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Hydrography Committee

Report of the Study Group on the
Flushing Time of the North Sea
Meeting at Liège , 27 April 1980

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1. In accordance with C. Res. 1979/2:15e the Study Group had a meeting in Liège at the Sart Tilman Campus of the University of Liège, the day preceding the JONSDAP-76 Workshop. The meeting was limited to one day in order to economize the time. During the following days in informal contacts the arrangements could be further settled.
2. The meeting was attended by:
L. Otto (convener), Y. Adam^x, J. Adams, G. Becker, F.-E. Dahl^x, A.M. Davies^x, M. Mork^x, F. Ronday, A. Svansson^x.
(^x members that since 1977 have become involved in the work of the Study Group).

The following members were unable to attend:
H. Dooley, J.A. Durance, D. Harding, D.J. Jefferies.

3. Letters by J. Ramster and H. Dooley had been received and were communicated to the members by the convener. The points raised in these letters were considered during the subsequent discussion.
4. The group discussed at length the ideas developed at the first (Lowestoft) meeting of the group, and the contents of the final report.
 - The group agreed upon the point of view that the scope of the exercise could only be limited. There is a great amount of simplification in the concept of reservoir models and the exchange between the various reservoirs proposed for the North Sea can only roughly be estimated.

Moreover the exchange between reservoirs may be formulated in various ways (one-directional, two-directional, or one-directional plus mixing) and the best approach may not be equal for different problems. Yet there appears to be a need for a simple approach. This could be used in a general way as a first step in the solution of various problems, many of which may ask subsequently for more specific and refined models. The group judged it important that these ideas and reservations should be made fully clear in the introductory parts of the report.

Because of the aim at a rather simple and general approach and the difficulties of obtaining reliable figures already in the present set-up, the group did it consider not appropriate to go into further subdivisions of the North Sea as compared with the 1977 proposals, although for specific problems this may be justified. There is only one exception, that is, that for box 3 a separation between Scottish and N. English coastal waters and S. English coastal waters (with a separation near Flamborough Head) might be relevant. An addition with a separate Skagerrak-compartment appears justified.

- The final report has to consist of a general section, presenting the idea of the flushing time and related concepts, the possible applications and the provisos and the relevant figures. In addition a number of separate contributions giving the scientific background of the figures adopted would be annexed to the general section. These latter contributions, after being discussed within the Study Group, could be presented under authorship of separate members.

- 5. The Study Group then considered the drafts for various sections, presented up till now. Gaps were identified and the group agreed upon a further distribution among themselves of the remaining tasks.

- 6. A time schedule was set-up according to which there would be a preliminary draft report consisting of the contributions ready at the 1st of July. This means that this preliminary draft would not cover the whole of the final draft, but nevertheless the material available would be of help in the discussions in the Hydrography Committee. The preliminary draft should be available in a limited number for those who would be interested, but not necessarily as an official Statutory Meeting document.

- 7. On the basis of discussions at the Statutory Meeting the group should complete the work as soon as possible. For the finalization of the draft a further meeting of the Study Group may be necessary at the beginning of 1981. In this time schedule the draft should be presented for a final consideration to the 1981 Statutory Meeting.

L. Otto, 8 May 1980