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Contemporary fisher images: Ideologies, policies and diversity

Signe Annie Sønvisen*

Norwegian College of Fishery Science, University of Tromsø, 9037 Breivika, Norway

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A B S T R A C T

This paper presents survey results that document heterogeneity among contemporary Norwegian fishers and discusses the implications of such heterogeneity upon fisheries policies in general and recruitment policies in particular. With the help of Multiple Correspondence Analysis and fishers' discourses related to management and technology, a fisher typology is produced. This approach yields four types of fishers. Two types of fishers are closely linked to ideology and form a basis for modern fisheries management. The other two are not ideological figures, but more pragmatic, and deviate from the assumptions usually found in fisheries management. As governing is difficult without images, an ontological understanding of the fisher is necessary. Thus, our image of the fisher has to be revised and fisheries policies have to take into account the presence of a number of adaptations and rationalities; hence, a more diverse recruitment policy is called for.

1. Introduction

For centuries, the Norwegian fisheries have contributed to national welfare and fed and employed the coastal populations. As in most western fisheries nations, Norwegian fisheries have undergone immense changes in the last six decades. From being an activity linked to local community, with simple and direct relations between fish and fisher[1] (Jentoft and Wadel, 1984; Johnsen et al., 2009a); fishing has become a globalized, modernized and professionalized occupation (Vik et al., 2011; Sønvisen et al., 2011).

A range of policy instruments directed at controlling human impact on fish stocks have been introduced. When the Northeast Arctic (NEA) cod stock collapsed in 1989/90, access rights and quotas where introduced in the coastal cod fisheries. The expectation was reduced fleet capacity; however, changes within the fisheries, where machines increasingly substituted people, actually increased fleet capacity (Johnsen, 2005; Johnsen et al., 2009a, 2009b). The unexpected result indicates that "fisheries problems arise from a failure to [fully] understand fishermen…" and their behaviour (Hilborn, 1985, p. 2). Thus, to develop more efficient management systems, a more ontological understanding of fishers' practices and responses is needed (Hanna and Smith, 1993; Ostrom, 1990; Salas and Gaertner, 2004).

The chosen management measures introduced in 1989/90 were based on theories about human behavior, particularly the assumptions of Gordon (1954) and Hardin's (1968) [2] models of common property resources. In this perspective, the fishers are seen as myopic and short-run profit maximizers (Hanna and Smith, 1993). However, studies within the *local community paradigm* (Brox, 1966; Anderson and Wadel, 1972; Jentoft and Wadel, 1984) challenged these assumptions, arguing that fishers' rationality extended beyond pure economics (Hersoug et al., 1993). Moreover, complexity, diversity and dynamicity tend to be ignored in the design of management measures; which has contributed to management failure in many fisheries in the world (Salas and Gaertner, 2004). A number of studies have addressed this and have shown how fishers' behavior and attitudes contradict those assumed by the prevailing models used in fisheries management (Doeringer et al., 1992; Hanna and Smith, 1993; Mansfield, 2004; Olson, 2005; Salas and Gaertner, 2004; St. Martin, 2001, 2006, 2007; Wilen et al., 2002). Despite the increased attention paid to complexity and diversity, the

* Tel.: +47 991 65 944; fax: +47 77 64 60 20.
E-mail addresses: signe.sonvisen@sintef.no, signe.a.sonvisen@uit.no.

[1] Whether to use the term *fisher* or *fisherman* is actually surrounded by controversy. I have chosen to use the direct and gender-neutral translation from the Norwegian *fisker*.

[2] Hardin defined a specific context, "freedom to breed for the poor," but his solution to avoid collective ruin has been applied to a number of social and environmental settings. In fisheries management, this has often been translated into limited access, quota programs and rights allocation (Jentoft et al., 2010; Ostrom, 1990; McGoodwin, 1990; Mansfield, 2004).

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operating assumption of homogeneity among fishers prevails in fisheries management systems (Christensen and Raakjær, 2006; Hanna and Smith, 1993).

Policies are restricted by discourses that limit policy options (Cruickshank, 2009). "Policy assumptions and instruments that are at odds with the underlying motivations of agents may actually reduce achievement of policy objectives…" (Davies and Hodge, 2007, p. 323). It is therefore important to be conscious about the way discourses work in policy design and in particular the underlying assumptions (Cruickshank, 2009). "[U]ntil we know the 'discourses' people use… it will be very hard to judge what, and whether,… policies will be socially acceptable, and therefore capable of being implemented" (Barry and Proops, 1999, p. 38). Hence, by analyzing fishers' discourse we try to understand fishers' attitudes and motivations to understand and predict behavior.

This study examines fishers' fisheries discourse, focusing on fleet recruitment.[3] To inform fisheries and recruitment policy design, it will yield insights into contemporary fisher types and their potential behavior. Previous studies have been mostly of a qualitative nature or set in a non-industrial context; thus, this study is the first quantitatively developed typology of fishers across the entire Norwegian fishing fleet. In addition, to obtain a deeper understanding of the typology, the results are discussed in relation to similar typology studies and primary qualitative data. Even though the findings of this article will contribute to increased knowledge about recruitment and will inform policy making in a Norwegian context, the approach is applicable outside of the Norwegian context, as a number of fishing nations are facing similar challenges. In addition, as recruitment policy affects and is affected by general fisheries policy, the findings in this article also have a wider political scope. Methodologically, the approach has a more universal application to studies within this field, as it studies fishers' attitudes in order to understand how fishers adapt.

