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# Social reporting, engagements, controversies and conflict in an arena context

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## Abstract

**Purpose** – The purpose of this paper is to empirically investigate relationships between engagement activities and social reporting practices in a controversial and environmentally sensitive industry. The interactions investigated were not restricted to stakeholder relationships but included other communications between different stakeholders.

**Design/methodology/approach** – This paper presents a case study approach framed within a contested political arena. Data were gathered using multiple methods including interviews with salmon farming organisations, stakeholders, rule-enforcers, issue amplifiers and political institutions.

**Findings** – All arena participants used social reports in their interactions to communicate the social, environmental and economic consequences of salmon farming. Different social reporting practices appeared to be reflexively related to the competing motivations of different stakeholders. However, social reporting in Scottish salmon farming was fragmented, driven by many different factors and did not necessarily lead to a resolution of the conflicts within this arena.

**Research limitations/implications** – Researching social reporting should consider the co-existence and co-evolution of different social reports, competing motivations and engagement tactics of stakeholders. This paper identifies the construction of holistic reports from multiple reports and issue amplification as two research methods to engage in social and environmental policy debates.

**Originality/value** – This paper presents empirical evidence from an under-researched industry, which has the potential to develop the theoretical understanding of social reporting. It also introduces the arena concept as a useful tool in further social reporting research.

**Keywords** Reporting, Stakeholder analysis, Fish farming, Social accounting, Scotland

**Paper type** Research paper

## Introduction

This paper reports on a case study into interactions between the main participants in Scottish salmon farming and their use of social reports. Our research was influenced by grounded theory (Glaser, 1978, 2004; Glaser and Strauss, 1967) in that we gathered empirical data and then explored the implicit theories that emerged. Using an arena

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approach (Renn, 1992), we assembled a rich empirical description of the complex engagement dynamics, social reporting techniques used, the regulatory regime and key arena participants. From this data set, we extracted a number of themes that we located within prior social and environmental accounting research.

Salmon farming was deliberately selected as our empirical site because of the controversy surrounding its social and environmental impacts (Friends of the Earth Scotland (FOE), 1988, 2001) as well as its political and economic importance in Scotland. Salmon farming can negatively impact sensitive marine ecosystems and is subject to a complex network of laws, regulations and voluntary certification schemes. However, there is considerable disagreement on the effectiveness of this regulatory regime in protecting coastal eco-systems and consumers of farmed salmon. Chemical additives, pollutants in salmon-food, chemical residues from disease and parasite treatments and artificial flesh colouring pigments are periodically subject to public debate. For example, Hites *et al.* (2004) stated that an annual consumption of more than six portions of Scottish salmon could result in cancer. Salmon farming was and still is a symbolic battleground for UK environmental pressure groups.

Prior research would suggest that social reporting in salmon farming, as a heavily regulated industry under intense scrutiny and external pressures, could be explained by political economy responses (Cooper and Sherer, 1984; Puxty, 1991), stakeholder engagements (Gray *et al.*, 1997; Owen *et al.*, 2001), legitimacy actions (Patten, 1991; Buhr, 1998; Campbell, 2000), emancipatory change (Bebbington, 1997; Thomson and Bebbington, 2005; Dillard *et al.*, 2005) and democratic accountability (Gray, 1992, 2002). Salmon farming offered the potential to examine the relationships between arena participants, regulatory regimes and social reporting.

Our research design was informed by research into social and environmental policy debates, particularly studies which utilised an arena approach (Hilgartner and Bosk, 1988; Jaeger, 1998; Jaeger *et al.*, 2001; Lowi, 1964; Renn, 1992; Rucht, 1990; Tierney, 1989; Wartburg and Liew, 1999). The arena concept has been used in other controversial areas such as nuclear power and genetic modification. This approach offers important insights for social reporting theory and practice in respect of engagement dynamics, communication routes, stakeholder analysis and the role of evidence.

The rest of this paper will consist of six sections. Firstly, we give a brief overview of the salmon sector in Scotland. Secondly, we discuss the contribution of the arena concept to the social and environmental accounting research literature. Thirdly, we explain the research methods and data sources used. Fourthly, we present our empirical evidence on the relationship between social and environmental engagements and accounting. Fifthly, we discuss our findings and finally we present the implications of this study for social reporting practice and future research.

### **Salmon farming in Scotland**

The first Scottish salmon farm began operating in 1969, but it took ten years to develop into a significant business sector (Highlands and Islands Enterprise, 1998). Salmon farms are often located in ecologically sensitive coastal areas and salmon farming was intended to regenerate deprived, remote, rural communities adversely affected by the decline in traditional agriculture and fisheries. Grants from public sector agencies for up to 90 per cent of start-up costs were common. However, since the mid-1980s, governments have gradually withdrawn financial support from salmon farming. As a result, an industry that originated

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as small fish farms run by local communities, selling premium fish through co-operative networks was left to compete in a market dominated by state-owned Scandinavian multi-nationals and UK supermarkets. Increasing global salmon production led the Scottish salmon industry to adopt a differentiation strategy constructing premium brands via product certification mechanisms, including organic salmon (Georgakopoulos and Thomson, 2005; Dillard *et al.*, 2005)[1].

The production cycle of a salmon from egg to supermarket shelves is approximately 2.5 years (Laird and Stead, 2000). This long production cycle and perishable nature of the product make it difficult for salmon farming organisations (hereafter SFOs) to react to market changes. SFOs require high levels of working capital to finance this long-production cycle and many SFOs are financially dependent on credit from suppliers. There is a lack of influence from the stock exchange or major institutional investors. Many SFOs are privately owned, unlisted private companies or part of multinational firms wholly or partly owned by overseas governments. Throughout our study all participants expressed grave concerns about the future viability of Scottish salmon farming. However, there was evidence of a political shift in favour of salmon farming. Salmon farming was viewed as a useful transitional source of supply while open sea fishing is closed or restricted to allow the regeneration of wild fish species, due to the failure of European sea-fisheries policies (Perman *et al.*, 1999).

### Literature review

In this paper, we introduce the concept of the political arena to help structure our analysis of prior literature and empirical findings. The arena concept has been used to analyse a number of social and environmental risk policy debates (Hilgartner and Bosk, 1988; Jaeger, 1998; Lowi, 1964; Rucht, 1990; Tierney, 1989; Wartburg and Liew, 1999), however it has not previously been used to investigate social reporting. An arena approach allows us to differentiate stakeholders and to consider a wide range of interactions and engagement dynamics. It locates social reporting practices within past and present political discourses between different classes of stakeholders. The arena metaphor subtly alters the entity concept away from a single organisation towards an issue or specific problem around which different organisations engage (Cooper *et al.*, 2005).

Stakeholder dynamics are arguably underspecified within the social and environmental accounting literature[2]. Typically, it is implicitly assumed that stakeholders are generally passive, reacting on receipt of the selective information grudgingly supplied by companies. Using an arena framework we suggest that interactions between companies, stakeholders, regulators, the media and the public are more complex than previously described. With a few exceptions (Adams, 2004; Buhr, 1998; Gray *et al.*, 1997; Harte and Owen, 1987; O'Dwyer, 2005), the literature does not explicitly consider the co-existence of alternate accounts, heterogeneous engagement activities or the co-evolution of these alternate accounts and diverse engagement dynamics within a particular empirical site. The arena concept provides a skeletal frame and vocabulary from which to reconstruct and represent these engagements and interactions.

A political arena approach assumes that there will be differences in ideologies, rationalities and values in relation to the issues around which the arena is constructed. In the context of social reporting, therefore, we would expect the co-existence and co-evolution of responses explained by political economy theories (Cooper and Sherer, 1984; Puxty, 1991), stakeholder theories (Gray *et al.*, 1997; Owen *et al.*, 2001),

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legitimacy theories (Patten, 1991; Buhr, 1998; Campbell, 2000), emancipatory change (Bebbington, 1997; Thomson and Bebbington, 2005; Dillard *et al.*, 2005) and democratic accountability (Gray, 1992, 2002).

