

S3/1054

MONACO 29 August 1979

TO : All Members of the IHO/FIG Advisory Board on Training of Hydrographers

SECOND MEETING OF THE FIG/IHO INTERNATIONAL

ADVISORY BOARD ON TRAINING

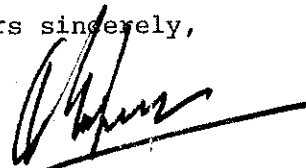
FINAL REPORT

Dear Colleague,

Having now received the agreement of members to the "Provisional Report", I am enclosing a copy of the "Final Report" which incorporates some minor amendments resulting from comments made by members of the Advisory Board.

2. Action is in hand to circulate the FIG/IHO Information Paper to National Focal Point and interested institutions.

Yours sincerely,



D.C. KAPOOR
Rear Admiral, Indian Navy (Ret.)
Director

Encl.

PROVISIONAL REPORT OF PROCEEDINGS OF THE SECOND MEETING
OF THE FIG-IHO INTERNATIONAL ADVISORY BOARD ON TRAINING
at the CANADIAN GOVERNMENT CONFERENCE CENTRE
Ottawa, 10-12 May 1979

1. Present were:

Rear Admiral D.C. KAPOOR, I.N. (Retd.) (Chairman)
Lt. Cdr. C. DON, R.N.N. (Retd.) (representing Mr W.C.J. BURKI)
Lt. Cdr. A.E. INGHAM, R.N. (Retd.)
Mr A.J. KERR
Dr T. UCHINO
Mr B.C. SCHRUMPF (representing Ing. Gén. de l'Armement J. BOURGOIN)

Also in attendance were Mr G.N. EWING and Mrs L. BELLY (Interpreter)

2. OPENING OF THE MEETING

Mr Ewing welcomed members of the Board on behalf of the Canadian Government.

Rear Admiral Kapoor welcomed the presence of Mr Schrumpf and Commander Don, whilst regretting that Ing. Gén. Bourgoin and Mr Burki were unable to attend. He noted that Rear Admiral Fraser was to have represented Commander Rao, but unfortunately had been unable to be present. He reported that much had been achieved since the last meeting. The "Standards of Competence" had been printed and circulated and were proving to be a 'best-seller'. A German version had just been issued and was to be displayed at the International Hydrographic Technical Conference about to open.

Mr Kerr gave information on administrative arrangements for the meeting.

Rear Admiral Kapoor noted that Mr Ewing, as Chairman of the original Working Group, had been invited as an observer and, at the suggestion of Mr McCulloch, an invitation had been extended to Rear Admiral Powell, Director of N.O.S., to send a representative. It was further noted that the Chairman of FIG Commission IV had extended an invitation to the Board to meet Commission IV at 1400, May 17.

3. ADOPTION OF THE AGENDA

The Provisional Agenda was adopted after the addition of two items. (See Appendix A.)

4. FINAL MINUTES OF PREVIOUS MEETING (7-9 February 1978) AND MATTERS ARISING

On the question of whether Minutes should be available in French it was agreed, based on earlier comments of Ing. Gén. J. Bourgoin, that all working documents of the Board would be in English, but that periodic information reports would be made available in all the working languages of the IHO and FIG.

Concerning Item 3, Rear Admiral Kapoor had asked India and Brazil to nominate members on the Board. India had nominated Commander Rao but, regretfully, there had been no response from Brazil.

At the request of Commander Don, clarification was provided on the use of the asterisk in the syllabus and it was noted that this could be found on page 9 of the "Standards".

Referring to Item 5.6, Admiral Kapoor noted that there were difficulties in obtaining references from Argentina, as that country had no major training course. After discussion, it was decided to leave the multi-language reading list in abeyance until the next meeting.

Referring to Item 6.3, it was decided that in future new editions would be published only when the Board considered it to be necessary.

Chairman

Referring to Item 6.4, it was noted that a number of Hydrographers had agreed to act as National Focal Points, but that the U.S.S.R. and Italy had not responded yet. The Chairman would take this up with these countries. FIG, through Chairman, Commission IV, would also be asked to stimulate interest.

Dr Uchino

Referring to Item 6.6, Dr Uchino stated that the Japan Hydrographic Association would be making an announcement about the work of the Board this year. Elsewhere the work had been publicized in hydrographic journals and through IHO Circular Letters. Dr Uchino was requested to write an article on this matter for the Japan Hydrographic Association Journal. Commander Ingham suggested that future reports be published both in the I.H. Review and I.H. Bulletin. It was proposed that the report on the work of the Board to the IHTC might be suitable for publication in the I.H. Review.

