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Fishing in deep waters: The development of a deep-sea fishing coastal fleet in Norway

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ABSTRACT

In the post-war political landscape in Norway, it has been a rooted consensus to maintain the coastal fleet as the largest and most important segment of the Norwegian fishing fleet. The simple and open technology, and low entrance costs in the coastal fisheries have secured employment in fisheries dependent districts, especially in Northern Norway. In order to protect the coastal fleet from the deep-sea fleet, the regime fixed the resource allocation and secured the coastal vessels with the largest share of the national TAC for cod. However, despite the strong institutionalization of the coastal fleet, the regime has not managed to avoid a rapid growth of deep-sea vessels and reallocation of quotas within the coastal group.

1. Introduction

According to the United Nation's Food and Agriculture organization (FAO) [1], about 50 of the world's 51 million fishermen are small-scale fishermen that produce nearly half of the fish globally consumed [2]. This is reflected in a number of initiatives to protect small scale fishermen. FAO has led an initiative to develop international guidelines in order to secure and develop the position of small-scale fisheries. According to Bavinck [3], small-scale fisheries must be understood in relation to large-scale fisheries, as the two are often in conflict as they compete for the same resource. Historically, keeping the two vessel types apart has been a major challenge in terms of access to fishing areas and allocation quota among different gear and vessel groups. This continues into fisheries managed with individual vessel quotas (IVQ), as the total quota is often provided for specific vessel groups where transfer between groups is not possible [4].

The competition between vessel groups are also highly relevant for the important small-scale cod fisheries in Norway. Traditionally, the coastal fleet has been defined as the backbone of the Norwegian fishing fleet [5]. In this context, coastal fisheries is embedded within a larger social and ecological system- as a "system within the systems" and strongly connected to the social, economic and cultural life in local communities [2]. The simple and open technology, and low entrance costs in the costal fisheries have secured employment in fisheries dependent districts, especially in Northern Norway [6–8]. Prior to the closing of the commons in 1989, the coastal fleet was characterized by open access without quota restrictions [9]. In 1970, more than 40,000 fishers were registered, whereby the majority was employed as coastal fishermen [10]. In the post-war political landscape, it has thus been a rooted consensus to maintain the coastal fleet as the largest and most important sector of the Norwegian fishing fleet [11].[1]

After the collapse of the North East Atlantic (NEA) cod, a total allowable catch (TAC) regime was introduced in the coastal fleet in 1989. The new regime fixed the resource allocation and secured the coastal vessels with the largest share of the national TAC for cod (see Table 1) and thereby institutionalizing the protection of the coastal fleet from the deep-sea fleet [13].[2] The TAC-regime was followed by an individual vessel quota regime (IVQ) in 1990. Unlike the Icelandic version of the individual transferable quotas (ITQ), the Norwegian IVQs system did not allow transfer of quotas. To maintain a diverse fleet structure and regional fleet patterns, quotas were allocated according to the size of the vessels in a linear manner. Independently of efficiency or income needs, participants with equal length vessels were awarded identical quotas.

[1] The importance of the coastal fleet can also be illustrated by its position regarding allocation of the fish resources in Norway. Here, the coastal vessel group is allocated approximately 65–70% of the Norwegian total allowable catch (TAC) for North East Atlantic cod, pending on the size of the TAC [12].

[2] According to the principles of resource allocation among different gear and vessel groups, coastal vessels was originally defined as vessels between 0 and 28 m length [14].

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Table 1
Allocation of Norwegian TAC (in tons) for NEA cod for different gear and vessel groups, 2014 [40].

Vessel group	Quotas (tons)	%
Cod trawlers	146,777	32.5
Other trawlers	750	0.2
Deep sea long liners	38,109	8.4
Closed group	211,956	46.9
Open group	25,929	5.7
Fresh fish incentives	29,205	6.5
Total Norwegian TAC:	451,726	100

This principle was a profound structural element of the IVQ-model [15].

However, a basic characteristic of the coastal fisher is heterogeneity, with a large number of adaptations depending on a range of factors [16,17]. Within the framework of the IVQ-model, *unequal fishermen were treated on an equal basis.* Hence, many fishermen were allocated larger quotas than their previous catches would imply, whilst others were allocated smaller quotas than their previous catches would imply. The authorities had constructed a regulatory map that did not correspond to the actual terrain. Moreover, it created strong incentives within the coastal fleet to adopt to the new system. This also included changing the type of vessels in the coastal fleet.

