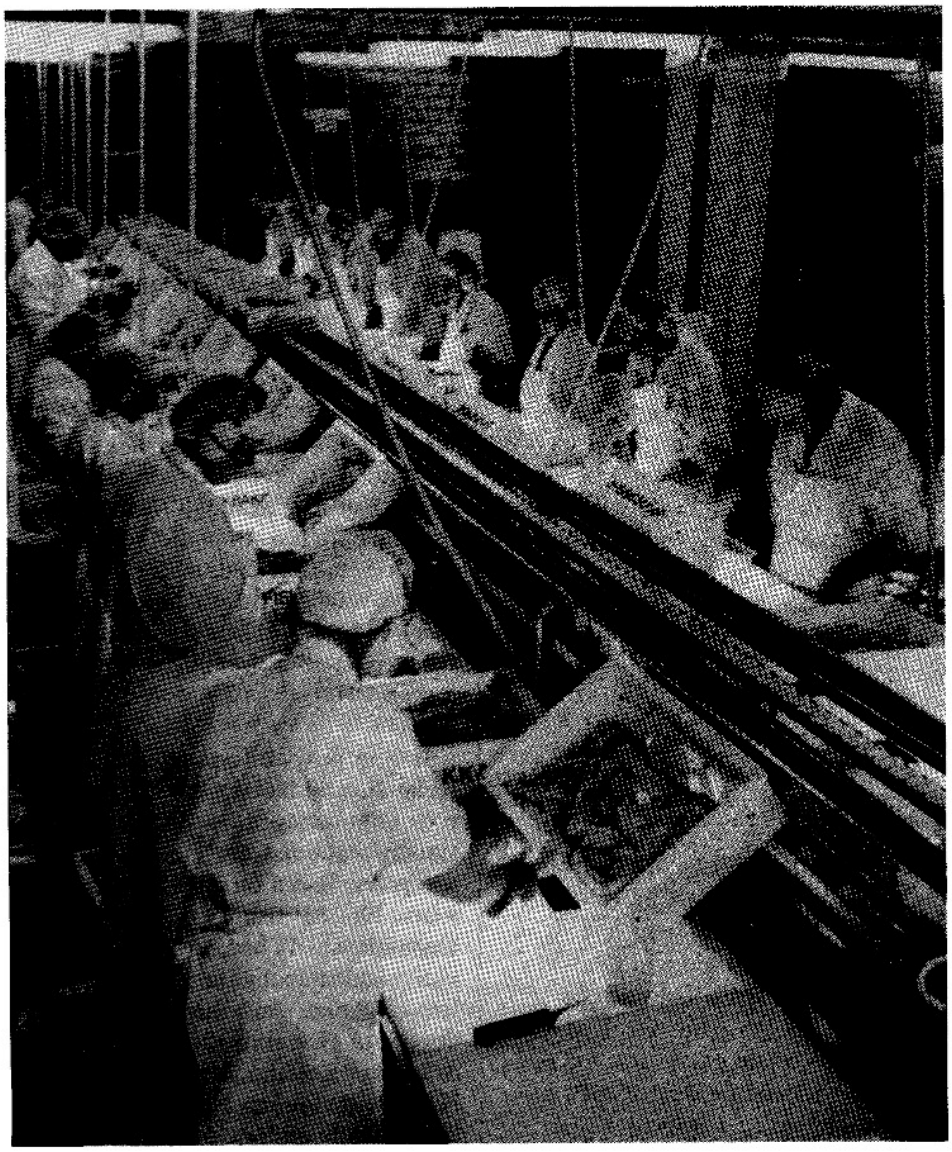
Iceland on the outskirts of Europe: The common property resource problem

by Thorvaldur Gylfason

Fisheries are an important part of the EEA negotiations. This article describes the situation in Iceland and Norway, where quota systems have been introduced. In Iceland the quotas can be traded domestically. Is there a possibility of free trade in fishing permits? The writer analyses this sensitive question.



As the internal market of the EC approaches completion before the end of 1992 and the Community prepares for further expansion, possibly to incorporate some or all of the EFTA membership, it is important that economists and policy makers direct their attention to the substantial macroeconomic and social gains that can be reaped through microeconomic reforms of existing structures and institutions as well as through judicious monetary, financial, and fiscal management.

