

Advantages and Disadvantages of Strong User Rights in Fisheries.

Göteborg, 5th and 6th May, 2022.

This workshop took place from 13:00 on May 5 to 15:00 on May 6. The venue was meeting rooms in Handelshögskolen in Gothenburg. It was attended by 11 participants.

Summary of workshop proceedings

The summary of the workshop contains two points:

1. Summary of general issues.
2. Summary of presentations.

Below each point is addressed separately.

1. Summary of general issues.

Due to the Covid 19 pandemic, the project leader will apply for an extension of the project until December 31, 2022, which we hope will be granted. Generally, the project is progressing according to the plan and we expect that it will continue to do so. At the meeting we talked about future applications on the topic of strong user rights in fisheries and we decided to apply for future funding at the national Danish and Finish research councils. When doing so an idea could be to also apply for funding at the Nordic Council of Ministers. In line with a decision made at a previous meeting, we are going to publish a special issue of Marine Policy where the articles developed will appear. We decided to have end of June, 2022, as the first deadline to submit articles to the guest editor trio, Ragnar Arnason, Håkan Eggert and Frank Jensen. Given the slow process of finding reviewers, getting reviews, carrying out revisions and get final version acceptance, it is hard to predict when the issue will be published. However the aim to complete the special issue during 2023. Depending on whether the project gets an additional extension due to the pro-longed Covid pandemics, we may have an additional meeting in Reykjavik during the summer in 2022. This meeting would focus on preparation of the Marine Policy special issue and to prepare applications for future funding, like for example from the national Danish and Finish research councils.

2. Summary of presentations.

Zvonko Mrdalo: “User Rights in Pelagic Fishery and Fish-Farming on the Faroe Islands: The Issue of Rent Capture”.

In a policy perspective, the communities whose existence is highly dependent on efficient exploitation of natural resources are expected to regulate such extraction at the most efficient matter given its resource size and contribution to their respective economies. Consequently, our investigation offers evidence of positive relationship between strong user rights and economic efficiency measured by increased flow of profits and investments for: i) fish-farming, ii) pelagic and iii) distant-waters fisheries.

The regulatory regime for fish farming in Faroe Island has moved from no user rights over weak user right to strong user rights. It seems like strong user rights in fish farming in Faroe Island has contributed to increases in harvest and resource rent. A similar development has occurred in the pelagic and the distant-water fisheries where management is based on strong user rights, resulting in increases of efficiency and resource rents. The prevalence of resource rents and the need to generate public funding has motivated the introduction of resource rental charges in the fish farming sector and the use of resource rent fees in the pelagic and distant-waters fisheries over the last ten years. The demersal fishery on the other hand is characterized by low efficiency because of persistent overcapacity. In the current situation, the demersal fishery is to a lesser extent contributing to public revenues and is in fact, receiving government subsidies.

Anthony Starr; “Fishing opportunity negotiations of the Council of the EU – A voting power index approach”,

The point of departure for this presentation is the EU fisheries policy. Under this policy all relevant member states shall negotiate to fix a total allowable catch (TAC). To investigate the impact of each member state on the TAC decisions, a power index approach have been applied. The preliminary results of the analysis show that Germany’s role is very important, basically it has to be in any winning coalition. Further, France is a clear winner from Brexit with increasing voting power. UK was more influential in negotiations pre-Brexit compared to current situation. This raises the question whether UK actually knew how to utilize its’ voting power, that is, forming coalitions? Netherlands and/or Spain may benefit from Brexit. An intuitive result from Brexit is that every member states’ blocking minority power increases,

some more than others. Similarly intuitive, a general conclusion is that larger countries have more voting power to block potential legislation.

Trond Bjorndal and Marko Lindroos: “Property Rights to International Fisheries Resources and Consequences for Fisheries Management”.

Many fish stocks are transboundary, migrating between the exclusive economic zones (EEZs) of several states and between EEZs and the high seas. Among these we can distinguish between three types: a. Shared fish stocks, b. Straddling fish stocks and; c. Highly migratory fish stocks. All three pose challenges with regard to user rights. According to the 1995 United Nations Fish Stocks Agreement, straddling and highly migratory fish stocks shall be managed by regional fisheries management organisations. Thus, the relevant states shall jointly determine a total allowable catch (TAC) and a sharing rule for this TAC. From an economic point of view international property rights systems is important and to investigate this system cooperative game theory can be used. Several sharing rules are possible. There are theoretically optimal ones, like the Almost Ideal Sharing Scheme which maximises the number of countries in the agreement and are optimal from a bio-economic perspective. Other sharing rules may result from political processes, lobbying, or be based on history or similar like the principle of relative stability which has guided the European Union so far. There are also simple ones like the equal sharing rule. A particular challenge relates to the time consistency of such agreements, for example in a situation when the distribution pattern of a stock changes.

Ragnar Arnason: “Assessing Advantages and Disadvantages of SPRs”.