The questions to be asked are as follows: what fisher types are present in the Norwegian fishing fleet today? What characterizes these fishers in terms of attitudes and motivations? In terms of recruitment to the fishing fleet, what are the policy implications of a more heterogeneous fisher image?

Following this introduction, section two briefly introduces Norwegian fisheries. Section three describes the chosen theory and methods, including the survey design and the variables used. Section four presents the fisher types. Section five discusses the fisher types in relation to other studies and primary qualitative data, which is followed by a brief conclusion.

2. Background

2.1. Norwegian fisheries and management in brief

For centuries, the Norwegian fisheries and seafood industry have been of great importance nationally, regionally and locally (Holm, 1995; Nielsen, 2009). In 2011, 5414 active fishing vessels employed 12,791 fishers and landed 2.4 million tonnes of seafood (MCFA, 2012: 9). The export value of Norwegian seafood in 2009 was USD 7.1 million (MCFA, 2012: 4). In 2010, the Norwegian seafood industry was estimated to create economic values for the Norwegian society worth about USD 7.75 billion in terms of value added to the GDP (Henriksen et al., 2010: 3).

An important principle in Norwegian fisheries policy is to ensure that the returns of the fisheries go to active fishers and coastal communities. Participation is limited by annual permits (coastal fleet) or licenses (industrial fleet), combined with individual vessel quotas. The total Norwegian quotas are allocated to different vessel groups and then distributed amongst vessels holding the necessary permits/licenses. Officially, licenses and permits are not tradable; however, as they are issued to a particular vessel, when the vessel is traded, the licenses and permits follow the vessel (MFCA, 2013).

In terms of management, the Norwegian fisheries are separated into two main segments: coastal fisheries and industrial fisheries. The coastal fleet (often referred to as the "conventional fleet") consists mainly of vessels less than 28 m, using conventional gear, such as jigging, line, net and Danish seine; and seine vessels with less than 500 m^3 cargo capacity. The deep-sea or offshore fleet consists mainly of fishing vessels over 28 m using purse seine, trawl or long line. Both the coastal fleet and the industrial fleet have great mobility. Small coastal vessels may fish inside fjords close to home but may also travel several hundred nautical miles along the coast to fish. Industrial vessels wander farther offshore and may fish as far north as Svalbard – 500 NM off the mainland. As significant modernization has taken place in both fleets, the separation between coastal or industrial is a reflection of different adaptations as well as a result of different political paradigms: one tied to coastal fishing and the other to industrialized fishing.

The organizational separation between coastal and industrial fleets became more marked after the collapse of the NEA cod stock, with increased focus on capacity reduction through fleet restructuring. Since then, the cod quotas have been allocated roughly 67% to the coastal fleet and 33% to the industrial fleet (DoF, 2012a).[4] Due to strict resource management, as well as modernization and rationalization, Norwegian fisheries have become an economically efficient and market-oriented sector (DoF, 2012b; Finstad et al., 2012; Schrank, 2003). One effect of this is increased catch-capacity and decreased employment, as seen in Fig. 1.

2.2. Existing images of fishers

Since the collapse of the NEA cod, Norwegian fisheries policies have focused on fleet capacity and restructuring. These policies are essentially about who is in and who is out. Chosen management instruments are based upon particular assumptions or images about the fisher: who the fisher is, what motivates the fisher and how the fisher acts (Johnsen, 2004; Sønvisen et al., 2011; Sønvisen, 2013). As mentioned above, two images of the fishers have been particularly influential in modern fisheries management: the *economic man*, or the *economic fisher* (Gordon, 1954; Hardin, 1968), and the social actor, or the *social fisher* (Brox, 1966; Jentoft and Wadel, 1984).

The economic fisher is an economically rational, individualistic, appropriator in an open access resource commons. The

[3] The term *recruitment* has different meanings. In biology, recruitment is *the process of adding new individuals to a population* (Merriam-Webster online, 2012). In business, it is the process of identifying and hiring the best-qualified candidate (BussinessDictionary.com, 2012). As I feel that these definitions are too limiting, this article uses the term *recruitment* as it was developed by Jentoft and Wadel (1984), in which recruitment is also the social process preceding the occupational choice, such as socializing and informal training and transfer of knowledge. Thus, recruitment may be explained by individualistic rationality *and* social relations.

[4] It should be noted that the dividing line in relation to quota allocations is mainly along a trawl/not-trawl dimension: the trawl ladder allocates a maximum of 33% of the total quota within the trawl fleet. The conventional fleet segment includes conventional industrial vessels (e.g., long liners); hence, the divide is not strictly an industrial/non-industrial or an industrial/coastal divide. In 2012, the quota of the conventional industrial fleet accounted for 8% of the total Norwegian cod quota (DoF, 2012a).