Free trade in fishing permits

Owing to their uneven regional distribution and impact, fishing and fish processing are actually more important to the economies of Iceland and Norway than their gradually declining share in exports, gross domestic product (GDP), and manpower might indicate, but their importance should nevertheless not be overestimated. Fisheries are the mainstay of many communities along the coasts of both countries. In Iceland, fish products presently comprise roughly one half of total export earnings and about one sixth of GDP – and a bit more if related industries such as shipbuilding and fishing gear manufacturing are taken into account. By comparison, fish products account for about 5 percent of Norwegian exports of goods and services and about 2 percent of GDP. About 13 percent of the Icelandic labor force are employed in the fishing industry, while 2 percent of the Norwegian work force are similarly employed. However, fisheries economists have argued convincingly

Thorvaldur Gylfason is an economist at the University of Iceland, the Institute for International Economic Studies, Stockholm University and the Centre for Economic Policy Research (CEPR), London.

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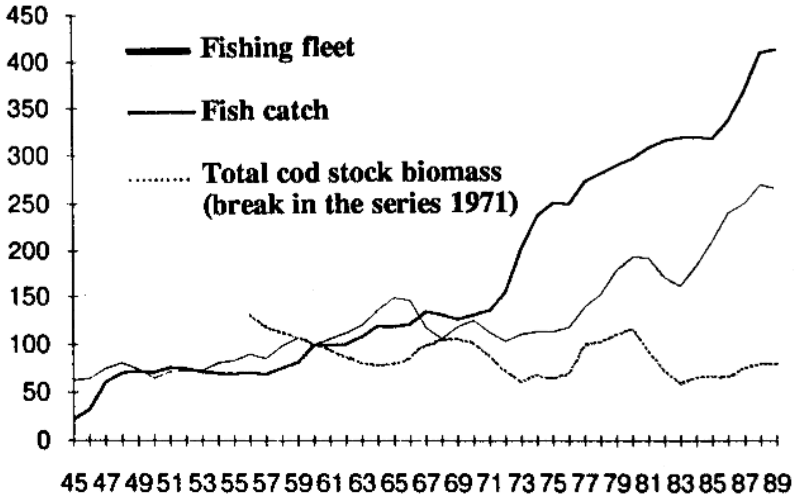
that the fishing fleet and hence also the number of fishermen in Iceland could be reduced by up to 40% or more, and in Norway by up to two-thirds, without reducting output (see Árnason 1984 and Hannesson 1990).

There is a simple reason for this state of affairs. In both countries, overfishing has been a serious concern for many years, a problem inherent in the uncontrolled exploitation of common property resources everywhere. In Iceland, for example, while the value of the fish catch has increased a bit more than fourfold in real terms since the mid-1940s, the fishing fleet has been expanded by a factor of seventeen at constant prices (see Figure 1). This implies that the average real value of the catch per unit of capital has shrunk by three-fourths during this period. The financial consequences of this massive overinvestment in the fishing fleet are especially acute in times of high oil prices in world markets because the fleet accounts for about one half of the country's total oil use. Meanwhile, fish stocks around the country appear to have declined by about a third to one half, mainly because of overfishing. The once bountiful Atlanto-Scandinavian herring, for example, has virtually disappeared from Icelandic waters. Some other species are endangered. Fish stocks within the jurisdiction of other North Atlantic nations have declined even more, and some have vanished, perhaps because among those nations less is at stake from a macroeconomic point of view.

This depletion of fish stocks around Iceland imposes a heavy burden on the human population in terms of foregone future income – a burden which, incidentally, is not reflected in national income accounts because, according to current international practice, they make no allowance for the depletion of natural resources, including environmental pollution. This, together with the gradual accumulation of foreign debt which amounts now to more than one half

Figure 1

Iceland: fishing fleet and fish catch at constant prices and total cod stock biomass in tons 1945-1989 (1960=100)