Referring to Item 8.1, it was agreed that the financing of FIG Board Members to attend meetings should be taken up with Commission IV of FIG.

The Minutes of the previous Meeting were approved.

5. MEMBERSHIP OF THE ADVISORY BOARD

Chairman

1) After considerable discussion, during which the desirability of finding members of the Board from developing countries was advocated, it was decided that Rear Admiral Kapoor should try, for a last time, to interest Brazil, and at the same time ask the Chairman of Commission IV of FIG to request the Nigerians, probably their Port Authority or Hydrographer, to provide a member.

Chairman

2) The Chairman noted that he had received a letter from Mr Burki relating to his inability to continue as a Board Member. Commander Don had been nominated in his stead, but a letter should be written to the Chairman of FIG Commission IV to arrange for his specific appointment.

3) It was suggested by Mr Ewing that membership of the Board was dominated by members from national hydrographic organizations. This, to some extent, was rebutted when it was realized that Commander Don worked for a commercial survey company.

6. COMMENTS FROM NATIONAL FOCAL POINTS

A letter from Rear Admiral D. Haslam, U.K. Hydrographer, commenting upon Subject 8: "Law of the Sea" was reviewed. There was a consensus of the Board that all hydrographic surveyors should be acquainted with the delimitation of marine boundaries and that this would require some understanding of the historical development of the Law of the Sea. As a result of the discussion, the following changes would be made to the syllabus in the "Standards":-

8.1 Delete present paragraph.

Replace by: "Historical development of the Law of the Sea. Organizations and mechanisms involved."

8.4 Delete "liability for damage".

8.5 Delete "and" , "jurisdiction over living and non-living resources" , "rights of navigation".

Redraft as follows: ";rights, obligations and jurisdiction of coastal States, including the law concerning submarine cables and pipelines; artificial installations and scientific research."

8.6 Delete "FisheriesShelf-Locked States".

8.8 Delete.

Chairman

A reply would be sent to Rear Admiral Haslam outlining the action taken.

7. MODIFICATIONS TO THE "STANDARDS" ("Guide Notes")

Some difficulty had been found in the precise meaning of the asterisk (*) used in the syllabi. The explanation on page 9 was consequently examined and modified as follows:

Delete sentence: "Advanced study in core subjectsfollowing syllabi).

Replace by: "In designing courses at a more advanced level than the minimum provided by these Standards, it is proposed that the subjects marked by an asterisk (*) could be usefully incorporated and taught at an advanced level on a selective basis."

Difficulty had been found in the precise meaning of the terms "Familiarization", "Practical" and "Full" as used in the "Standards". After a review the Board agreed that they be modified and that page 8 of the "Standards" be changed as follows:

Before "Preface to Detailed Syllabi", place "4.1"

Following the paragraph under "Peripheral Subjects" ending "...in the other subject groups.", insert a new heading: "4.2 Levels of Knowledge". In the sentence following, underline "hydrographic surveying". Delete "familiarization" and "full knowledge" and replace by "basic" and "detailed", respectively.

Delete paragraph: "'Familiarization' implies that.....command of the subject". Replace with:

"Basic implies acquaintance with, and general understanding of the subject.

Practical implies knowledge of principles and their application.

Detailed implies a thorough command of the subject."

This should be followed by a new heading: "4.3 Specialized Subjects"

There followed a discussion on Section 1.3 and 1.7 concerning minimum requirements for the education and training of hydrographic surveyors.

The need to produce a new edition of the "Standards of Competence" was discussed. It was decided that this would not be done immediately. A circular letter would be sent to all persons receiving the document, identifying the changes. Also, any significant changes would be described in the paper to be presented at the International Hydrographic Technical Conference.

(Items 6, 10 and 13 of this Report also include modifications to "Guide Notes" or Syllabi - see full list in Appendix B)

8. PHILOSOPHY PERTAINING TO CERTIFICATION OF INDIVIDUALS

Rear Admiral Kapoor explained that he had received a letter from a surveyor in Malaysia asking whether the Board could give him certification, since he possessed all the qualifications. The Board re-iterated its stand that it would only certify courses, and that the certification of individuals was the responsibility of national organizations. In this case, where such an organization did not exist in Malaysia, it was recommended that he seek certification through a professional institution in another country.