The arena metaphor is not a predictive framework and does not predetermine any specific outcome, rather it suggests certain processes, relationships, technologies, and forms of interactions that could characterise collective contested decision making. For example, within an arena we would expect to observe social reports as part of this political discourse. Social reporting can be viewed as a technology that measures, creates, makes visible, represents and communicates evidence. Evidence is considered an important social resource within any political arena discourses. Within an arena, there is explicit recognition of competition for power and control over other arena participants in that it is assumed that all parties try to influence decisions taken within the arena. We would therefore anticipate social reporting to be part of the contestation for control. Social reports could be produced to legitimate and maintain the dominant coalition's position of power, alternatively social reports could be produced by others to problematise those in power. Social reports could also be produced by less-powerful parties to demonstrate compliance with different rule enforcers' regimes, submitting to their disciplinary powers in order to avoid punitive sanctions.

It is important to stress that we are not proposing the political arena concept as a normative model for the development of social reporting, but as a heuristic to represent and make sense of social reporting in the context of wider political discourses and engagements. We also recognise the theoretically informed debate as to the purposes, motivations and implications of social reporting. Crudely, there appears to be three positions within the literature, ranging from "just don't do it", to the "win-win business case", to an "emancipatory change mechanism" to create different sustainable utopias. We conceptualise social and environmental accounting as having the potential to bring about substantive social and ecological change, whilst recognising that it could also perpetuate unsustainable organisational and societal behaviours (Cooper, 1992; Everett and Neu, 2000; O'Dwyer, 2005; Puxty, 1991).

There are a number of important attributes critical to reducing the possibility that social and environmental accounting will produce unsustainable outcomes. Emancipatory social and environmental accounting should reconceptualise the substantive social and ecological environment through the provision of knowledge enabling an authentic dialogue (Dillard *et al.*, 2005; Lehman, 1999; Thomson and Bebbington, 2005). If social reporting is to enable authentic dialogue Thomson and Bebbington (2005) suggest a number of features that must be avoided and others that should be included. Authentic dialogue requires social reports to be designed to promote emancipatory environmental and social change both within the accounting entity and beyond. These reports should be educative, promote debate, change our knowledge of situations, suggest corrective actions and create space to enable action. Social reports should allow a meaningful critique of the reporting entity, a questioning of decision makers and monitoring compliance with internal or external standards (Tilt, 2001). They also should enable a critique of these standards, social norms, regulations and legislation (Gray and Bebbington, 2001).

Researching emancipatory social reporting requires a systemic investigation of the assemblage of various engagements and contextual factors that constitute the accountability network within which any reports are located. This requires an inclusive approach to recognising practices as social reporting. Whilst the research literature is

dominated by studies of corporate social and environmental disclosure in Annual Reports, Thomson (2007) identified a diverse set of social reporting practices applied to different accounting entities. Social reporting is viewed as incorporating most systems that provide information on the inflows, outflows and pools of natural, economic, cultural, ethical and social resources in a range of different entities (Gray and Bebbington, 2001). It also requires investigating the interrelationships between different reports, entities and interaction dynamics.

The arena concept provides a structure to differentiate engagement activities that inform social and environmental discourses and describe the context of any accounting disclosures. It recognises a wider set of interaction routes than previously recognised in the social and environmental accounting literature, which is predominantly concerned with the unreflexive external transmission of corporate information to underspecified stakeholder groups (Thomson and Bebbington, 2005).

*Overview of the arena concept*

An arena is a metaphor that describes the symbolic location of actions that influence collective decisions. An arena attempts to explain the process of policy formulation and enforcement in a specific context. It structures and represents the participants in an arena, patterns of interaction, communication and decision-making processes. Figure 1 shows the key elements of an arena.

Within an arena, it is assumed that different actors use social resources to pursue their objectives. These resources include money, power, social influence and evidence. Resource accumulation may be the ultimate goal of an actor, but within an arena resources are more likely to be a means to an end. Success or failure of arena engagements are determined by participants' perceptions of their influence on decisions (Renn, 1992).

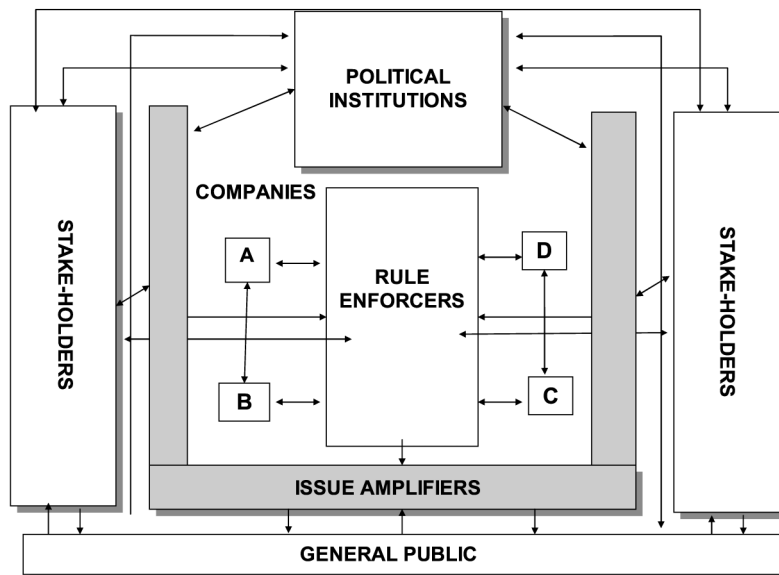


Figure 1.  
The arena concept

Source: Renn (1992, p. 190)

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Each arena is characterised by formal codified rules monitored by rule enforcers and informal rules that emerge from interactions between participants. Normally, these rules are external constraints for each participant but several participants may join forces to change rules. Rule enforcers ensure that participants abide by formal rules and may coordinate informal interactions and negotiations. Most rule enforcers are deemed to have powers delegated to them by political institutions via legislation.

Issue amplifiers play a role analogous to “theatre critics” observing actions on stage, communicating with the participants, interpreting their findings and reporting to others. Issue amplifiers can influence arena dynamics by mobilising public support for particular factions within the arena. Their audience consists of other groups who may be enticed to enter the arena and individuals who may demonstrate their support or displeasure with participants. Drawing upon an arena approach (Renn, 1992), we suggest that the term stakeholder can be further refined into political institutions, regulatory rule enforcers, voluntary rule enforcers, issue amplifiers, the public, supportive stakeholders and reforming stakeholders.

An arena assumes all of the above participants attempt to influence the outcome of a collective decision process in accordance with their values and beliefs. This outcome is not wholly determined by an individual group but by structural rules and group interactions. Political organisation and the reflexive impacts of participants’ actions can lead to outcomes incompatible with the evidence and/or values of all or any participating group. An arena framework is useful in representing, explaining and making sense of complex decision-making processes (Renn, 1992).

#### *Arenas, engagements and social reporting*

The arrows in Figure 1 show the range of arena interaction possibilities and integral to these engagements we suggest are demands for the “giving and receiving of accounts” (Gray, 2002). Different engagement activities will create different demands for the giving and receiving of accounts. Engagement activities will also be influenced by previous reports available within the arena.

As mentioned earlier evidence is a critical resource in arenas (Renn, 1992) and social reporting is a system for creating and communicating evidence. Creating formal or informal requirements on other arena participants to account for their activities has the potential to shift the dynamics and eventual outcome of an arena. Rule enforcers, as part of their regulatory enforcement, often require changes in internal social and environmental accounting systems and external social reporting practices.