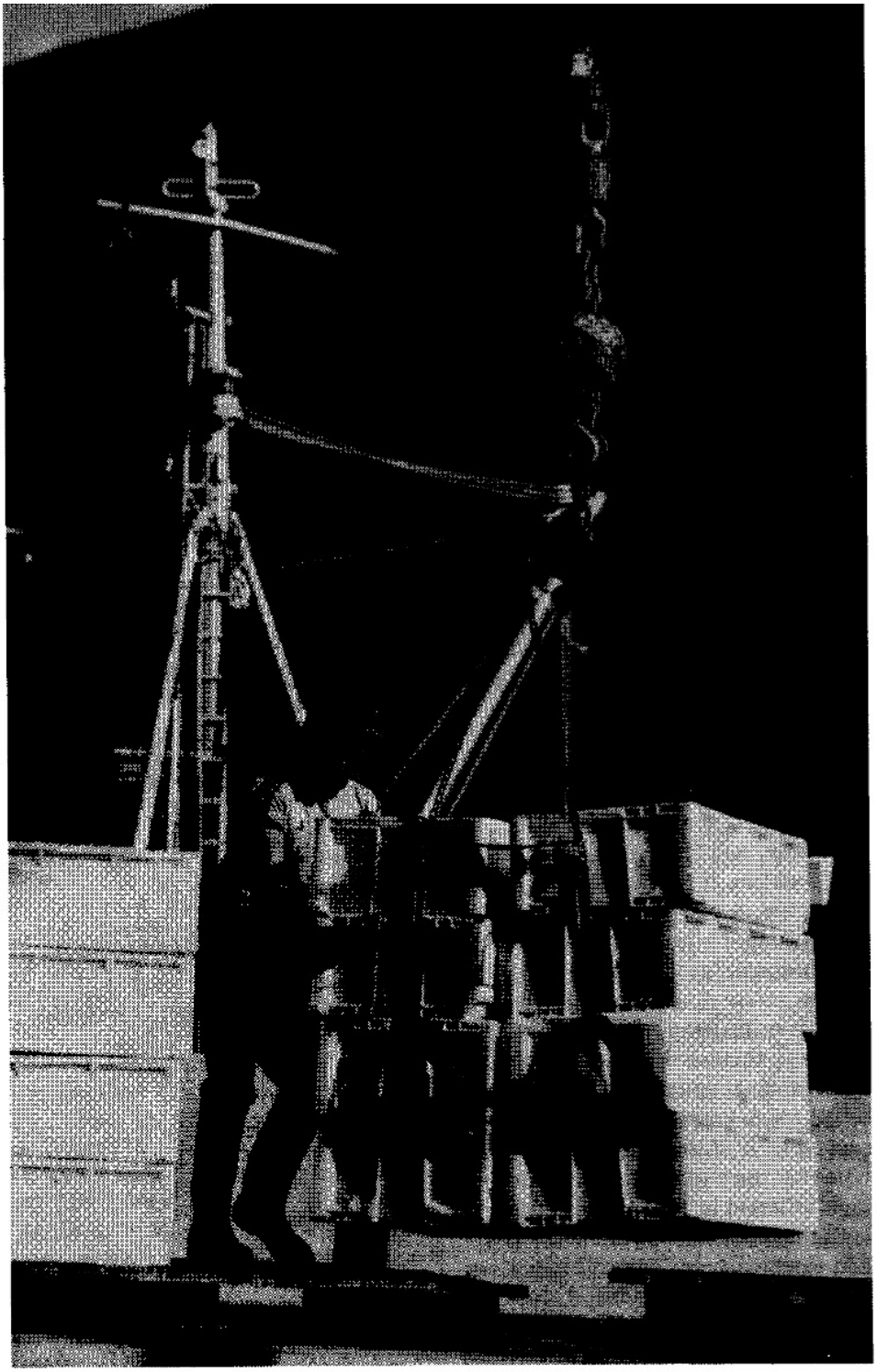
Source: National Economic Institute and Marine Research Institute, Reykjavik.

of annual GDP, implies that the fairly impressive growth record of the Icelandic economy showing that GDP per capita has grown by almost 3 percent per year on average since 1945 is exaggerated in official statistics. The same applies, on a smaller scale, to Norway. Presently, however, the treatment of natural resources in national income accounts is under review at the United Nations.

