

## **Summary of workshop.**

### **Advantages and Disadvantages of Strong User Rights in Fisheries.**

**Copenhagen, November 5- 6, 2021.**

The summary of the workshop contains two points:

1. Summary of general issue.
2. Summary of presentations.

Below each point is addressed separately.

#### **1. Summary of general issues.**

Due to corona the project has been extended one year so the final deadline is June 30 , 2022. Generally, the project is progressing according to the revised plan and we expect that it will continue to do so.

At the meeting in Copenhagen we discussed future research 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. At the meeting a publication strategy was also discuss and here Marine Policy has stated that we can make a special issue on strong user rights in fisheries in this journal. We decided to use the opportunity and Ragnar Arnason, Håkon Eggert and Frank Jensen was selected as guest editors for the special issue. Finally, we decided that our next meeting shall take place in Gothenburg and possible dates for this event is May 5-6, 2022. It was also suggested that we should meet in Reykjavik during the summer in 2022 to prepare the applications for 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”.**

The purpose of the presentation is to discuss the legislation developments in respects of fish-farming and fisheries user rights in the Faroe Islands. In particular, our considerations will illustrate the major effects of strong user rights on improved economic performance and efficiency over time. The regulatory regime for fish-farming has moved from non-existent or poorly defined user rights to strong user rights. Despite initial operative challenges and fragmented ownership structure, a process of an economic rationalization has brought significant structural changes that resulted with substantial growth in the harvest of salmon and realization of economic rent. At the same time, the current study also aims to present regulatory analysis of the Faroe Islands fisheries in general and its pelagic fishery sector in particular. In this respect, the Faroese pelagic fisheries’ management policies have undergone numerous regulatory changes (from grandfathering to auctions and back to grandfathering), with mixed results. However, and based on evidential facts, the pelagic fishery delivered a positive level of economic returns (2010-2020) Consequently, the Faroese Government has introduced the separate sets of legislations (Resource Tax/Fees) outside the general corporative taxation code that will aim to collect share of profits to be redistributed to a wider community. At the end we propose to compare those government undertakings that might

have implication both for development of future user rights and commercial exploitation of natural resources.

**Marko Lindroos and Antony Starr; “Power Indices for the 8 Baltic Sea EU Member States in Setting Baltic Sea Fishing Opportunities”,**

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 power indices have been applied. These indices can inform us about how TAC decisions is made and here voting games can be used. Applying voting games to international fishing agreements is an important area for future research.

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

Many fish stocks are transboundary and migrate between exclusive economic zones (EEZs) of coastal states and between EEZs and the high seas. Among these we can distinguish between: a. Shared fish stocks, i.e., stocks migrating between the EEZs of two or more states, b. Straddling fish stocks, i.e., stocks migrating between EEZs and the high seas, and; c. Highly migratory fish stocks, essentially tunas and tuna like fish. For these fish stocks it is important that coastal states shall agree on exploitation as each state has “sovereign rights” to exploitation when the stock is in its EEZ. According to the United Nations Fish Stocks Agreement, straddling and highly migratory fish stocks shall be managed by regional fisheries management organizations, consisting of coastal states and relevant distant water fishing states. 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. When using cooperative game theory to investigate international property rights systems important future research topics is dynamic coalition formation games, comparing various allocation rules and incorporating stochastic events such as changes in migration.

**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. Thus, based on the presentation it cannot be concluded whether switching to SURFs is desirable.

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

The point 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. Divisibility; b, Transferability; c. Exclusivity, and d. Security. By using the four dimensions Arnason (2000) and (2008) suggest an index for the quality of user rights. By using the Icelandic fishery as empirical case it is discussed whether the quality of user rights can be measured empirically in those dimensions with a simple scoring metric. It was argued that this would be difficult due to a huge number of rules under the user rights regime in Iceland.

**Frank Jensen: “Are Taxes Preferred over Strong User Rights for Fisheries? An Empirical Analysis”.**

A number of theoretical studies indicate that taxes might be preferred over strong user rights for fisheries under various kind of uncertainty. The purpose of this presentation is to investigate the size of the relative welfare gain of switching to taxes empirically by using the Danish cod fishery in Kattegat as case. It is shown that the relative welfare gain of switching to taxes is very low for the Danish cod fishery in Kattegat. This result holds for different kinds of uncertainty and variations in all relevant parameter values. To generalize this result to other fisheries an operational indicator for the relative welfare gain of switching to taxes is developed. By using the indicator it is shown that the welfare gain of switching to taxes might be very low for almost all fisheries worldwide. Thus, from a practical policy perspective there is no economic argument for using taxes instead of strong user rights in fisheries.