Adopting an arena framework allows us to make sense of the complex interaction in the giving and receiving of social reports. Understanding the overall social and environmental impacts of a company or sector will not be determined by a single social report from a single participant. It will be constructed from the information that flows from different engagements, depending on what information is made available to other parties. Decisions may be influenced not by an absence of information but by multiple, potentially contradictory reports, prepared according to different institutional and ideological rules. The research literature on social reporting predominantly focuses on reports produced directly by organisations (mostly, profit-oriented limited liability companies) voluntarily providing a selective representation of their social and environmental impacts. In addition to these direct accounts, the literature also reports on the production of reports by organisations (mostly campaigning NGOs or political

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institutions) on their selective representation of the social and environmental impacts of other organisations. These external reports are normally designed to problematise the activities of others, but their audience is not only the organisation directly causing the problematic impacts, but includes political institutions, other stakeholders, the media and sections of the general public (Gray, 1997; Dey, 2003; Harte and Owen, 1987; Medawar, 1976; Cooper *et al.*, 2005). These external problematising accounts may themselves be subject to problematisation in that they are challenged by those that they criticise, in an attempt to regain their social legitimacy (Adams, 2004). Within the social and environmental research literature, there is little discussion of indirect reports, i.e. reports prepared by parties external to the organisations at the centre of the arena but on their behalf. The arena concept suggests the possibility of direct, indirect and external reports. Within a political arena, it is likely that the evidence produced in social reports will be subject to challenge as to its validity and relevance and efforts will be undertaken to demonstrate the superiority of one account over another, for example, the use of third party assurance statements or claims of superior scientific methods.

Within an arena, there is a need for accounts required to demonstrate compliance with regulations. Conventionally compliance accounting is assumed to be motivated by the avoidance of punitive sanctions, however (non) compliance with regulatory standards is a powerful (de)legitimising tactic for and against a particular stance. Given that regulatory compliance is potentially a legitimising tactic, control over these regulatory standards and standard-setting processes is highly desired. These standards, rather than organisation's activities, may themselves become subject to problematisation and/or legitimacy struggles.

If direct control or influence over these standards is not practical then another strategy is to create alternative (voluntary) rule enforcing institutions and procedures that are intended to address gaps (or perceived gaps) in regulatory regimes. These alternative rule enforcers attempt to emulate, but not necessarily replicate, mandatory regulatory regimes. These alternate regimes can be set up by supportive or reforming stakeholder groups and are designed to operationalise their ideological solution based on their problematisation. Within a heavily contested arena, a number of different rule enforcers may operate, each with their own institutional procedures and subjected to problematisation/legitimation processes.

Within an arena, we would therefore expect problematising reports, legitimising reports and compliance reports produced directly by organisations, indirectly on others behalf and/or externally by organisations opposed to the activities of others. There is likely to be some overlap between legitimising reports and compliance reports, for example, when communicating to the public about perceived product risks they may present evidence of compliance with standards (Tilt, 2001) to demonstrate their product's safety. However, legitimising reports need not rely upon compliance but can include impression management (Neu *et al.*, 1998), problematising the reports of others (Adams, 2004), or responding to media reports (Brown and Deegan, 1998). Within an arena, all parties may seek the selective amplification of fragments of their reports in the media in order to gain wider support for their particular stance.

In terms of the nature of these different reports, we suggest that compliance reporting will be determined by the rules, procedures, sanctions avoided and rewards of the specific regulatory regime (Larrinaga *et al.*, 2002), whereas both legitimising and problematising reports will largely be problem and context specific, heavily influenced



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by the ideological motivations and political tactics of the reporters. For example, arena participants driven by a deep green ideologies (Maunder and Burritt, 1991) are unlikely to trust or use any accounting-based reports, whereas reforming stakeholders informed by principles of ecological modernity (Everett and Neu, 2000) are likely to rely on “scientific” social reporting techniques such as pollution damage inventories (Buhr, 1998), ecological footprinting (Wackernagel and Rees, 1996) or biodiversity accounting (Jones, 1996; Elad, 2001).

The power dynamics within any arena will affect the nature of engagements and social reporting practices. Powerful players demand access to all the information they want, whereas less-powerful players have to make do with publicly available reports. The powerful within an arena could control others’ access to data by obscuring, manipulating and selectively disclosing as explained by political economy theories. Within an arena, certain engagement activities will be designed to address any perceived power imbalance. The weak may join together in coalitions against any perceived hegemony. This could involve ideologically conflicted groups sharing data and resources for a temporary common purpose, creating joint reports to demonstrate the damage caused by structural inequities or oppressive forces.

Drawing upon our literature review, it is likely that social reporting in the salmon sector, as a contested political arena, will take many different forms, tailored to specific engagements, using different entity concepts and motivated by different epistemological understandings of the harm caused by salmon farming. It is likely that there will be social reports and engagements not directly concerned with the impacts of individual SFOs, but concerned with gaining control over the arena. We would anticipate that there would be a relationship between engagements, participants’ objectives, power dynamics and social reporting. We are also interested in exploring whether any arena participants are using social reporting as part of a sustainability reform agenda or whether they are responding to the existing arena power dynamics in pursuit of their own self-interest. The existence of a political arena does not necessarily produce results that are desirable or optimal. An arena does not equate with participative democracy or authentic dialogue. It is possible for an arena to operate in that way but it can also operate in a hegemonic, oppressive fashion maintaining social inequities and environmental harm, much depends upon the governance of political processes within an arena as much as the quality of evidence provided in social reports.

### **Research methods**

Our research methods were influenced by grounded theory methodologies (Glaser and Strauss, 1967; Glaser, 1978, 2004; Parker and Roffey, 1997), in that we sought to discover the theories implicit in the interviews and other data sources. This approach allowed us to investigate any potential relationships between engagement processes, social reporting practices, communication routes and arena participants. A range of research methods was used to gather information to provide a rich description of salmon farming. Initial data on the sector were collected by a postal survey. The results of this survey were used to construct a set of interview protocols and identify potential interviewees[3]. Four pilot interviews led to the selection of a particular salmon-farming region, the A Islands[4] as our main empirical site, due to the concentration of organic salmon production.

It was crucial that we gathered data from all the active elements of the arena model shown in Figure 1. Within each element we sought to gather information from those

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who could offer a diverse mix of experiences and perspectives. One limitation of our study was the lack of systematic investigation of the general public. As the research unfolded, the public were largely absent from arena discourses. However, most participants claimed the right to represent the public and unsurprisingly the public were invoked to legitimate all stances within the arena. In light of the absence of the public in the arena we decided to omit them from this research project. Figure 2 shows an overview of data sources and participants in this project.

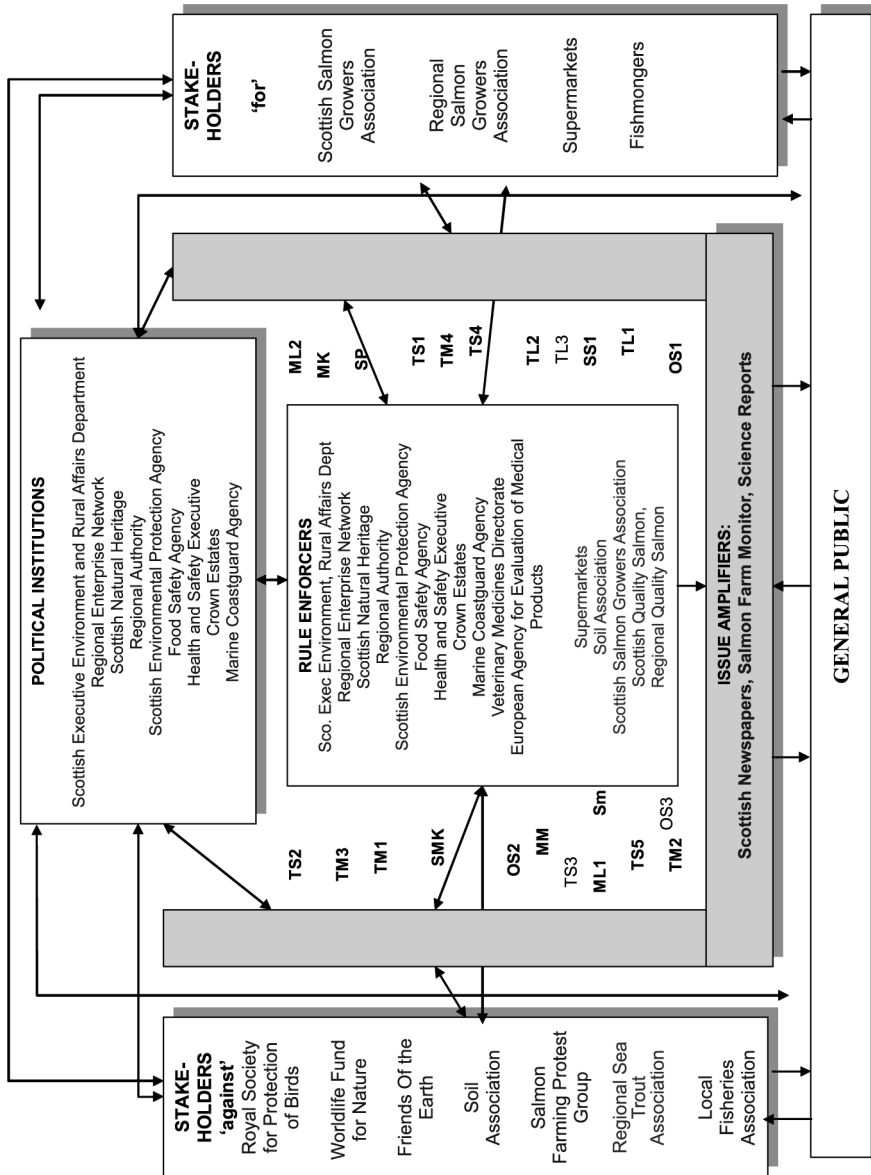
Semi-structured interviews were employed to gather information from arena participants. By systematically comparing interviews, we were able to discern engagement processes, perceived problems and information that influenced decision making. In our research, we looked for similar responses, listened for potential contradictions and noted outlying ideas worth following up. Our interview protocols were designed to gather information on each actor's position and their perception of other actors. This allowed us to triangulate their "self-description" with that provided by others. The data gathered also enabled us to identify, differentiate and explore "company to stakeholder" engagements and "stakeholder to stakeholder" engagements using the engagement routes shown by the arrows in Figure 2.

