



Efficient fisheries management: Fishing rights and flexibility

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Right based Management

Fisheries management has changed drastically in the last half a century. Whereas once there was open access in almost all fisheries, many countries, especially the developed ones, have now introduced effort or rights based management systems. Rights based management regimes are set up by allocating property rights or user rights to fishers in some fashion and because of the incentives implicit in these systems, the adoption of these management methods are more likely to lead to both economically and environmentally sustainable fisheries. However, although rights based management systems thus lead theoretically to very desirable results, their implementation often meets considerable resistance.

The merits and criticism of rights based management regimes were discussed at a conference held under the auspices of the Icelandic Presidency in the Nordic Council of Ministers and organised by the Institute of Economic Studies, University of Iceland, on August 27th–28th. The conference, which was attended by policy makers, stakeholders and academics, brought together some of the leading experts in the field to discuss various top-

ics connected to the conference theme, Efficient Fisheries Management: Fishing Rights and Flexibility.

Jon Bjarnason, Icelandic Minister of Fisheries and Agriculture, opened the conference and briefly described the importance of the fisheries to the Icelandic economy. As the sector is hugely important to the Iceland economy, it is not meaningful for Iceland to pursue unsustainable management of the fisheries, as marginal small mistakes can easily become large in economic terms for the nation.

In his keynote address, Gordon Munro, University of British Columbia, pointed out that there has been a steady advance in acceptance of fishing rights based management schemes, and systems based on individually transferable quotas (ITQs) in particular. Recently, however, these schemes have come under vigorous attacks, and although the attacks may be regarded as rearguard action, they are damaging and should be addressed head on. In particular, it may be necessary to compare the rights based management schemes with other alternatives, and

convince stakeholders of their relative efficiency. The first goal should be to settle on the national objectives of fisheries management. In many cases, nations set forth many objectives, but Munro argues that the cornerstone of fisheries management should be to maximise economic rent, broadly defined, through time.

¹⁾ Since resource rent can not be created and maintained without a sustainable resource, there is no conflict between ensuring sustainability and maximising resource rent.

There exist various types of rights based management (RBM) systems, including ITQs, community quotas, territorial user right fisheries (TURFs) and cooperatives, as well as various local innovations. Christopher Costello, University of California at Santa Barbara, pondered the question: What is the effect of introducing rights based management (RBM) system on the collapse of fisheries? In order to answer, Costello and his colleagues have looked at a large number of fisheries that were collapsing in the 1980s. Some of these later on adapted a rights based approach, but in the 1980s they were experiencing the same rate of collapse as those fisheries where ITQs were not implemented. However, in the

1) Economic rent may be defined as the surplus after all costs and normal returns (profits) have been accounted for. Thus, economic rent refers to abnormal or supernormal profits, i.e. profits above what can generally be earned. In the case of natural resources, such as fisheries, economic rent is commonly referred to as resource rent.



years after implementing a rights based approach the fisheries, where RBM systems were not implemented, experienced continued overexploitation and falling stocks, whereas those fisheries that set up a rights based approach witnessed reversing stocks and increased catches. However, catches do usually not rise immediately following the adoption of RBM, but continue to fall for 3–5

years, because harvesters are willing to decrease catches in the short-run in the knowledge that their pay-off will be higher in the long-run.

In most cases, rights based management systems are not implemented in a fishery until after the fishing stock in question has been heavily overexploited. At that stage the fishery generates very little if

any economic rent. However, once rents start to be generated, distributional issues²⁾ emerge, in particular with regard to how the rent should be distributed between the public purse and private interests. In his presentation, Anthony Cox, OECD, discussed the distributional issues brought about by the transfer of wealth from public to private interests. Drawing on OECD experience, Cox noted that resources are usually given free to fishers, with the allocation in most cases based on historical catches. This grandfathering rule generates windfall gains, which are usually not taxed or recouped – Iceland is the only country operating an ITQ system that has set up an explicit resource tax, where the resource rent is taxed to some extent. Because rights based systems alter existing patterns of costs and benefits, there are heightened incentives for those with vested interests to engage in lobbying, court-actions and other forms of rent-seeking behaviour to alter the outcomes.

When quotas are allocated, some are generally set aside for recreational fishers and indigenous groups and community quotas are also quite common. The OECD experience is mixed with respect to the distribution of quotas between harvesters and processors, but in cases where there is less vertical integration it is important to allocate quotas to both harvesters and processors.