Icelandic fisheries economists and natural scientists have demonstrated beyond reasonable doubt that the current fish catch could be drawn from the sea by a fishing fleet up to 40 percent smaller than at present (see Árnason 1984 and Helgason and Ólafsson 1988). The cost reduction and the resulting efficiency gains involved are estimated to create conditions for raising gross national product (GNP) permanently by up to 4 percent a year. This amount is equivalent to almost 4,000 US dollars per year for each family of four in Iceland. The present value of the gains to be made from reducing the fleet and the commitment of other resources to the fishing industry is accordingly estimated at about 40 percent of current annual GNP at least, assuming a discount rate of 10 percent. A similar story can be told about Norway, although there the numbers are less dramatic: reducing the fleet and the commitment of other resources to the fishing industry in Norway by two-thirds would raise Norwegian GNP by roughly 1 percent a year.

For purposes of conservation, Icelandic and Norwegian fisheries are presently managed through a quota system which has been in force for a few years. Based on catches in earlier years, 1981-83, fishing permits in Icelandic waters have been allocated to individual ships by the government free of charge since the inception of the quota system in 1984. In Iceland, as in New Zealand, but not yet in Norway, the quotas can be traded domestically under close government supervision and subject to various restrictions that have been gradually relaxed. The Icelandic market for quotas has developed slowly, however, with correspondingly limited efficiency gains in the fishing industry thus far.

