



Half a century of decadal symposia by NAFO and ICES

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During the establishment of ICES, it was stated “that in all researches, whether hydrographical or biological . . . it be recognized as a primary object to estimate the quantity of fish available for the use of man, to record the variations in its amount from place to place and from time to time, to ascribe natural variations to their natural causes, and to determine whether or how far variations in the available stock are caused by the operation of man.” ICES addressed these obligations, among others, by publishing annual volumes of *Annales Biologiques*, a series terminated in 1987, and in 1988 replaced by symposia on decadal variability of hydrobiological conditions. A corresponding series was started by ICNAF (later NAFO) in 1964. A brief summary of these events is presented and a comparison made of the two series.

Keywords: decadal symposia, ICES, NAFO.

Background

There were many reasons for establishing ICES in 1902 (Went, 1972). Some of the principle reasons were expressed by the British delegate D’Arcy Thompson as follows:

That in all researches, whether hydrographical or biological . . . it be recognized as a primary object to estimate the quantity of fish available for the use of man, to record the variations in its amount from place to place and from time to time, to ascribe natural variations to their natural causes, and to determine whether or how far variations in the available stock are caused by the operation of man.

To me, these sound like reasons for decadal symposia more than 50 years before their existence! Key issues for achieving these objectives were observation, through nationally coordinated studies and joint expeditions, documentation of the outcomes in datasets and publications, and scientific analysis in order to understand the variations and causalities involved.

What was the strategy for tackling the problem at ICES?

I have not studied all the earlier decades, but since 1943 the solution was to publish annual volumes of *Annales Biologiques*, presenting summaries of hydrography, plankton, fish, and joint investigations. Introductory chapters were written by ICES staff and detailed papers on specific topics and areas by national experts. These volumes contain much of the detailed information on a single year but relatively little on a longer timespan. Some

brilliant exceptions can, however, be found. On the biological side, Continuous Plankton Recorder data were occasionally presented as time-series; on Icelandic waters, Svend Aage Malmberg considered temporal changes and on the Baltic Sea, Stig Fonselius was concerned with the temporal deterioration of the state of the sea. The publications also gave vivid descriptions of joint expeditions. The last publication of *Annales Biologiques* was No. 41 in 1986, describing the conditions in the year 1984. By that time, Malmberg had disappeared from the author list, Fonselius had become limited in comment, and descriptions of joint investigations had become more or less administrative reports.

It was clear that *Annales Biologiques* had lost its momentum. ICES also had financial problems, as Council finances could not support all of the expanding publication activities. In 1987, in Santander, the Council discussed the problem and decided to

- endorse the Consultative Committee’s conclusion concerning the demise of *Annales Biologiques* as an ICES publication;
- approve its proposal regarding the handling of *Annales*-type environmental material;
- accept the Committee’s proposal that a decision about the handling of the fish stock and fisheries material should be deferred until the following year’s Statutory Meeting.

A final decision on the establishment of a hydrographical and biological variability symposium in 1991 in Mariehamn was made at

the Statutory meeting in Bergen in 1988. The planning was done by a small Working Group led by the chair of the Hydrography Committee, Bob Dickson.

NAFO symposia

The tradition to hold decadal variability symposia was begun by the International Commission for the Northwest Atlantic Fisheries, ICNAF (ICNAF, 1965). The Commission noted in its meeting in 1961 a need to

- (i) establish a general programme of environmental studies;
- (ii) establish experimental and physiological investigations;
- (iii) prepare a programme for a symposium to discuss fisheries' environmental problems.

A well-planned meeting was held at the headquarters of FAO in Rome in 1964. The symposium was organized in nine sections, dealing with different aspects of fisheries and the environment. In all, 70 scientists participated and 90 papers were presented. Four review papers were presented. Gunter Dietrich presented one on new hydrographical knowledge of the northern Atlantic; just three years had passed since the International Geophysical Year (IGY), and he had much interesting information to convey. Then, E. H. Ahlstrom spoke about the environment and the Pacific sardine, V. E. Brock on the environment and tuna, and Basil B. Parrish on the environment and herring. Various issues, ranging from fishing operations to marine forecasting were debated. From a physical perspective, one can notice that the main emphasis was on temperature variations and their effects on fish and fisheries. Themes such as currents, fronts, ice conditions, and long-term variability were discussed, but with less emphasis.

Obviously, the 1964 symposium was a success. The second, covering the decade 1960–1969, was organized in 1972 at the Bedford Institute, Nova Scotia (ICNAF, 1972). Neil Campbell, the convener, noted in his opening remark, “We are faced today not only with studying the natural cause and effect relationship but now the man-made effects The key question is the improvement of our ability to manage the ocean as a resource and as an environment.” This may also reflect the ongoing Law of the Sea negotiations in the United Nations (UN), so, in addition to fisheries policies, other international policies became connected to the initiative.

The second symposium was organized differently from the first. Instead of having a great number of contributions, the focus was on 11 invited lectures, discussions based on these lectures and a general discussion. The topics covered were very diverse, from atmospheric and marine circulation, glaciers, sea-ice, and marine geology to more biological topics such as plankton abundance, spring blooms, food chains, and year-class success. In the lively general discussion, the first comment made was that, in addition to sea temperature, little was known about other environmental factors affecting fish stocks.

Following the development of the UN Convention on the Law of the Sea, ICNAF was replaced in 1979 by the Northwest Atlantic Fishery Commission, NAFO. The third symposium, covering the period 1970–1979, was held in 1981, again at the Bedford Institute. The publication of that meeting (NAFO, 1982) covered mainly physical studies: meteorology, climatology, hydrography, and sea-ice in the NAFO area. Only two short papers had biological content.