Methods for allocation of fishing rights

Although grandfathering is the most common way to allocate rights in fisheries there are other allocation mechanisms, such as political allocation, uniform allocation and auctions. In his presentation, Gary Libecap, University of California at Santa Barbara, compared these methods, noting that grandfathering is not restricted to fisheries or other natural resources; patents that run for a limited time are just one way of allowing the parties involved to capture the rents from their endeavour. First possession rewards agents for

search and innovation, but because of the criticism concerning the distribution of rents, it has been suggested that some of the rents – at least – should be taxed away. However, taxation may reduce investment in stocks, research and development, exploration of new markets, evolution of new products, while also raising the costs of funds and raise the cost of capital. Consequently, growth in the industry may be hampered and drive factors – capital and labour – into other branches of economic activity where their

use will be of less value to society than potentially in the fisheries. Overall, economic efficiency of the economy will thus suffer. Auctions have a similar effect as taxes on the industry and on efficiency, but the effect of the auction will furthermore depend on the type of auction. Multiple auctions are most damaging, but second-price auctions, where the winner pays the second-highest price, can also have a dampening effect if the bidders are competitive.

2) In a fishery with little or no resource rent there can be no debate on how the resource rent should be distributed as there is none to distribute. However, through time, as the rent begins to accumulate and grow, the matter of rent distribution between rights-holders, other stakeholders, and the state, will become more important.



ITQ and other marine management issues

The implementation of ITQs increases incentives for self-management in the fishery, where stakeholders themselves take over the duties of managing the stocks. In addition, it may be easier to accommodate the conflicting views of the many users of the marine resources. These users may for instance include commercial and recreational fisheries, conservationists, tourists, ocean mining and coastal zone development. In his paper, Ragnar Arnason, University of Iceland, developed the idea that the fishing industry itself would be able to set the total allowable catch (TAC) for each species, and other management rules, enforce these rules and do the necessary biological and economic research needed for sound management. The industry would in all likelihood manage the fisheries more efficiently than the government because of more appropriate incentives, better access to information and shorter lines of communication. Arnason also demonstrated how the inclusion of both commercial and recreational fisheries in an ITQ system would lead to an efficient allocation of quota to both groups, as well as facilitating negotiations between fishers and other users of the marine resources.

Challenges and experiences with RBM worldwide

New Zealand

Stan Crothers, former senior executive of the New Zealand Ministry of Fisheries now an independent fisheries advisor, discussed the New Zealand management system. All significant fisheries in New Zealand are now managed by the quota management system (QMS). Crothers focused especially on the system's success factors, which could not have been achieved without a supportive government. The authorities spent a long time with fishers and stakeholders to design and build support. Before each fishery was integrated into the QMS participants in the fishery were polled on their views to the quota management system. Not one fishery went into the system without first getting 85% support. However, building legitimacy and support does not stop with implementation; it is really important that rights holders and bureaucrats continually work at building and maintaining that societal support. Otherwise, the system will come under all sorts of pressure. Robust legal frameworks and sound institutions are also imperative. On the management side, principles, objectives and standards must be stated clearly, and rights allocated in a well specified and efficient manner. In New Zealand, quotas were primarily allocated based on catch history. The government did consider auctioning the rights, but the socioeconomic dislocation costs were considered to be too high. Governance and management roles and responsibilities must be clearly defined. It is also necessary to continually invest in fisheries governance and management services, such as research, enforcement, monitoring and legal administration. Rules must be strictly enforced, especially in the first 5–10 years, to ensure integrity of the system. The management scheme must



be flexible enough to be able to adapt to changing environment and social and economic conditions. Crothers emphasised that it takes time and resources to develop and transit into a successful RBM management system.

EU

The aim of the Common Fisheries Policy (CFP) is to ensure exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions. However, Poul Degnol, DG Maritime Affairs and Fisheries, drew attention to the fact that these objectives are not focused and prioritised, and give no guidance for decision making and accountability. In particular, the ecological sustainability of the fisheries has been compromised in order to cushion short-term economic and social effects of reductions, which in turn have further undermined the economic and social sustainability. Long term ecological sustainability should be the basic premise for the economic and social future of European fisheries, and decision making should accordingly be focused on long-term objectives principles.

Degnol introduced the term results based management, stating that it was



necessary to set up a system that enables the industry to adapt as much as possible instead of harnessing it in very restrictive regulation. The micromanagement of the CFP should be abandoned, and it left up to the industry instead to develop solutions which meet outcome requirements, and are practical economically. This view was echoed by Niels Vestergaard, University of Southern Denmark, who showed that micro based regulation could lead to a series of unintended derived effects, such as discards, illegal landings, low use of vessel and crew and poor quality of landings. Poor economic performance and lacks sustainable ability of adjustment, then kept the sector in a trap, where short-run decisions were taken by both fishers and the authorities. A solid management system should therefore focus on the management framework.

Degnol does not believe that rights based management is an EU policy issue. There is a fundamental difference between the EU and non-member countries, in that the latter have complete sovereign jurisdiction over most of their stocks. On the other hand, how individual member state chose to distribute the quota assigned to them within the CFP is a member state issue, and individual countries can of course chose to establish rights based regime.