FISHERIES

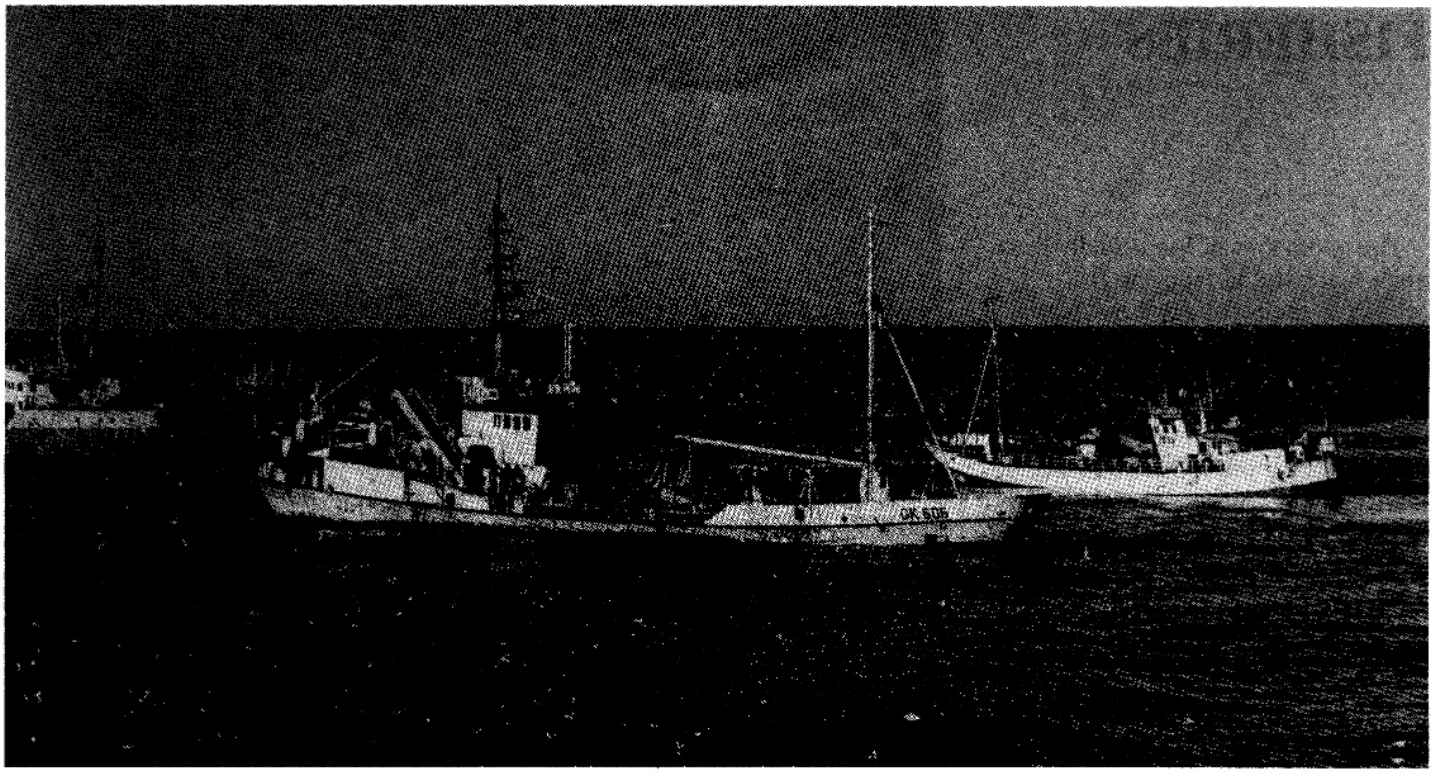


The quota system has actually been quite successful in reducing fish catches to the permissible maximum determined by the government exclusively on biological and political grounds. On the other hand, the system has not been primarily intended to enhance the economic efficiency of the fishing industry – at least not until the system was revamped in early 1990 by extending the duration of fishing permits and by relaxing restrictions on the transferability of quotas, *inter alia*. Until then, the legal and institutional framework of the quota system provided insufficient incentives for efficient fishing firms to buy quotas from inefficient firms, as required for substantial rationalization in the industry. Indeed, the Icelandic fishing fleet continued to expand: since the quota system was introduced in 1984, the fleet has grown by 30 percent (see Figure 1). Yet, scientists had issued warnings as early as 1975 that the capacity of the fleet already exceeded the maximum sustainable catch

This is the main reason why economists in both Iceland and Norway (as well as in Scotland, Newfoundland, and elsewhere) have proposed that the quotas or other forms of long-term fishing permits be sold off in auction markets ex ante or taxed ex post rather than given away for free, and traded freely thereafter. Such an arrangement has been tried out in New Zealand, for example, and in the Falkland Islands in recent years with good results.

In both Iceland and Norway, however, the official sale or taxation of fully transferable fishing permits has been vehemently opposed by representatives of the fishing industry as well as by rural interests in general, despite the substantial macroeconomic gains to be derived from such a change. Their opposition is understandable: they do not like the idea of fishing firms being charged for rights that many of them have hitherto been granted for free. Nevertheless, the potential macroeconomic benefits from changing the system are such that it should not be difficult to work out a reasonable scheme for compensating fishermen for their relocation expenses and other losses. Also, the theory of tax incidence suggests that the burden of the tax would be shared by others (see Heaps and Helliwell 1985). Moreover, potential entrants into the fishing industry are beginning to realize that they now have to pay their competitors in the industry large sums of money for quotas that the latter have received from the government free of charge. This realization is bound to result in a serious conflict of interest between insiders and outsiders in the fishing industry.

There are other important arguments for selling or taxing quotas rather than giving them away besides the economic efficiency argument outlined above. One is the public finance argument. The persistent inflation problem in Iceland over the last 20 years has been caused, to a considerable extent, by deficits in the consolidated public sector and their financial consequences. The government would be in a much better position to eliminate or at least reduce these deficits and the attendant monetary



expansion, and hence also the inflation problem, if it sold or taxed fishing quotas; it plays no substantial role in this context whether this would be done through the government budget or not. Alternatively, the proceeds of the sale or taxation of quotas would suffice to finance the abolition of both personal and corporate income taxes, which amount to about 4 percent of GNP. Also, it is interesting to note that the period of high double-digit inflation in Iceland coincides with the divergence of the fleet curve and catch curve in Figure 1, indicating that the government-induced investment boom in the fishing sector in the first half of the 1970s may have ignited or at least aggravated the inflation problem that has usually been ascribed to lax financial and fiscal policies as well as to the quadrupling of oil prices in world markets during 1973-74 and a subsequent wage explosion in 1977.

And then, of course, there is the question of social justice which is outside the purview of purely economic analysis: does a government have an unqualified right to discriminate among citizens by giving a relatively small group of individuals free and marketable access to a valuable natural resource which is, by law, the common property of a nation?

