Report

of the Sub-Committee for Telegraphic Communication of
of Oceanographic Observations

(1) The Sub-Committee met on Wednesday 5th October to follow up proposals made at the previous meeting (Report C.M. 1966/N:32).

Present: Dr. J. Eggvin (Chairman) Norway
Mr. H. Thomsen Denmark
Dr. R. Dorrestein Netherlands
Dr. S. Malmberg Iceland
Mr. A. Blindheim Norway
Mr. P. Myrland Norway
Dr. L. Wessel Sweden
Cdr. D.P.D. Scott (rapporteur) Great Britain

(2) As stated earlier, the codes used during the pilot scheme were found to be not entirely satisfactory by certain participants. A revised code has now been agreed and a copy is attached as Annex I.

It was noted that the revised code is designed to facilitate reports with the ship on a steady course. The position is given for the first and last observation only, intermediate positions being reported by distance from the previous station. By this means fronts can be accurately positioned as it is unnecessary for the stations to be equally spaced. Ships fitted with Sea Thermograph can select and report points of interest on completion of the run.

If the ship alters course, the position of alteration must be included in the message or a new message started.

As before, the fishery information is optional and can be added at the end of the message.

(3) A scheme for collection and dissemination of the data was discussed and is attached as Annex 2.

As naval vessels and WMO "selected" ships are already reporting data using differing codes, it was considered impracticable to try and coopt them into the scheme. It was, however, considered worthwhile to negotiate with appropriate national Meteorological Offices and Naval Authorities who should be willing to arrange supply of their data to the scheme.
The Working Group considered that its work is now completed and that it should be disbanded and submits the following resolution to the Hydrographical Committee:

Recognizing the rapidly increasing worldwide interest in Synoptic oceanography and its potential value for fisheries;
Noting that the ICES' area is better covered with observations than most other areas, and that the pilot project on synoptic fishery oceanography carried out from January 1st to March 31st 1966 by the Directorate of Fisheries Marine Research Institute, Bergen on behalf of ICES, has proved to be successful;

The Sub-Committee for Telegraphic Communication of Oceanographic Observations recommends that an international Centre for synoptic fishery oceanography should be established and invites the Council to take steps to continue the project on a permanent basis.

J. Eggvin
The code published in C.M. 1966, No.17 was revised in October 1966. The revised code runs as follows:

**OCEANOGRAPHIC CODES**

Surface observations from stationary ships and coastal stations

a. Temperature only:
   1 NNNN DDTTT DDTTT ........

b. Temperature and salinity:
   2 NNNN DDTTT 9SSSS DDTTT 9SSSS ........

Surface observations from moving ships

a. Temperature only:
   3 L L L L L L L L L L Q DDNNN TTTdd TTTdd ........
      .... TTTOO 9L L L a a a a L L L L Q

b. Temperature and salinity:
   4 L L L L L L L L L L Q DDNNN TTTdd 9SSSS TTTdd 9SSSS ....
      .... TTTOO 9SSSS 9L L L L a a a a L L L L Q

Sub-surface observations from moving ships

a. Temperature only:
   5 L L L L L L L L L L Q DDNNN mmTTT mmTTT 9SSSS ........

b. Temperature and salinity:
   6 L L L L L L L L L L Q DDNNN mmTTT 9SSSS mmTTT 9SSSS ....

Sub-surface observations from stationary ships

a. Temperature only:
   7 DDNNN mmTTT mmTTT ........

b. Temperature and salinity:
   8 DDNNN mmTTT 9SSSS 9SSSS ........

Observations of fish shoals are added by optional groups starting with F:

FL L L L L L L L L L L Q 0 3 f S S S f
**Meaning of code symbols**

DD  Day of the month, always 2 digits: 01, 02, ..., 30, 31.

TTT  Temperature in tenths of degrees C. Always 3 digits. (e.g. 1.2° is coded 012). Negative temperatures are indicated by adding 50.0 to the temperature reading, disregarding the minus sign (e.g.: -1.2° is coded 512).

SSSS  Salinity to the second decimal place.

dd  Distance in nautical miles between two consecutive surface samples.

LLLLL  Latitude to be reported in degrees and minutes. Always four digits.

LLLLL  Longitude to be reported in degrees and minutes. Always four digits.

Q  E or W longitude

mm  Depth in metres. If the depth exceeds 99 metres: the two first figures of the depth. (e.g. 300 metres = 30, 125 metres = 12, 3500 metres = 35).

NNN  Letter code for moving ships (last 3 letters of Signal Letters).

NNNN  Letter (or number) codes for stationary ships, coastal stations, ocean weather stations and offshore reference stations. (To be allocated by the regional oceanographic centre.

---

**F**  Indicator letter, indicating that the following 5-figure groups refer to fish shoals.

**c_3**  Description of kind of fish (see code table).

**F_f**  Character of fish shoal (see code table).

**S_f**  Depth of fish shoal in whole metres.

**Code tables.**

**c_3**-Description of kind of fish.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No fish.</td>
</tr>
<tr>
<td>1</td>
<td>Cods.</td>
</tr>
<tr>
<td>2</td>
<td>Herrings.</td>
</tr>
<tr>
<td>3</td>
<td>Brisling, sardines, anchovies, capelines, etc.</td>
</tr>
<tr>
<td>4</td>
<td>Hakes, haddocks.</td>
</tr>
<tr>
<td>5</td>
<td>Coalfish.</td>
</tr>
<tr>
<td>6</td>
<td>Mackerels.</td>
</tr>
<tr>
<td>7</td>
<td>Tunas, bonitos, etc.</td>
</tr>
<tr>
<td>8</td>
<td>Crustaceans.</td>
</tr>
<tr>
<td>9</td>
<td>specimen unknown.</td>
</tr>
</tbody>
</table>
F<sub>f</sub> - Character of fish shoal.

1 = Nothing registered on echosounder or asdic, but fishing operation indicates presence of fish.
2 = Very small concentration (dotted or scattered).
3 = Mostly scattered, but small shoals in between.
4 = Small shoals, poor concentration.
5 = Big shoals, good concentration.