Sweden

Some countries, such as Denmark and the Netherlands, have indeed implemented ITQs in some of their fisheries, and in 2009 Sweden introduced a quota system into the pelagic fisheries. Quotas are allocated based on catches in 1998–2004 and are valid for 10 years. Hakan Eggert, University of Gothenburg, discussed

why rights based management had not been a real option earlier and mentioned three primary reasons. First, the Swedish Fisher's Organisation has for a long time been very much against the use of individual quota systems in fisheries. In recent years, the views of the organisation have changed and the organisation was instrumental in the rapid introduction of the management scheme in the pelagic fisheries. Second, the political system has been against introducing quotas. Finally, Swedish environmental non-governmental organisations (NGOs) have been reluctant to see the potential of ITQs for quota conservation, biodiversity or other goals. The Swedish EU membership has facilitated the influence of these NGOs on marine policy.

Norway

Introduction of an ITQ system has also met considerable resistance in Norway, but Rognvaldur Hannesson, The Norwegian School of Economics and Business Administration, maintained that the cur-

rent Norwegian quota management system does have unmistakable elements of ITQ. The slow evolution of transferability in the Norwegian system is mainly the results of ideological opposition and opposition to structural changes; falling number of fishers, changes in location of the fishing industry, and changed composition of the fishing fleet. However, policy makers have gradually come to realise that ITQs are an effective vehicle to reduce overcapacity at the industry's own expense. Over time, the restrictions on quota trade have been relaxed and extended to more and more vessel groups, and this trend is expected to continue.

The Faroe Islands

The Faroe Islands depend more on fisheries than most other countries and have therefore a great incentive to engage in sound fisheries management. Hjalti i Jakupsstovu of the Faroe Marine Research Institute, is though not of the opinion that the current management scheme

has yielded good economic results. Most of the fisheries in Faroese waters are subject to an effort system which many people believe lead to less illegal fishing, underreporting and discarding. Since vessels can land everything that is caught in a legal area, fisheries statistics are good. In addition, in an effort system fisheries adapt almost instantaneously to changes in stocks size. However, these fluctuations also make the fishery unstable. The economic performance of the effort-based fisheries have also been much worse than of the pelagic fleet and factory trawlers, both of which are managed through bilateral agreements with other nations and quotas. The effort system has also lead to much lobbying, both because the views of the fishers on the conditions of the stocks usually differ from that of the scientists, and because technological improvements have increased fishing capacity of the vessels, leading scientists to recommend a reduction in the number of fishing days per year.





Rent drain³⁾

Ola Flaaten, The Norwegian College of Fishery Science, presented in his talk the imaginary case of Codland, and demonstrated how rent drain from fishing communities and countries could occur despite significant resource rent creation. Flaaten argued that if distributional and equity objectives does matter, other instruments than ITQs could be used. These include conditional tradable fish quotas and vessel licenses, resource taxes, co-management, public ownership, auctions, leases, time limited rights, time and area regulation, TURFs and marine protected areas (MPAs).

The danger of concentration of quota had also been mentioned by Anthony Cox, OECD, in his paper. The concentration could lead to monopoly power and the ability to influence prices, TACs and regulations, as well decline of the small-scale sector and serious impact on fishing dependent communities. Consequently, most OECD countries with rights based systems had placed limits on the holdings of quota.

RBM and small scale fisheries

Rolf Willmann, FAO, discussed why small-scale fisheries require special considera-



tion in the fish rights debate, and how more effective management of these fisheries could be brought about. In many cases, the small-scale fisheries are directly contributing to attaining the twin and inter-related goals of eradication of poverty and achieving food security for all. This holds especially true in the less developed countries. If a country wishes to consider a management approach that is tailored to the needs of the small-scale fishery, it must take a focused strategy to achieve this. The approach taken will depend on many factors, including the geographic, socio-economic and political systems in the country.,

Kevin Fram, Fisheries and Oceans Canada, addressed the challenges and benefits of integrating aboriginal rights into Canada's commercial fisheries. The "Constitution Act" of 1982 recognized "existing aboriginal and treaty rights of aboriginal people" and two subsequent Supreme Court decisions affirmed Canadian aboriginal right to fish for "food, social and ceremonial purposes" and establish commercial fishing rights for Atlantic First Nations to "earn a moderate livelihood". Following this steps have been taken to integrate First Nationals commercial fishing participation into established fisheries.

The way forward

Following the presentations, Gordon Munro, Poul Degnbol and Stan Crothers were joined by Johann Sigurjonsson of the Icelandic Marine Research Institute and Grimur Valdimarsson, FAO, in a panel discussion. The session was moderated by Carl-Christian Schmidt, OECD. The panel members discussed how the socio-political system and traditions influence our thinking with respect to rights based management. The tool box – the economics of rights based systems – is well known, but policy makers are faced with a struggle

regarding the implementation and dealing with stakeholders. It is important for policy makers to involve the industry when initial quota allocations take place and special attention must be given to distributional issues. The management system must be continuously improved and care taken to build and maintain system legitimacy, accountability and support. It is essential that governments contemplating a rights based system develop a road map to help with the implementation and transition into the new system.

3) Rent drain refers to the situation where poor management policies lead to rent dissipation in a fishery.



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