Our methods were emergent in nature, learning from each interview how best to test and challenge the emerging themes. In other words, both methods and themes developed gradually as the data and interpretations accumulated, allowing each interview to build on the previous work. Representatives from organisations were interviewed until a degree of empirical saturation was reached. It is not suggested that our data set can be generalised to the whole salmon sector, but rather that our data provide us with insights into different perspectives about salmon farming.

Table I lists the organisations that participated in the interviews. In total, representatives from 25 organisations were interviewed. This included representatives from nine SFOs, seven rule-enforcers, four political institutions, five supportive stakeholders, five reforming stakeholders and three fish retailer/wholesalers. All but one of the political institutions had a dual role as rule-enforcer and are included in the seven above; the Soil Association (SA) is included both as a reforming stakeholder and as a voluntary rule enforcer. Two supportive stakeholders (Scottish Salmon Growers Association (SSGA) and Regional Salmon Growers Association (RGA) were also involved in voluntary rule enforcing. Scottish Executive Environmental and Rural Affairs Department (SEERAD), Regional Authority (RA) and Scottish Environmental Protection Agency (SEPA) required multiple interviews with different representatives due to their multiple remits.

We interviewed SFOs that varied in terms of size, ownership and production methods. For example, we included a number of organic SFOs, owner-managed SFOs, SFOs at different stages of the salmon production life-cycle and SFOs part of multi-national groups. This was not to get a fully representative cross section, but rather to capture a range of different opinions.

Where it was not possible to arrange interviews due to access problems, confidentiality issues and unavailability of people, we accessed secondary data sources such as web sites, policy documents, government statistics, government reports, media coverage and reports by stakeholder groups or related institutions. These additional (non-interview based) sources of empirical data are shown below:



**Figure 2.** Representation of the participants in this study within the risk arena framework

<i>Salmon farming organisations</i>	<i>Regulatory rule enforcers/political institutions</i>	<i>Supportive stakeholders</i>
OS1, small family organic fish farm	SEPA – Scottish Environment Protection Agency	Regional Salmon Growers Association FM1 – Glasgow based retail fish monger, sole trader FM2 – Glasgow based wholesale fish market, sole trader FM3 – Scottish based wholesale/retail group, UK company
OS2 small family run organic fish farm	RA democratically elected single, all-purpose local authority SEERAD – Scottish Executive Environment and Rural Affairs Department	<i>Reforming stakeholders/voluntary rule enforcers</i> RSPB – Royal Society for the Protection of Birds. wildlife conservation charity RFA – Regional Fisheries Association represents sea fishermen RSTA – Regional Sea Trout Association Sea fishing NGO
ML1 subsidiary multinational group producing conventional and organic salmon	SA – an independent charity promoting and certifying organic agriculture	
ML2 subsidiary of multinational group producing conventional and organic salmon		
TM1 subsidiary family run group producing conventional salmon		
MK marketing company of TM1	<i>Supportive stakeholders/voluntary rule enforcers</i> Scottish Salmon Growers Association	
MM large salmon UK company producing conventional and organic salmon		
Sm large smolt producer	SQS – Scottish Quality Salmon product-labelling scheme	WWF – World Wide Fund for Nature Scotland: International environmental non-governmental network
SMK a small salmon smoking company	RQS – Regional Quality Salmon labelling schemes – part of RGA	<i>Political institutions</i> REN – Regional Enterprise Network reports to Scottish Executive

**Table I.**  
Organisations where representatives were interviewed

(1) *Rule enforcers data gathered through web sites, policy documents and other governmental reports:*

- HSE: Health and Safety Executive responsible for regulation of health and safety issues.
- MCA: Maritime and Coastguard Agency – to develop, promote and enforce high standards of maritime safety and pollution prevention, to minimise loss of life and pollution from ships.
- FSA: Food Standard Agency – independent food safety watchdog set up by Parliament to protect the public’s health and consumer interests.
- CE: The Crown Estate – political agency responsible for management of the territorial seabed and foreshore between high- and low-water mark.
- VMD: Veterinary Medicines Directorate – UK Government Agency protecting public and animal health, the environment, promoting animal welfare by assuring the safety quality and efficacy of medicines.

- EMEA: European Agency for the Evaluation of Medicinal Products co-ordinates scientific resources to evaluate and supervise medicinal products for both human and veterinary use throughout EU.
- (2) *Political institutions data gathered through documentary analysis. Scottish Natural Heritage (2002)*. SNH: Scottish Natural Heritage – Scottish Executive’s statutory adviser on natural heritage, nature conservation matters, promotion of nature’s sustainable use, public understanding and enjoyment.
- (3) *Stakeholders – opposing salmon farming*:
  - FOE: Friends of the Earth Scotland a NGO network of environmental groups with representation in 68 countries, major environmental pressure group in the UK. – documentary analysis of FOE (1988, 2001).
  - SFPG: Salmon Farm Protest Group – an environmental NGO to ensure the preservation of wild species, unpolluted coastal and inland waters, and people relying on that environment for a living. Analysis of [www.salmonfarmmonitor.org](http://www.salmonfarmmonitor.org)
- (4) *Stakeholders – for salmon farming*. Analysis of web sites of Tesco, Sainsbury, Asda, Waitrose and by visits to supermarkets: Supermarkets dominate the retailing of salmon and organic salmon and play a critical role in driving product modifications. Supermarkets impose strict quality requirements and can be viewed also as voluntary rule-enforcers.

These secondary sources were analysed with the codes developed from the interview data.

All interviews took place in the work place and included site visits of the SFOs. Almost all of the interviews lasted at least an hour and some up to three hours. Interviewees were largely friendly and supportive, even when the interviews were not pre-arranged. In some cases, the researchers turned up, provided a brief summary of the research and asked if anyone would be available for interview [5].

All interviews except five [6] were tape-recorded. Summary notes were written up as soon as feasible after each interview. The interviews were partially transcribed and cognitively mapped with simultaneous grouping of discussed themes (Kitchin and Freundsclub, 2000). These maps were informed by our observations, photographs and notes taken of post-interview discussions. To make sense of our interviews we adopted the protocols described by O’Dwyer (2003), using a three step code-and-retrieve process: data reduction; data display and drawing conclusions (Huberman and Miles, 1994).