II Access to markets versus resources

There is yet another important reason for selling or taxing fishing permits rather than giving them away, which is why this issue is brought up on this occasion. Selling permits in one way or another could possibly remove the main obstacle on the road to Icelandic membership of the EC. The rules and regulations of the EC require that all members have equal access to each others' markets, not resources. French firms were, of course, never granted the right by the EC to dig coal from German ground free of charge, but only to purchase and operate coal mines in Germany on par with German enterprises, and vice versa. This was the fundamental insight of Jean Monnet, and it was the basis of the distinction that was at the heart of the establishment of the Coal and Steel Community, the immediate predecessor of the EC. As intended, this simple idea has been an important cornerstone of peace, freedom, and prosperity in Western Europe since the Second World War.

It is important to realize that the same argument applies to other natural resources, including fish. If permits to fish in Icelandic and Norwegian waters were traded freely in open and unobstructed markets, the membership of Iceland and Norway in the EC would grant other member countries the right to compete in those markets. Provided satisfactory safeguards against unfair trading practices (including producer subsidies and deficiency payments to inefficient fishing industries intended to grant them an unfair competitive advantage), presumably only mutually beneficial exchanges would be carried out. Specifically, if a foreign fishing firm could offer a higher price for Icelandic fishing permits than domestic firms could in a fair and free market, then it could be beneficial for Iceland to sell to the foreign firm provided that the benefit-cost calculation properly reflected the external effects of the transaction on other industries (fish processing, for example) as well as on regional balance and national culture. Fishing, like farming, is an integral part of the cultural heritage of the Icelandic people.

What is primarily at issue here is simply the exploitation of comparative advantage and increased competition in international trade under conditions where the distributional consequences of the outcome are especially sensitive politically for cultural and geographical reasons. The case for free trade in fishing permits in Icelandic waters or elsewhere is essentially analogous to the case for free trade in agricultural products world-wide – and it is also fraught with similar difficulties involving externalities and deep-felt emotions.

Aggregate productivity of labor and capital in the Icelandic fishing industry (i.e., catch per fisherman or per unit of effort at sea or per unit of capital) has consistently been much higher than elsewhere in Europe over the years--with the possible exception of Spain in recent years. The same applies, though to a lesser extent, to the Norwegian fishing industry which is also quite efficient by international standards. For example, while the volume of the Icelandic fish catch was about one fourth of the total catch of the EC in 1987, the tonnage of the Icelandic fleet was only about 4 percent of the tonnage of the EC fleet. This implies that the catch/fleet ratio in Iceland was about six times as high as in the EC as a whole. For comparison, the catch/fleet ratio in Iceland is presently more than two times as high as in Norway. Moreover, the catch per fisherman per year in Iceland exceeds that of Norway by a factor of three. To some extent, the superior productivity of the Icelandic fishing industry can be traced to the high density of fish around Iceland, but the local fishermens' knowledge of and proximity to their own fishing grounds has almost surely been a contributing factor as well. Like agriculture, fishing is heavily subsidized in the EC and in Norway, but not in Iceland. For this reason, and also because of extensive overfishing in EC waters in recent years (the North Sea, for example), it seems clear that the common fisheries policy of the EC needs an overhaul to promote efficiency and preserve fish stocks, independently of whether Iceland and Norway apply for EC membership in the near future or not.

In view of the comparative advantage of the Icelandic fishing industry, it does not seem likely that other member countries of the EC would be able to compete successfully in a free market for fishing permits in Iceland if the market were opened to foreign competition, provided that satisfactory side measures were taken to ensure fair trade in full recognition of the Icelandic economy's unique dependence on fishing. Consequently, the exploitation of Iceland's limited fish resources would most likely remain primarily in Icelandic hands despite EC membership, as is so strongly desired by the Icelanders, and so the main current hindrance on their way to membership could be removed without cost. The same seems to apply to Norway.

The Icelandic government has repeatedly asserted that free access of foreign fleets to Icelandic fisheries inside the 200-mile exclusive economic zone in exchange for free access of Icelandic fish products to the EC market is out of the question. However, this position should not be construed as necessarily precluding the possibility of selling foreign vessels temporary access to Icelandic fisheries in some way as part of an agreement in connection with Iceland's entry into the Community as a full member some time in the future or as part of a trade arrangement with the Community with comprehensive reciprocal rights and obligations.

