



Serial No. 2769  
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ANNUAL MEETING - JUNE 1972

OECD Symposium: Economic aspects of fish production,  
Paris, 29 November-3 December 1971

The Symposium was attended by 150 representatives from Europe, North America and Japan, with observers from various international organizations. The contributions (Appendix I) were discussed in full sessions arranged broadly on topics viz

- i) the Law of the Sea and international problems of resource management
- ii) resource assessments and forecasting
- iii) methods of resource management and the regulation of production
- iv) aquiculture
- v) the structure and economics of fishing enterprises.

Contributions under the first two categories reviewed the existing legal, biological and management status of world fisheries, from the situation of smaller localized resources through the mixed fishery complex such as that existing in the ICNAF Area to the global regulatory problems presented by the oceanic tuna fisheries and the important interests of developing nations. These discussions provided a background for economists and representatives who may not have been fully aware of the body of knowledge that exists, and indicated the likely direction of change over the next few years. The degree of international integration which has already been achieved in this field was in sharp contrast to the essentially national base of the majority of economic contributions. Even so, these contributions exposed the complexity of the implications and ramifications of management measures, whether they be the social implications of regulating catches or the actual consequences of various forms of industrial support policies. It also exposed the actual or apparent scarcity of information and hence emphasized the need for increased research in this field.

It was suggested that close international integration of research from various disciplines in addition to biology could provide a broader base for decision making both at Government and industrial level.

Attached as Appendix II is a copy of the Résumé of the Symposium Discussions prepared and distributed by OECD after the Symposium.

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Appendix I

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List of Papers

- ADAM, P. Practical problems of policy formulation in fisheries
- ASADA, Y. Trends of management and investment in Japan's tuna longline fishery
- BAKKEN, E., and DRAGESUND, O. Fluctuations of pelagic fish stocks in the Northeast Atlantic and their technological and economic effects on the fisheries
- BELL, F.W., et al. The impact of world demand upon living marine resources
- CHRISTENSEN, J. Møller Parameters used for the measurement of fishing effort
- CHRISTY, F.T. Jr Fisheries management and the Law of the Sea
- CLEARY, D.P. Assistance programs in fully capitalized or overcapitalized fisheries
- CRUTCHFIELD, J.A. Simulation programmes for selected fisheries
- DICKIE, L.M. On relations between fishing and long-term yield
- FARSTAD, N. Towns versus outports: some structural problems in the fisheries industry of North Norway
- GARROD, D.J., and POPE, J.G. The assessment of complex fishery resources
- GATES, J.M. Appraising the feasibility of fish culture
- GENSCHOW, J. Concerted management of a fishing fleet
- GERHARDBSEN, Prof. G.M. The need for clarification of concepts used when comparing the fisheries industries of different countries
- GULLAND, J.A. Some thoughts on a global approach to tuna management
- HANSEN, Dr T. An analysis of the factors determining the economic yield of the winter capelin fishery by means of a mathematical model
- HILDEBRANDT, A.G.U. A case study: an investigation into the financial problems of small fishery firms
- HOVART, P., and MICHELSON, K. Investment, labour and costs in Belgian fisheries
- HUQ, A.M. Socio-economic factors to be considered in implementing limited entry: a case study, the northern lobster fishery
- INSTITUTE OF FISHERIES ECONOMICS, BERGEN Norwegian pondfish farming
- INSULL, A.D., and CORMACK, K. Forecasting landings of demersal fish by British vessels in Great Britain

- JOHANSEN, T. Investment in fishing ports as a regional development factor
- JOSEPH, J. An overview of the tuna fisheries of the world
- JUSTE, E. Collating catch statistics in France
- LAGARDE, R.A. International fishery control methods
- LELIEVRE, D. Cod in the Barents Sea
- LINDQUIST, Dr Armin The sprat - fluctuating stocks of limited distribution
- LUNA, J. Financial assistance for fishery development projects in Latin America
- MOAL, R.A. International cooperation on tropical tuna fishing
- PAGE, J.P. CNEXO programme relating to fish farming
- PARRES, A. A method of calculating "adjusted profitability" for sea fisheries seen as a public food-producing service
- PARRISH, B.B., et al. Some notes on regulatory measures controlling fishing mortality rate
- PEARSE, P.H. Rationalization of Canada's West Coast salmon fishery: an economic evaluation
- PICKLES, L.M. An economic analysis of the United Kingdom Humber distant water cod price
- RANGO, J. de Application of the method of rationalizing budget choices to conversion of the distant water fishing fleet
- ROTHSCHILD, B.J. An exposition on the definition of fishing effort
- SOKOLOSKI, A.A. Discussions and research on ocean fishery management: a summary of US workshop
- SOKOLOSKI, A.A., and CRUTCHFIELD, J.A. The domain of population dynamics and production economics in fisheries management research
- SUDA, A. Possible problems involved in the regulation of tuna longline fishery
- YAMAMOTO, T. Raising young yellowtail in Japan