In data reduction, the process of selecting, focusing, simplifying and abstracting data created a set of codes to organise the written material. The codes were derived from interview questions and transcripts. Each interview transcript was reviewed to derive a set of codes. Different codes were identified by grouping quotes on similar emerging themes. Some quotes were included in more than one grouping and we clustered similar groups of quotes together. These groups formed a network of ideas, with each code representing a node within that network. When there was a significant change in these codes, we returned to all previously coded transcripts and revised them accordingly.

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A number of interrelated themes emerged from the interviews: risk construction; how risks affected decision-making; SFO's rationale for change; content and patterns of communication. These themes were used to construct a conceptual framework of the data to assist in their theoretical evaluation. The next section will present the key empirical findings of this study; this will be followed by a discussion of these findings informed by our literature review.

### **Social reporting and Scottish salmon farming – empirical findings**

Within the salmon farming arena, we observed a rich pattern of interactions between arena participants which included extensive use of social reports. The social reports incorporated many different social reporting techniques and were produced and used by SFOs, supportive stakeholders, reforming stakeholders, political institutions, mandatory and voluntary rule enforcers. Many of these reports were amplified in the media and were intended to demonstrate compliance with standards, secure economic benefit, avoid sanctions, legitimate operations and problematise the actions of others. Within the arena, there were multiple voluntary and mandatory rule enforcing institutions that imposed social reporting demands upon SFOs. The voluntary rule enforcing institutions were mainly created by supportive stakeholders to protect and legitimate SFO's operations and provide economic advantage via product certification.

Many engagements and related social reports were part of a power struggle for control over the arena. The most visible interactions and reports within the arena were confrontational (and largely ineffective), but not all. There were examples of co-operative interactions between opponents in the arena and all arena participants expressed a desire for more co-operative forms of engagement, openness and enhanced accountability in the future development of salmon farming.

In the rest of this section, we present and discuss the evidence gathered in the following order. Firstly, we provide an overview of arena participants and interactional dynamics in order to contextualise our discussion of the social reporting practices and how these reports were located within these wider political discourses.

#### *Overview of the political arena*

Our empirical data clearly demonstrated that salmon farming was a highly controversial industry under intense scrutiny by regulators, media and social and environmental pressure groups. The evidence gathered confirmed conflicts over the desirability and acceptability of salmon farming. In one camp, salmon farming was described as a national asset, an economic saviour for remote rural communities, protecting declining wild fish stocks, whilst causing no environmental damage to sensitive coastal areas. In the other camp salmon farming destroyed global and local marine eco-systems, detrimental to many other important rural businesses and the final product was so heavily contaminated that excessive consumption significantly increased the risk of developing cancer. There was evidence of a lack of respect for others in the arena. For example:

The industry has had a terrible press from a few people who are anti-fish farming campaigners. They are absolute nut-cases (SSGA Supportive Stakeholder).

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There has been an absence of trust between the involved bodies. Salmon farms felt that NGOs were trying to destroy the industry; NGOs felt that the industry was trying to get away with environmental externalities (WWF reforming stakeholder).

Extreme stances were taken on the nature of the impacts of salmon farming by arena participants. Perhaps, the widest divergence of opinions related to salmon farming's environmental impact. There was consensus amongst SFOs that salmon farming did not cause environmental damage or create substantive social or environmental risks from producing, processing or consuming salmon. SFOs denied they were responsible for sea lice epidemics, declining wild salmon stocks or other marine species. Smk described the industry as so:

[...] environmentally friendly that economically it is choking itself to death (Smk SFO).

This position was largely supported by arguably the most powerful environmental regulator in the arena:

There are probably sites where SEPA's approach was not correct but the appropriate adjustments were made in the standards. On a national scale the impact of the discharges is well within what the environment can take (SEPA Regulatory Rule Enforcer).

However, SFOs and supportive stakeholders accepted that there was perception of environmental and social risks:

It takes a lot of convincing to persuade potential customers that there is not anything bad with farmed salmon (Smk SFO).

But that this was due to the deliberate spread of misinformation by "nut-cases" encouraged by press and media coverage as illustrated by the following quote:

The media seems to be more pleased to hear bad things about the industry from environmentalists than from the industry promoting its product as good and healthy. The media have never pointed out that salmon is produced under very good conditions and it has not caused any proven damage (Smk SFO).

SFOs represented themselves as weak and oppressed by others within the arena:

As the industry becomes politically more self-aware it will start dictating to the rest of the regulators and certification bodies what should be done and not the opposite (Tm1 SFO).

85% of the fish is sold through the supermarkets and 67% of the production in the UK is dominated by the big companies. By controlling the fish sales they are destroying the producers (SSGA Supportive Stakeholder).

SFOs described a scenario where they felt constantly under threat from command and control regulators, high-regulatory costs, reforming stakeholder groups, politicians, overseas competitors, product certifiers, supermarkets and the media.

Reforming stakeholders expressed very different opinions on all of the above points, but also positioned themselves as weak against a coalition of SFOs, supportive stakeholders, political institutions and regulators. Reforming stakeholders did not agree that salmon farming was environmentally neutral or wrongly represented in the press:

The salmon industry has had a bad press justifiably for using materials to kill sea-lice that kill everything else fishermen might be interested in (RFA Reforming Stakeholder).

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They were highly critical of the regulators and claims that regulatory compliance represented acceptable environmental behaviour:

The industry will probably always make the economic case and that will always control its (SEPA) actions (RSPB Reforming Stakeholder).

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Reforming stakeholders believed regulations legitimated and perpetuated environmentally damaging activities. For example:

The industry claims it is clean because it follows SEPA's regulation. But sea-lice is not regulated by anyone and SEPA's models used for the monitoring of the discharges are too simplistic (RSTA Reforming Stakeholder).

We are concerned about cumulative impacts and the information does not seem to be out there to enable us to put forward our comments. We feel we don't know what the impacts of the salmon farms really are. It is difficult to prove some points on environmental impacts because of the difficulty to obtain good data. Everyone feels that the limits SEPA puts on the industry are not stringent enough (RSPB Reforming Stakeholder).

Reforming stakeholders also described a relationship that lacked many of the attributes of authentic dialogue:

There is not physical intimidation but at times the industry has not been far from that. It has been vitriolic with verbal threats on the phone towards RSTA, individuals, etc. The situation often gets to that point if there is a lot of money involved (RSTA Reforming Stakeholder).

Reforming stakeholders viewed the political institutions and mandatory rule enforcers acting in coalition to preserve salmon farming largely in its current form, legitimating and perpetuating environmentally damaging activities. Our general interpretation was that mandatory rule enforcers were largely supportive of salmon farming. However, there were a number of circumstances where regulators were critical of certain salmon farming practices. For example, regulatory rule enforcers stated that high-regulatory costs were a consequence of SFOs' poor environmental practices. Regulators also recognised salmon farming's negative financial impacts on tourism and sea-fisheries. Regulatory rule enforcers argued that there was a need for: increased stakeholder involvement; more accountability; better codes of practice; and cooperation with other stakeholders in order for salmon farming to become more environmentally sustainable.

There was some evidence of constructive, co-operative engagements between certain reforming stakeholders and regulatory rule enforcers. In certain circumstances reforming stakeholders were consulted by regulators for example, exploring salmon farming's sustainable development potential and how to incentivise sustainable aquaculture. There were examples of temporary informal alliances between reforming stakeholders and regulators when their interests were aligned but there were institutional obstacles to action. A reforming stakeholder described a situation when government scientists leaked data they were unable to publish. This stakeholder was then able to ask specific parliamentary questions allowing these data to enter the wider public discourse on salmon farming. RSPB spoke about close relationships with Scottish Natural Heritage (SNH) (regulatory rule enforcer). They informally liaised over salmon farming development applications to ensure they provided the same advice to respective licensing authorities, thus enabling greater influence over the outcome of the application.



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Within the interviews, we recognised a growing frustration at the ineffectiveness of this confrontational discourse whereby both camps instinctively rejected anything from the other side. This frustration coupled with a specific initiative of the Scottish Executive (2003) led to the emergence of the possibility of a new more constructive relationship between the key actors in the arena.