Parallel to the new quota regime, authorities had ambitions to streamline the coastal fisheries into a more homogenous and economically efficient group. However, as map and terrain did not match, the result was not as expected and an array of institutional adjustments have been necessary to achieve the overarching fisheries political objectives of structural adjustments and profitability improvements. Although the new regulatory regime was a top-down approach, fishers also exerted pressure from the bottom and demanded a system change in line with changing fishing practices. So, despite the government's attempt to streamline the coastal fleet, to accommodate changes in the fleet and demands from fishers, present regulations have become a complex set of rules for quota transactions where each rule provides new incentives to adapt [18].

Fig. 1

At the time of the closing of the fisheries, the coastal vessels were small, numerous and adapted to a near shore fishery to support the dispersed settlements of small coastal communities. Today, however, the modern coastal vessel increasingly resembles deep-sea fishing vessels in both technology and operations, and the fleet has accordingly been substantially transformed due to the incentives provided by the changes in the management system. Moreover, larger vessels have weaker local community orientation and may contribute to weakening the local employment system [19], as larger vessels recruit and employ less from the local community where they are based [20].

Fig. 1. Traditional Norwegian coastal vessel fishing cod with gillnets [10].

This article studies the interaction between the Norwegian management regime and the construction of the coastal vessel in the Norwegian fisheries politics from 1990 to present, as well as its effects upon the fleet structure. More specifically, it studies how the social construction of the coastal vessel has changed in that period. The coastal fleet, at the time of the closing of the NEA cod fisheries, was a practical category for management purposes. It was based on a regional policy that promoted a desire to protect the smallest, and in some perspectives the most vulnerable fleet sector from the industrial, deep sea fishing fleet. Today, the coastal fleet is increasingly becoming a symbolic construction with less and less connection to the original intention of the coastal fleet. Thus, the picture of coastal vessel in the past lingers, but due to changes in regulations, the material construction of the coastal vessel has led to the modern coastal vessel being more like the deep sea fishing vessel, both in terms of technology and adaptations. Moreover, this article explores the future implications of the Norwegian IVQ-system and what it may be evolving into.

To answer these questions, section two outlines a theoretical framework relevant to understand the relationship between the state and the fishers. In section three, the article describes the background and the development of the quota regime, and the effects upon the coastal fleet structure. Finally (section four), the present status of the regime and the coastal fleet is discussed, and an alternative input to the future policy debate is outlined.

2. Governance of coastal fisheries

Governmentality [21–23] serves as the theoretical foundations for this paper. In short, governmentality is about how governments produce citizens that are best suited to fulfill the objectives of the governments. Thus, the paper explores how fisheries regulations produce fishers that fulfill fisheries objectives. This includes techniques and strategies that rendered the fishers governable. In this perspective, the state and the individual co-determine each other [24], but is also about state politics and control of individuals. For the task at hand, the theoretical framework of governmentality is applied to understand central modernization processes of the coastal fisheries. It is therefore necessary to problematize the regime of practice in Norwegian fisheries management and examine relevant management principles. In this article, an exploratory case study is used to analyse how the interplay of institutional changes and technological adaptations have affected the coastal fleet in Norway.

A number of factors affect how governance is carried out in Norwegian fisheries. The basic foundation for all fisheries management is the two main legislative decrees: the Marine Resources Act [25] and the Participation Act [26]. The Ocean Resource Act outlines overall principles for sustainable resource management and define who shall benefit from the harvest of marine resources via input to the resource allocation policy. The Participation Act shall ensure a harvest capacity adjusted to the scientifically sanctioned resource-base. In this manner, the Participation Act regulates the numbers of vessels and who are (not) awarded access to conduct fishing. The main legal framework is further outlined in decrees, which regulates in details the technical conditions for allocating quotas, such as the use of specific fishing gear and vessel size in specific areas. Hence, these decrees with accompanying regulations outline the “field of possible action” for fisheries actors.

Over time a number of events have led to changes in the legal framework; and in turn how fishing is practized. Prior to 1990, the