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Appendix II

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Résumé of the discussions

Session 1: General

1. It was recognized that the pending law of the sea issues will have a very important impact on fisheries. In spite of the urgency of the matter, it seems that the real interests of many fisheries are not always clearly presented. Surely better tools, especially from the statistical viewpoint, are necessary for assessment preliminary to the drafting of measures of the indispensable international fisheries management.

Sessions 2 and 3: Stock assessment and forecasting

2. A review of some case studies and methods showed that many research workers are aiming at a more interrelated understanding of the situation of different fisheries, i.e., supplementing basic biological facts with economic and even social factors. This can lead to very precise assessments and forecasts for individual stocks, or to less precise evaluations of the effects of fishing on several stocks on which the same fleets are operating. Also mentioned was the usefulness of even vague judgements on fisheries for which data are scarce. Furthermore, it was emphasized that the fish stocks which were underexploited 10 or 20 years ago had not been supplemented by any significant new discovery but had been drastically reduced due to a rapid and world-wide extension of exploitation leading to full or excessive exploitation of most of the world stocks.

3. It was underlined by different speakers that the wish to perfect existing tools or models and the desire to determine scientifically the complete causal mechanisms of the complex phenomena involved should not prevent immediate action being taken towards improving the present situation in world fisheries and, even more so, towards preventing the recurrence of well-known detrimental factors.

4. While more and more biological studies have, at one point or another, to introduce at least some explanation of an economic character, studies from an economic outlook have to utilize basic biological data. The interrelationship between demand, prices, and supply is certainly very complex, especially when trying to make forecasts, whether at the global and long-term level or in the short term for given products and markets. These difficulties render further studies all the more necessary.

5. Discussion covered other matters of common interest to economists and biologists and it was strongly recommended that to avoid misunderstandings, very precise wording should be used. For example, the expression "fishing effort" is used either in its loose meaning - any kind of assessment of the intensity of fishing activity - or with a scientific meaning - ratios of stock abundance arrived at through computations of comparable catch and effort series of data. Such remarks and others led to a suggestion that interdisciplinary studies could usefully be made by small groups of specialists from the various disciplines. In this respect, it was pointed out that such studies are undertaken by universities or national institutions but are difficult as they have to cover matters which are not purely national; no institution or body exists at present which has among its responsibilities the convening of such gatherings which could undertake projections and similar work at the international level.

Session 4: Regulating production

6. Papers in this session covered either management schemes and methods which exist for some fisheries or the problems that the introduction of management schemes would raise. Speakers stressed the numerous and varied side-effects which could arise from the economic and also, very important indeed, the sociological side. The needs of specific areas where fishing activities are located were also noted. Also examined was the usefulness of studying alternative management measures, e.g. through simulation techniques.

7. It was stressed that, although sophisticated and refined preliminary studies are essential, the decision to implement any management scheme remains entirely a policy decision to be taken at governmental level which, for obvious practical reasons, will often be subject to some kind of negotiations and bargaining.

#### Sessions 5 and 6: Tuna Panel

8. The papers for these sessions reflected the fact that the problems of tuna are by nature more completely international than those for other fisheries but that the requirements for data and methodology had a general similarity. At present, the main disturbing feature of tuna fisheries is the increasing fishing capacity drawing from resources which are not expected to be developed with the same rhythm, thus giving rise to fears for the future. This led to the recognition that in such cases, which are not specific to tunas, there rarely exist ways and means of regulating apparently prosperous fisheries with a view to avoiding detrimental developments, which are only expected sometime in the future. It was also mentioned, and not only with reference to tunas, that the existing international machinery is too often insufficient, either to study the basic data or, even less, to examine the possible needs for regulatory measures.