It is within this political arena that the social reporting practices reported on in this paper are located. The next section will attempt to demonstrate the co-evolution of social reporting and arena engagements.

### *Social reporting and arena engagements*

Our empirical investigation identified multiple and contradictory reports of the social and environmental impacts of salmon farming. These reports used different data sets, different entity concepts, different reporting mechanisms, different ideological stances and were intended for different purposes. Figure 1 shows a number of possible engagement routes and within the salmon farming arena we identified engagement activities and reporting on all routes. In our study, the most active engagements were between SFOs to regulators, SFOs to supportive stakeholders/voluntary rule enforcers, reforming stakeholders to regulators, reforming stakeholders to SFOs. There was evidence of supportive stakeholders and reforming stakeholders communicating via issue amplifiers to the general public. SFOs provided reports of their social and environmental impacts to supportive stakeholders, rule-enforcers, political institutions and reforming stakeholders. Additional social reports of salmon farming were produced by supportive stakeholders, reforming stakeholders, rule enforcers and political institutions and amplified through the selective media reporting of crises in salmon farming (*The Observer, 2004; The Scotsman, 2004; The Sunday Times – Scotland, 2004; The Telegraph, 2004*).

In Scottish salmon farming, we observed complex interactions that appeared to be reflexively related to a complex set of social reporting practices consistent with our analysis of the arena model. However, the complexity observed emerged from a series of one-to-one reports, often these reports were used for purposes they were not intended for. Most reports were highly specific and selectively provided to particular arena participants. Each report dealt with a fragment of the social and environmental impact of salmon farming. Each recipient received a partial account of salmon farming and there was little evidence of attempts to systematically collate these fragments into more holistic accounts of the social and environmental impact of salmon farming. The existence of multiple, contradictory reports of social and environmental impacts did not create a discourse that led to the “resolution” of the problems associated with salmon farming. Rather, our interviews suggested that these reports largely reflected entrenched ideological differences in participants’ perceptions of the social and environmental risks of salmon farming. There was evidence of a link between the intended purpose of each arena engagement, the reports used and the power dynamics.

The reports provided by SFOs were underpinned by different concerns including, regulatory compliance, economic self interest, fear of legal and economic sanctions, addressing perceptions of weakness, impression management, responding to media criticism, political lobbying and providing their version of the truth about salmon farming. However, often these different motivations were interconnected and the same reports were used to achieve these different objectives.

Social reporting mechanisms included statistical returns, site inspections, compliance statements, forms, questionnaires, annual accounts, statutory returns, face-to-face meetings, public meetings, press releases, news letters, *ad hoc* communications, formal roundtables, working groups, expert consultations, scientific reports, membership of voluntary groups, applications for public funds, applications for licenses, environmental impact assessments, planning permission applications, policy consultations and web-based disclosure. One SFO even installed a web camera under their salmon cages.

The content of these reports included production volumes, average prices, harvest forecasts, salmon disease, medicines used, fish feed composition, fish-feed source, sea-lice treatment plans, economic benefit of salmon farming, quantity of wastes, type of wastes, anti-predatory precautions, chemicals used, water temperature, hygiene procedures, cage densities, food additives, flesh pigmentation, impact on wild salmon population, impact on marine eco-system, noise, odours, visual and aesthetic impact, salmon movements, individual salmon traceability, compliance with discharge consents, compliance with operational procedures, food labelling and chemical residues in salmon. Table II illustrates a range of social reports of salmon production prepared by SFOs.

Direct social reports were also produced by SFOs prior to starting salmon farming, extending the business or moving operations. For example, if a SFO wanted to move to a new sea-site this would require an environmental impact assessment and consultation with 40 bodies. Objections from any of these bodies could block this move. Specific social reports were an integral part of these consultation processes, often with different reports and verification procedures required for each consultee. Direct social reports were also required if the SFO was applying for grants or subsidies. Receiving public sector grants or subsidy often imposed additional reporting requirements.

Most supportive stakeholders operated as voluntary rule enforcers through product labelling schemes. SFOs reported engaging with their trade associations for: the protection and development of their industry; quality assurance; disease control; and to compensate for their lack of power. In order to address this power imbalance, the SSGA attempted to collectively manage the industry. They gathered information on costs, salmon volumes, forecast harvest sizes and contracts details. They provided reports to members of future market volumes in order to avoid short-term price slumps. SSGA also used this information when lobbying for regulatory reforms, financial assistance and responding to external problematising reports.

Regular engagements and the giving and receiving of reports were evident between SFOs and supportive stakeholders, particularly those operating as product certifiers. Product certification was considered essential for accessing premium market prices and countering negative publicity. Product certification required changes in production practices, a levy on sales, submitting to a monitoring/policing regime and introducing social reporting procedures to ensure compliance. Whilst they recognised the additional legitimacy offered by product labelling schemes, many SFOs felt that product certification was unnecessary, imposed upon them by unjustified public criticism. For example:

The certification bodies assure that a specific company follows a certain code of practice in terms of production, medicine control, temperature, hygiene, food safety but this does not mean better quality (Mm SFO).

Label Rouge[7] for example is not necessarily better than any other type of salmon but it costs a lot of money to the industry in terms of compliance (Tm1 SFO).

	Intended recipient	Basis for disclosure	
<i>Direct periodical certified reports</i>			
Application of medicines	Rule enforcers	Mandatory	
Application of medicines	Product certifiers	Business case	
Waste quantities/composition	Rule enforcers	Mandatory	
Waste quantities/composition	Product certifiers	Business case	
Production chemicals/additives	Rule enforcers	Mandatory	
Production chemicals/additives	Product certifiers	Business case	
Production regime details	Product certifiers	Business case	
Noise, odours, visual/aesthetic impact	Rule enforcers	Mandatory	
Fish movements	Rule enforcers	Mandatory	
Fish traceability	Product certifiers	Business case	
Fish-food – composition/source	Product certifiers/stakeholders	Business case	
Compliance with licenses/consents	Rule enforcers	Mandatory	
<i>Direct periodical reports</i>			
Economic impact of salmon farming	Political institutions	Voluntary	
Annual salmon production volume and prices	Political institutions	Mandatory	
Annual salmon import volume and prices	Political institutions	Mandatory	
<i>Direct contingent reports</i>			
Disease notification	Rule enforcers	Mandatory	
Disease notification	Product certifiers	Business case	
Fish forecast harvests	Rule enforcers/supportive stakeholders	Voluntary	
Changes in licenses/discharge consents	Rule enforcers	Mandatory	
<i>Direct qualitative reports</i>			
Plans for sea-lice treatments	Companies	Voluntary	
Anti-predatory precautions	Stakeholders	Voluntary	
Fish welfare	Stakeholders	Voluntary	
Escaped salmon	Stakeholders	Voluntary	
Impact on wild salmon population	Political institutions/stakeholders	Voluntary	
Impact on marine environment	Stakeholders	Voluntary	
Impact on other marine businesses	Stakeholders/companies	Voluntary	
Salmon product labelling	Companies/public	Business case	

**Table II.**

Examples of direct social reports of salmon production process

There was very little evidence of social reporting reducing environmental impacts below regulatory limits, largely because SFOs did not believe they created any negative environmental impacts. However, compliance with regulations reports were used as a part of a legitimating process intended to counter the negative publicity associated with salmon farming. SFOs also engaged more critically with regulators, in conjunction with supportive stakeholders, to influence the way current regulations were enforced and to lobby for regulatory reforms. Reports were produced to demonstrate the negative financial impact and the negligible environmental benefits of current (or future) regulations.

Individual SFOs also engaged proactively with regulators to pre-empt problems and to get the regulators on-side. SFOs explicitly recognised the business case of an alliance with regulators in opposing reforming stakeholders. There was limited evidence of SFOs directly producing accounting information to avoid any reputational damage or challenging general engagement efforts from reforming stakeholders.

However, supportive stakeholder groups were more actively involved in providing indirect reports to defend the sector's reputation from continual external threats.

