuing influence by affected groups; distributive justice requires transparent allocation of benefits, costs, and remedies; recognition justice requires respect for differentiated local knowledge and vulnerability; and ecological justice requires protection of the shared water, land, and marine systems on which livelihoods depend. The most appropriate pathway is not a choice between unrestricted operation and total rejection, but accountable co-governance. Priority measures include independent and participatory effluent and water monitoring, a publicly trackable grievance mechanism, transparent review of MOU and CSR commitments, impact-based livelihood remedy, and a permanent multi-stakeholder mediation forum with neutral facilitation. These measures would not erase disagreement, but they could convert conflict from episodic confrontation into an institutional process of evidence, negotiation, correction, and adaptive learning.

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