9. Discussion on tuna also touched on the situation which faces the industrialized countries, the industries of which want to keep or improve their position, as well as the developing countries with plans for development which require technical assistance. It is obvious that the fish resources are not sufficient to satisfy all those national aspirations and that the necessary political conciliation for fisheries as a whole could not be done satisfactorily without more attention being given to the international nature of fishery economics.

#### Session 7: Fish farming

10. The developments in fish farming being recent, and the basic technicalities often still on trial, the discussion of this topic was of an exploratory and sometimes descriptive nature. The feasibility, and the know-how of developing the production of marine protein through fish farming was fully demonstrated and it was shown how important this sector has already grown.

11. The meeting discussed at some length what contribution fish farming could make to the solution of nutritional problems in a number of countries. It was also stressed that in many areas pollution represented one of the most formidable obstacles to development in this promising sector of fish production.

#### Session 8: Fishing enterprises

12. Reports covered a broad range of subjects from structural problems in some countries and possible solutions to the management of a single fleet. Financial aids were discussed and emphasis placed on the frequently inadequate assessment of their economic impact.

13. Besides a number of other specific topics, such as the work of producer organizations, the role of public services, international cooperation between fishermen, etc., the meeting devoted some time to an actual method of managing wet fish trawler fleets.

#### Session 9: Costs, earnings and statistics

14. This session was mainly devoted to a number of case studies on costs and earnings undertaken in different countries. It was strongly underlined that these investigations, containing fundamental information for all in charge of the industry, are very important for the future assessments of the different sectors of the world fisheries. Different speakers stressed the need for more work in this field especially on an international level as the results of these studies could be used as guidance towards a more rational management of the resources.

#### Session 10: Summing up and conclusions

15. As this Symposium was of an exploratory nature and as the participants were speaking only in a personal capacity, there was no adoption of a report on the discussions nor were recommendations made. It is nevertheless worthwhile to record here some of the most important points which were stressed during the last session.

16. One of the points had been repeated by many speakers during the discussions and was brought up again at the closing session. It can be said to represent the consensus of opinion of most participants.

The present situation in international fisheries is not healthy and requires urgent action; if the basic knowledge is not always complete, it is quite sufficient to indicate the directions to be followed and the kind of management measures which should be discussed and implemented at the political level.

17. Other points of importance mentioned by different speakers were:

- The Symposium has stressed the interdisciplinary nature of the major problems involved and has shown that much of the research work underway was in line with the practical issues requiring solutions.
- When emphasis was laid on the necessity of combining in a better fashion the work of the biologists and of the economists, it was added that:
  - : a full coverage of the problems would not be possible without the cooperation of technologists, naval architects, etc.
  - : the social problems are not only those of the remote areas where no or few alternative activities exist, but should also, for example, take into account the difficulty of finding crew ready to accept the absences implied by the present far distant fisheries.
- The aid being presently given to fisheries by most, if not all, national authorities should not lead to the consideration of fisheries as some kind of a non-profitable general service, but to build up the necessary framework it needs from the international and the national standpoints, a framework inside which free competition between fishermen would keep alive the incentive responsible for the actual progress in fishery technology and results.
- Existing management schemes were recalled and the work done in this respect for many years was duly recognized, but some disappointment was also expressed on the very slow progress achieved internationally; it was stressed that the existing machinery for cooperative action could be better utilized and that the main obstacle was not so much a lack of data and expertise but the absence of a stronger will at the political level.
- The problems of the less developed countries, somewhat outside the direct OECD sphere, had not been covered in any detail, but a number of participants firmly stressed the responsibility of the industrialized countries towards those needing technical assistance and a share of the common fish resources.

Note by the Secretariat

18. It was said that the cooperation of economists, in spite of what was sometimes recommended from the economic side, did not need to be institutionalized as the cooperation of scientists has been. Certainly, the nature of economic work in fisheries is so much mixed with policy issues that it cannot lead towards scientific assessments. Conversely, the "scientific evidence" offered by the biologists is so often underutilized or even ignored, in spite of the official framework in which it is presented, that the usefulness of such institutionalization is not always evident. It seems, nevertheless, desirable to promote, for the policy-making level, a better understanding of these international economic issues which, if they can be presented in a sophisticated and even mathematical-economic language, are in fact no more than a basic knowledge of fisheries technology and their main economic consequences.