Supportive stakeholders produced a number of indirect quantitative and qualitative reports on salmon farming at a regional level and national level. Some reports were designed to lobby political institutions/rule enforcers on behalf of SFOs and others designed to counter adverse publicity and manage reputational risks (Scottish Salmon, 2004a, b). When involved in reputational management supportive stakeholders often used issue amplifiers, despite blaming issue amplifiers for spreading these "untruths" in the first place. As well as reacting to public crises supportive stakeholders attempted to proactively create alternative reports of the "safety" of farmed salmon via product certification schemes. In theory, they could provide a certified report of the production process, medicines, chemicals and food-additives used in any salmon product bearing their quality label.

External reports of the regional or national social and environmental impacts of salmon farming were regularly prepared by political institutions and regulatory rule enforcers. Examples include annual salmon production (Fisheries Research Services, 1998-2004), economic impact of salmon farming (Highlands and Islands Enterprise, 1998; Scottish Executive, 2002), pollution emissions data (SEPA, 2003), and The Strategic Framework for Scottish Aquaculture (Scottish Executive, 2003; SNH, 2002). Most of these external reports were supportive of salmon farming and could be seen as legitimising their activities.

Reforming stakeholders produced external problematising reports of salmon farming. Their reports were designed to achieve a range of different objectives. Some of these reports were designed to promote the "risks" of farmed salmon and salmon farming) or to respond to reports deemed unjustifiably supportive of salmon farming (Scottish Salmon Farm Monitor, 2003). Reforming stakeholders in our study acted in accordance with ecological modernity concepts (Beck, 1992; Beck *et al.*, 1994) producing systematic, evidence-based social reports intended to support their criticisms of salmon farming. Reforming stakeholders made extensive use of web technology to disseminate their reports (RSBP, 2004; WWF, 2003) as well as issue amplifiers.

Our analysis suggests that most engagement activities undertaken by reforming stakeholders concentrated on the regulatory rule enforcers rather than on individual SFOs. Reforming stakeholders challenged the robustness of the regulatory enforcement framework and subsequent legitimacy claims by SFOs, driven by concerns that existing regulations were legitimating and perpetuating officially sanctioned environmental damage. Reforming stakeholders used social reporting techniques to critique the prevailing scientific and economic epistemology of regulations. These techniques included external social audits, biodiversity accounting, environmental impact assessment and natural resource accounting. Their reports also contained recommendations for solving the environmental damage caused by salmon farming.

The targeting of regulators by reforming stakeholders was a deliberate strategy as firstly, any reforms would apply to all SFOs and secondly, it could remove or damage SFOs' legitimacy claims. This strategy was part of a contest for power and influence over the arena rule enforcers. Reforming stakeholders also produced reports intended to mobilise public support, enticing individuals or groups to support their campaigns.

One interesting observation was the choice of reporting entities within the salmon farming arena. Participants were not concerned with company-level reports. In most

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cases, the reports provided by SFOs related to specific business operations, specific sites, parts of the production process even down to individual fish cages. Indirect and external reports did not use individual SFOs as their reporting entities. They used alternative entities such as specific sea sites, geographic regions, industry level aggregations or political boundaries. The choice of entity, as well as the content, timing, verification, was dependant upon the purpose and nature of specific engagement activities.

In the salmon farming arena, there was little interest in social and environmental disclosure in annual corporate reports. Arguably, this was because many arena participants already received the reports they required, particularly the regulatory rule enforcers, voluntary rule enforcers, political institutions and supportive stakeholders. This was not the case with reforming stakeholders and the public, although it would be wrong to suggest that the public had no information regarding salmon farming. The public were subjected, directly and indirectly, to multiple and contradictory reports of the safety (or otherwise) of salmon farming and farmed salmon.

The lack of interest in social and environmental disclosure in corporate reports in arena discourses could be explained by certain characteristics of our empirical site. Salmon farming is a highly regulated industry, with mandatory requirements for regular technical, scientific data on emission levels, resource inputs, production processes and end-product. The ownership and financial structure of the sector is atypical with a lack of discipline from the capital markets. SFOs did not seek legitimacy through the disclosure of social and environmental information in their corporate reports but by demonstrating regulatory compliance and adherence to product certification schemes.

Despite the high visibility of engagements between SFOs and reforming stakeholders, they appeared to have a minimal impact on SFOs. This lack of impact appeared to be as a consequence of ideological differences on the desirability of salmon farming. SFOs felt that the claims made by reforming stakeholders were unjustifiable, creating unnecessary problems for the whole salmon industry. However, all SFOs accepted that salmon farming did have an image problem; SFOs talked about a deliberate spread of misinformation about their practices and the need to correct these false claims. One solution was to produce what they believed to be truthful, unbiased, scientific reports of their operations.

Reforming stakeholders typically did not directly engage with SFOs. They targeted their efforts whenever they identified an opportunity to achieve their objectives, for example, submitting development objections, comments to licensing boards, appealing planning decisions, letters to the press, press releases, political lobbying, external environmental audits and publicity campaigns. However, there was evidence of co-operative engagements and a realisation from some in both camps of the futility of confrontational engagements. Some SFOs held open-days and had invited reforming stakeholder groups to attend. Some SFOs participated in the common management of coastal areas and as a consequence changed how they protected salmon from natural predators such as seals and seabirds. However, many interviewees also referred to a previous unsuccessful attempt to establish a coastal management forum with reforming stakeholders blaming SFOs for its demise and vice versa.

SFOs expressed a desire for better communication and accountability relationships with stakeholders. Despite some reforming stakeholders remaining ideologically

opposed to salmon farming certain stakeholders appeared less ideologically opposed to salmon farming, for example:

The long-term aim is to balance the socio-economic interests of the industry with less damaging impacts on the environment in a way that socio-economic and environmental interests coexist (WWF Reforming Stakeholder).

Reforming stakeholders agreed that there was better communication and mutual understanding with the industry than in the past. SFOs and reforming stakeholders attributed this to the Scottish Executive's inclusive consultation process when developing their strategic framework for Scottish aquaculture (Scottish Executive, 2003). The strategic framework has the potential to create non-confrontational dialogical engagements (Thomson and Bebbington, 2005). However, at the time of the study the strategic framework was not fully operationalised and its long-term effectiveness undetermined.

SFOs' most common response to reforming stakeholders was simply to ignore them. When they chose to respond it was normally aggressively denying reforming stakeholders' claims. The motivation of SFOs was to re-establish public legitimacy when they perceived that reforming stakeholder's activities could result in financial harm. These indirect, confrontational engagements had very little impact, as both sides felt the others were wrong and ignored each other.

Reforming stakeholders were less confrontational in their engagements with regulators. Their engagements often involved scientific reports of the environmental impact of salmon farming and regulatory frameworks. These reports were part of a political process to change the regulations controlling salmon farming. However, when reforming stakeholders felt that an impasse had been reached in their engagements with regulators/political institutions they resorted to media campaigns and direct action. Reforming stakeholders undertook and published highly critical external social reports of salmon farming (FOE, 1988, 2001; Scottish Salmon Farm Monitor, 2003) designed to gain public and political support for their reform programmes.

### **Summary of findings and evaluation of impact of social reporting**

In our study, we found evidence of social reporting practices tailored to specific engagements in terms of their content, reporting mechanisms, choice of entity, time periods, verification mechanisms and who prepared the reports. We did not find evidence of social reporting by SFOs driven by a desire for greater transparency, emancipatory change or to promote the sustainability agenda. There was some evidence of a dialogical (Thomson and Bebbington, 2005) form of engagements. However, these engagements were at a very early stage and their outcome undetermined.

We proposed earlier that a critical attribute of emancipatory social and environmental accounting was its ability to reconceptualise the substantive social and environmental context of problematic situations in order to bring about change. In our study, it was difficult to conclude that the social reporting observed accomplished this. There was some evidence of minor shifts in the conceptualisation of some participants and interestingly these appeared to be linked to the less confrontational, direct engagements associated with the strategic framework for Scottish aquaculture.