The purpose of the presentation is to discuss the impact of strong user rights (SURFs) relative to weak user right. A theoretical model for the effect on social welfare when changing the user right regime is developed but it is not feasible to apply the model directly on an empirical case. Therefore, cost-benefit analysis is suggested as empirical approach and it is suggested that the impacts of introducing SURFs shall be categories as either economic, environmental or social effects. It is argued that the economic and environmental impacts of SURFs may be positive while the social impacts is mainly negative. A case study of Lake Victoria fisheries is presented. Compared to the current almost open access situation, stronger user rights would imply a major change. Based on actual data, the results indicate that an optimally managed fishery would lead to a dramatic increase of fish stocks by almost 150% while fishing effort should be reduced by 50%. Harvest would only be reduced by 10% and profits would increase

tremendously. However, the social effects would be dramatic as about 120,000 of the total 225,000 fishers in the lake would lose their jobs.

Daide Dutto and Krister Mars: “Economic Effects from Covid-19 Pandemic on Swedish Shrimp Fishers”

This paper explores the effect of the perceived risk of the Swedish people of Covid-19, and its effect on daily auctioned shrimp prices from the start of the pandemic in March, 2021, to the end of the year 2021. This topic is of interest to see whether the government intervention in the shrimp market to aid fishers with possible losses was justified. We find that when we try to control for supply effects, the remaining effect on auction prices were negatively affected by covid-19 cases by about 10 percent or 20.37 SEK/kg, resulting in a loss for Swedish shrimp fishers of SEK 22.1 millions.

Frank Jensen: “Strong User Rights - Short-run and long-run advantages and disadvantages”

The purpose of this article is to present a list of short-run and long-run advantages and disadvantages of introducing strong user rights in fisheries. The point of departure is a review of the existing literature. I categorize the advantages and disadvantages from strong user rights into the following four areas of interest; Efficiency related economic effects; Non-efficiency related economic effects; Social effects; and, Environmental and biological effects. It should be noted that many of the advantages and disadvantages I mention are closely related in the sense that strong user rights affects an economic system in a complex way. Some examples of short-run advantages regarding efficiency economic effects are that strong user rights imply a reduction in fishing effort and the marginal harvest costs at any given level of the harvest while the stock size will increase. A potential short-run disadvantage with respect to efficiency economic effects could be when quantity restrictions is imposed on some species while other species are not regulated. This may result in undesirable substitution of the harvest between regulated and unregulated species. Regarding social effects an example is a shift in power structure in a society following from a change to strong user rights. In general power is transferred from the state to the fishing industry and this may be considered as both a desirable and undesirable effect.

Rasmus Nielsen: “Structural and productivity changes from introducing ITQs in Danish demersal fisheries”

This paper focus on the structural changes in Denmark’s fisheries during the new millennium. In 2001, the Danish parliament decided to introduce Individual Transferable Quotas (ITQs), which we label as Strong user rights. The aim of the parliament was to establish a management system that provided for the possibility of long-term economic viability and stability in the fishery and for a structural development to reduce fleet capacity and renew the fleet. The change was gradual, ITQs was introduced for the pelagic fleet in 2003-2004 and in 2007 also for the demersal fleet.

We evaluate the introduction of Strong user rights from a system of moderately strong user rights. The regulation meant free trading of quotas. Further, it placed limits on ownership for individual stocks, that is, Pelagic 10% and Demersal 4%. Initially, rights were granted for 8 years, but is now extended to 16 years. When looking at productivity changes, we find that all segments experienced a decrease in Total Factor Productivity (TFP) from 2000-2006, while all segments experienced an increase in TFP from 2006-2016. Further, without adjustment for biomass changes these findings are less apparent, but the overall TFP from 2000-2016 is almost identical. The decline and growth seems equally driven by efficiency, technical and scale changes in the different segments. We also find some evidence of strategic behavior in 2003-2005. Other studies confirm improved economics for the remaining fishers. Thus, the main goal of the implementation of ITQs is reached. However, there is also critique regarding for example reduction in employment, concentration of fishing rights and operating landing harbors.

Birgir Þór Runólfsson: “Measuring Quality of Property Rights”.

The purpose of the presentation is to discuss whether the quality of user rights can be measured empirically. The theoretical point of departure is Scott (2008) and Arnason (2000) and (2008). According to Scott (2008) the quality of user rights can be measured on six dimensions: a. Divisibility; b, Transferability; c. Flexibility; d. Duration; e. Exclusivity and f. Quality of title. However, Arnason (2000) and (2008) reduce the number of dimensions to four, given by: a. Durability; b, Transferability; c. Exclusivity, and d. Security. Using the four dimensions leads to a suggested index for the quality of user rights. The Icelandic fishery is used as a case study. Four years with important changes in user right dimensions are identified, that is, 1978, 1984,

1991 and 2005. Although, user rights have not been monotonically increasing in all four dimensions, the paper finds a monotonic increase in the overall quality value of user rights in Icelandic fisheries. The initial value of 0.11 in 1978, when there was open access, increased to 0.46 in 1984, when ITQs and licensing were introduced, and to 0.76 in 1991 when the ITQ system became more comprehensive, and finally reaching 0.81 by changes in 2005, when all commercial fishing became subject to ITQs.