The fourth symposium, held once again at the Bedford Institute in 1994 (NAFO, 1996), had a descriptive name: “Impact of anomalous conditions at the beginning of the 1990s in the Northwest Atlantic on the distribution and behaviour of marine life”. By that time, the cod fishery crisis had come to Canada and all administrators were interested in one question: WHY? The symposium covered a range of invited talks on oceanography, trends on spawning-stock biomass, and changes in the distribution of fish species in response to the cool period of the preceding several years. An interesting consequence of the symposium was a recommendation to NAFO that “long term monitoring of oceanographic properties (including plankton) as well as fish distribution and abundance be given a high priority within the NAFO area to allow interpretation of fish population fluctuations”.

In 2002, a mini-symposium was held in connection with other NAFO meetings (Colbourne and Drinkwater, 2004). Those two scientists acted as conveners. In a sense, this was a complementary meeting to the ICES decadal symposium of 2001, because the latter did not cover all aspects of the NAFO region. In all, eight papers were presented, dealing mainly with climate variations in the NAFO area during the decade 1991–2000. As in previous corresponding symposia, sea-ice influence was emphasized.

ICES symposia

ICES, according to the decisions made a few years earlier in Santander and Bergen, held its first Hydrobiological Variability symposium in Mariehamn in June 1991 (Dickson *et al.*, 1992). Bob Dickson, as convener, designed the themes of the symposium to follow the themes of *Annales Biologiques*: physical variability, plankton, and fish. As a separate element, variability of the Baltic Sea was included in order to cover the brackish-water peculiarities of the region, in particular the stagnation of the Baltic deep basins. Participation was good and a large number of papers were presented, of which 51 were published. Despite the beautiful weather of early Åland summer, the quality of presentations sustained the size of the audience. A large portion of the presentations covered time-series beyond the nominal 1980–1989, some even for the full period since the turn of the previous century, i.e. 1900–1990! By that time, the first IPCC report had been published and climate change was clearly on the agenda. As pointed out by Dickson in his introductory text, this was nothing new for oceanographers.

In 2001, the second ICES Hydrobiological Variability symposium was held in Edinburgh, convened again by Bob Dickson (Turrell *et al.*, 2003). Basic themes were again physical variability, plankton, and fish in relation to the environment. The symposium was a success, with 155 participants, 42 papers, and 55 posters presented. The decade of NAO changes had a number of anomalous features, such as deep convection, an exceptional storm index in the Norwegian Sea, and a century-long maximum of the main Atlantic gyre circulation. Edinburgh also provided wonderful surroundings for the social programme, with a simultaneous tattoo festival and a most memorable torrential rain downpour during the display.

Comparison and summary

Comparing the two series of symposia, one can note that with the exception of the first in 1964, the NAFO meetings were smaller in

scale and at times had very specific focus. Whether this is because the ICES area itself has more variety, or because of the structural differences between the two organizations, will remain an open question. NAFO symposia have been clearly more “top-down”, based to a great extent on high-quality invited speakers and sometimes having only invited presentations. The two ICES symposia have been open meetings, inviting people to present their findings on decadal changes. Both symposia served their original purpose: of casting light on the long-term changes and their impact on marine living resources. It was only natural, however, that the Edinburgh symposium had the co-sponsorship of NAFO and that the two symposia series were merging into one.

As stated on different occasions, keeping a focus on long-term changes, and in particular maintaining long-term monitoring programmes in the physically wide and complicated ocean environment is something that does not always have appeal for funding agencies. From a scientist’s perspective and priorities, however, such focus belongs at the top level. In the view of a pragmatic administrator, who needs to base management decisions on a sound scientific basis, there is also the need to consider long-term changes. I believe firmly, however, that the symposia have done and still do their best to fulfill the need expressed at an early stage by Neil Campbell: “. . . The key question is the improvement of our ability to manage the ocean as a resource and as an environment”.

References

- Colbourne, E. B., and Drinkwater, K. F. (Eds). 2004. Hydrographic Variability in NAFO Waters for the Decade 1991–2000 in Relation to Past Decades. Mini-symposium 7 June 2002. *Journal of Northwest Atlantic Fishery Science*, 34. 120 pp.
- Dickson, R. R., Mällki, P., Radach, G., Sætre, R., and Sissenwine, M. (Eds). 1992. *Hydrobiological Variability in the ICES Area, 1980–1989*. A symposium held in Mariehamn 5–7 June 1991. ICES Marine Science Symposia, 195. 514 pp.
- ICNAF. 1965. ICNAF Environmental Symposium held in the Headquarters of FAO, Rome, 1964. FAO Special Publication, 6.
- ICNAF. 1972. *Symposium on Environmental Conditions in the Northwest Atlantic, 1960–1969*. FAO Special Publication, 8.
- NAFO. 1982. *Symposium on Environmental Conditions in the Northwest Atlantic during 1970–79*. NAFO Scientific Council Studies, 5.
- NAFO. 1996. *Impact of Anomalous Oceanographic Conditions at the beginning of the 1990s in the Northwest Atlantic on the Distribution and Behaviour of Marine Life*. Symposium 15–16 September 1994. NAFO Scientific Council Studies, 24.
- Turrell, W., Lavin, A., Drinkwater, K. F., St John, M., and Watson, J. (Eds). 2003. *Hydrobiological Variability in the ICES Area, 1990–1999*. A symposium held in Edinburgh, 8–10 August 2001. ICES Marine Science Symposia, 219. 453 pp.
- Went, A. E. J. 1972. *Seventy years agrowing. A history of the International Council for the Exploration of the Sea, 1902–1972*. *Rapports et Procès-Verbaux des Réunions Conseil International pour l’Exploration de la Mer*, 165. 252 pp.

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