SFOs' social reports were not intended to provide a meaningful critique of their operations or decision making. At best, they were designed to allow others to monitor

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compliance with voluntary and regulatory standards. It was left to reforming stakeholders to provide reports that critiqued these standards, social norms, regulations and legislation. Many of the reports and engagements from the supportive and reforming stakeholders were intended to be educative, promoting debate, changing the collective understanding of salmon farming and they did propose solutions. Despite these intentions, they were largely ineffective due to the embattled relationships between the participants. All the key components of emancipatory social reporting appeared to be present but there was no mechanism for them to be synthesised into an emancipatory social and environmental change process.

### **Concluding comments and implications for future research**

This study raised a number of important issues for the development of our understanding of social and environmental accounting, in particular social reporting. It is important when making sense of reporting practices to recognise and incorporate alternate social reporting mechanisms as methods of discharging organisations' social and environmental responsibilities. The existence of social reports by other arena participants, also appeared to be important when investigating the impact of any specific social report. Researching social reporting requires greater awareness that the external social and environmental knowledge of a company or issue is constructed from all the social reports within the arena, not from a single report from a single participant.

Integral to different types of social and environmental engagements are demands for the "giving and receiving of accounts", with different engagement activities creating different accountability demands. Social reporting practices located in our salmon farming arena were influenced by previous reports available within the arena. We observed the co-existence of alternate accounts, and heterogeneous engagement activities and the co-evolution of these alternate accounts and diverse engagement dynamics.

We found multiple objectives for each of the engagement relationships we investigated and found some evidence of political economy responses, stakeholder theory, legitimacy theory, the business case underpinning social reporting responses. There was evidence to suggest that social reporting practises were explained by power differentials, with the content of these accounts contingent upon the perceived outcome of the engagements.

Another implication of our study was despite the existence of multiple social reports on all aspects of salmon farming, there was little evidence of their effectiveness in resolving social and environmental controversy. Understanding political dynamics, formal rules and informal codes in an arena are critical to making sense of observed social reporting practices and in designing effective social reporting interventions. We believe that the arena concept can make significant contributions on that point. It can help to identify different stakeholder roles (i.e. active or passive stakeholder dynamics), differences in ideologies, rationalities and values in relation to the problem. It can also help in recognising a wide range of interactions and engagement dynamics, complex interactions between companies, stakeholders, regulators, the media and the public.

Our study suggests that social reports are reflexively linked to arena discourses and engagement activities, the diversity of objectives/ideologies of actors in the relevant arena, the relative powers of groups, the alignment and/or coalition of these different

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groups and existing reports in the public domain. Further empirical research is required to understand the attributes of social reporting that would make it more effective in making an arena more sustainable.

Despite the confrontational nature of many engagements in the salmon arena, there was evidence of more constructive, co-operative and less public engagements with mutual sharing of evidence and ideas such as the tri-partite initiatives associated with the Scottish aquaculture strategic framework. The limited success of these co-operative engagements is worthy of further investigation. We intend to revisit this arena to investigate the longer term impact these engagements which would assist in the empirical development of dialogical accounting (Thomson and Bebbington, 2005).

Adopting an arena approach in this particular study allowed us to identify different social reporting practices that were not well documented in the research literature. For example, the relative lack of engagement activity between reforming stakeholders to individual SFOs was initially surprising. However, this was explained by a deliberate targeting of regulatory rule enforcers by reforming stakeholders. Another surprising observation was the importance of public sector regulators in arena engagements and the extent to which they both demand and use social reports.

There may also be some value in learning from reforming stakeholder's engagement tactics. Investigating the assemblage of stakeholders that seek to control an arena would appear to be a critical part of the social and environmental accounting research project. Rather than concentrating on social reporting of profit-oriented companies, we could investigate the social and environmental performance of political institutions and regulators. Rule enforcers, especially those linked with political institutions, should be easier to engage with as they are subject to democratic accountability and control. They are also specifically tasked with bringing about social and environmental change. Critically analysing their existing social reports, identifying portrayal gaps (Adams, 2004) or undertaking external social audits (Harte and Owen, 1987; Cooper *et al.*, 2005) of their activities may be used to challenge social and environmental regulatory rule enforcers' claims and oblige them to demonstrate their actual contribution to sustainable development. Our study suggests that there is some merit in creating additional accounting entities demanding social reports of the rule-enforcers, political institutions and arena level governance structures as part of an engagement process by researchers. Researchers can engage in policy debates as issue amplifiers by providing social reports of their analysis of arena practices and policy debates.

Our research identified that many participants had a partial and fragmented understanding of salmon farming mainly dictated by their narrow (regulatory or otherwise) interests. They were unable to critically perceive a systemic understanding of salmon farming and thus unable to consider any other way of being. One challenge for social and environmental accounting research would be to find ways to provide systemic accounts of the social and environmental impacts of different arenas. In our view, this could be achieved by engaging into "wider" studies where arena frameworks are used as research tools to identify, the different arena participants, investigate their motivations, their problematisations of others and interactions in an effort to form a more holistic view of the subject matter. These views could then inform the formulation of the appropriate social reporting entities, formal accountability responses and appropriate reporting mechanisms to discharge their accountability. In particular, preparing silent or shadow accounts on the arena discourse, rather than single fragmented entities, integrating and



representing all the evidence and opinions within the arena could be useful. Similarly the application of portrayal gap analysis to the reports produced could assist in identifying the contradictions (and commonalities) in the evidence and discourse within the arena.

Social and environmental accounting has the potential to bring about substantive social and ecological change or perpetuate unsustainable organisational and societal behaviours. It can reconceptualise the substantive social and ecological environment through the provision of knowledge, enable an authentic dialogue, promote environmental and social change. SEA can be educative; it can promote debate, change our knowledge of situations, suggest corrective actions and create space to enable action. It can also provide a meaningful critique of the reporting entity, a questioning of decision-makers and the ways they monitor compliance by providing a critique of the standards, social norms, regulations and legislation used. It can question unreflexive external transmission of corporate information to underspecified stakeholder groups and it could become an important part of a sustainability reform agenda or response to existing arena power dynamics driven by self-interest. We believe that the arena concept could provide a skeletal frame and vocabulary from which to reconstruct and represent these interactional processes.

### Notes

1. Scotland consists of a mainland and four main groups of islands, Inner Hebrides, Outer Hebrides, Orkney and Shetland.
2. See *Accounting Auditing and Accountability Journal*, 2007, Vol. 20 No. 3.
3. Details of the surveys are available by the authors on request. Survey respondents are provided in the Appendix.
4. Owing to the sensitivity and controversy surrounding the sector, it was agreed to protect the identity of SFOs and other participants who requested it.
5. There was no comprehensive listing of SFOs or the location of salmon farm sites. Some SFOs operated different farm sites but addresses and contact details were only publicly available for one site. This meant that when conducting field research we came across farm sites that we were not aware of.
6. In the RA, one interviewee refused to be recorded, notes were taken and the interview lasted 15 minutes. One interview with a SEERAD officer was not recorded, it lasted for about 20 minutes and notes were taken. Interviews with the three fish retailers/wholesalers took place in their shops between customers and it was not practical to record them.
7. Label Rouge is a prestigious French food label.

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### Appendix. Postal survey respondents

Salmon farmers data gathered only via postal survey:

- OS3. Small organic farm producing salmon, fry, smolts.
- TL1. Large farm producing non-organic salmon, smolts.
- TL2. Large farming business, subsidiary of large national company producing non-organic salmon, fry, smolts.
- TS1. Small farm, subsidiary of large national company, producing non-organic fry, smolt.
- SS1. Small farm, subsidiary of large national company, producing non-organic fry, smolt.
- TS2. Small family farm producing non-organic salmon.
- TS3. Small family farm producing non-organic salmon.
- TS4. Small family farm producing non-organic salmon.
- TS5. Small family farm producing non-organic salmon, mussels.
- TM2. Medium sized farm producing non-organic salmon.
- TM4. Medium sized farm producing non-organic salmon.
- SS1. Small farm, a subsidiary of large national firm, producing non-organic smolts.
- SP. Small farm producing non-organic smolts and salmon processing.

Sm, MK, ML1 and SMK responded to the questionnaire (Table I).

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