In this context, it is interesting to note that public opinion surveys conducted by the Social Science Institute at the University of Iceland indicate

that a majority of the electorate is in favor of Icelandic membership in the EC. Specifically, 60 percent of those who have made up their minds favor membership, and more than 80 percent favor membership provided that other Nordic countries become members (see Kristinsson 1990). When asked about their attitudes to the four freedoms, 78-80 percent of those who have made up their minds favor freer trade in goods and services and 62-64 percent favor increased mobility of capital and labor between Iceland and other countries in Western Europe. The internal consistency of the answers is quite striking.

Why do the political parties disagree so strongly with the public on the issue of potential Icelandic membership in the EC? The main reason seems to be that most or all of the political parties have traditionally been more responsive to the wishes of producers, especially in the fishing industry and in agriculture which employ less than 20 percent of the labor force combined, than to those of consumers. The producer associations are well organized and vocal pressure groups, and they wield considerable influence in politics. The interests of consumers, on the other hand, are scattered and, therefore, tend to be neglected in the political process. This problem is exacerbated by an electoral system which guarantees rural constituencies, where fishing and agriculture are more important than in the country at large, widely disproportional representation in Parliament.

The relative strength of producer organizations is not, of course, a problem that is specific to Iceland; Japan is another extreme case. However, the overbearing influence of producer organizations on government policy is somewhat puzzling in societies where trade unions have generally had the upper hand in wage negotiations with employer associations over the years, as has been the case in Iceland.

References

Arnason, Ragnar (1984),*Efficient harvesting of fish stocks: The case of the Icelandic demersal fisheries*, unpublished Ph.D. dissertation (University of British Columbia).

Baldwin, Richard (1989), "The growth effects of 1992", *Economic Policy* 9 October, pp. 247-270.

Baumol, William J., and Wallace E. Oates (1989), *The theory of environmental policy*, 2nd ed., Prentice Hall, Englewood Cliffs.

Cecchini Report (1988), *The European Challenge 1992*, Gower Publishing Company.

Hannesson, Rögnvaldur (1990), "En samfunnsökonomisk lönnsom fiskerinæring. Struktur, gevinst, forvaltning", Administrasjons- og arbeidsdepartementet, Oslo.

Heaps, Terry, and John F. Helliwell (1985), "The taxation of natural resources," *Handbook of Public Economics*, vol. 1, edited by Alan J. Auerbach and Martin Feldstein, North-Holland, pp. 421-472.

Helgason, Thorkell, and Snjólfur Ólafsson (1988), "An Icelandic fisheries model", *European Journal of Operational Research 33*, pp. 191-199.

Kristinsson, Gunnar H. (1990), *The adjustment of Iceland to the development of the European Community* (in Icelandic), The Icelandic Commission on Security and International Affairs, Reykjavík.

Krugman, Paul (1988), *EFTA and 1992*, Occasional Paper No. 23, European Free Trade Association, Geneva, June.

(Photos Mats Wibe Lund)

Highlights of the Ministerial meeting between the EC, its Member States and the countries of EFTA, 13 May 1991.

1. Liechtenstein's delegation in an intense discussion in the EFTA Brussels office. From left Ambassador Benno Beck, Head of the Office for Public Economy, Hans Brunhart, Head of Government, Liechtenstein's chief negotiator, Prince Nikolaus von Liechtenstein, and Andrea Willi, Office for Foreign Affairs.

2. EFTA's Austrian presidency talks to the Secretary-General. From left Minister Gregor Woschnagg, Austrian foreign ministry, Austria's Minister for Economic Affairs, Wolfgang Schüssel, chairman of the EFTA Council at ministerial level, Ambassador Manfred Scheich, EFTA's and Austria's chief negotiator, and EFTA's Secretary-General Georg Reisch.

3. A press conference was held in the middle of the night. From left Georg Reisch, Wolfgang Schüssel, Luxemburg's Foreign Minister Jacques Poos, chairman of the EC Council of ministers, and Frans Andriessen, Vice-President of the EC Commission.

4. The EC and EFTA ministers met at a late working dinner in the building of the EC Council of ministers.

5. Journalists from the EFTA countries interviewed "their" respective ministers. Sweden's Anita Gradin answers questions after the long meeting. *(Photos Josef Jany, Brussels)*