9. POLICY FOR REVIEW OF COURSE PROGRAMMES

It was decided that there was a need for a standard format for courses being given approval. A general statement noting approval of courses would be published in the I.H. Bulletin as well as "Information Papers" published from time to time. Detailed comments on the approval, noting any reservations, would be sent to the concerned Focal Points. Rejection of courses would not be publicized. It was proposed, following comments by Mr Schrupf, that National Focal Points be responsible for ensuring that standards were maintained once course accreditation had been received. Concerning this matter, the following change was made to Section 2.5 of the "Standards":

After "to their recognition.", add: "The list of approved programmes which will be maintained at the IHO, and may be published from time to time, will show date of approval."

To facilitate the review of courses by the National Focal Points and the Board, it was agreed that, following a suggestion by Commander Ingham, the following form should be used:

FIG/IHO Syllabus	Nat. Focal Point Remarks	Advisory Board Decision
1.1	Sat.	
1.2	required for entry to course	
1.3	Sat.	rather weak
	etc.	etc.

Policy towards developing countries

There was a discussion on short working papers by Messrs. Kerr, Schrupf and Burki. In discussion it was noted that a hydrographic training facility was being developed in India which, with the assistance of UNDP, could turn into a regional centre. It was noted that the IHB, in co-operation with the United Nations, was formulating plans for a seminar to be held at Monaco for Arab and African countries. This would be subject to the availability of funds from the U.N. It was noted that the Japanese Hydrographic Office carried out extensive training of hydrographers from East Asia. From the discussion it became apparent that Africa was particularly short of hydrographic offices and training facilities for hydrographers.

The Board gave support for the proposed seminar at Monaco and requested the Chairman to stress the need for expertise in hydrographic surveying in developing countries, and the recommendations in this respect of the U.N. Group of Experts, in his presentation to the IHTC.

10. REVIEW OF TRAINING PROGRAMMES

Training Syllabus from R.A.N.

The Board had been requested to review a course submitted by the Royal Australian Navy. It was noted that this was a 4th class surveyors' course which leads up to 3rd, 2nd and 1st class surveyors. There did not appear to be any more formal training after the 4th class as submitted.

The Board was of the opinion that the basic subjects of mathematics, mechanics, statistics, and some aspects of measurement science were adequately covered. For the remainder, except where it was noted in the submission itself that there were shortcomings (e.g. geology and geophysics), it appeared that the total list of subjects compared favourably with the "Standards", but they did not appear to be covered in the depth that was needed even for the B level. This point of view was substantiated by the exam papers.

Mr Kerr

Mr Kerr will draft a reply outlining the above points.

Syllabi from SHOM

The extremely high level in the basic subjects was noted; at the same time, it was suggested that the treatment of subject 7 appeared to indicate a rather theoretical approach rather than the practical levels recommended by the "Standards". In particular, it was felt that survey planning aspects should be strengthened.

The Board then reviewed those subjects which had been specifically noted in the SHOM documents (Fascicule 1, last page) as not treated.

- 2.6 (c) It seemed unlikely that, with the large coverage of optics, this would not be treated, and the difficulty was in the description provided in the "Standards". As a result, this would be changed to read:
- "Characteristics of telescopes (magnification, field, clarity, separating power, aberrations)."
- 3.3 (f) This subject in the "Standards" required only a 'Basic' level of knowledge and could be easily incorporated in the SHOM syllabus.
- 3.6 (d) It was believed that this was a misunderstanding and that "concepts of soil mechanics" as listed in the "Standards" only required an exposure to the topic. It was believed that "Geophysique 3 CT 23" in the SHOM syllabus probably covered the subject adequately.
7. As previously mentioned, there should be more emphasis on general planning aspects of surveying.
- 7.4 (c) Since these were clearly useful modern techniques their inclusion in the syllabus should be encouraged.
- 7.4 (d) It was felt that the wording used in the "Standards" had not been (iii) & clearly understood. It was thought that hydrographic engineers (iv) at SHOM did, in fact, provide advice on the siting of navigation aids and collected data for Sailing Directions. There was no intention that hydrographic surveyors should be taught to become experts in these fields.
- 8.8 Under amendments to the syllabus in the "Standards" this has now been omitted.

9.2 (f), The meteorological phenomena discussed in the syllabus would
(g), (i), not normally be expected in French waters and therefore it
(j) was not critical that they be included. However, for the sake
of well-rounded knowledge it was felt that these subjects
should be included in the SHOM syllabus.

It was noted that the SHOM syllabus did not mention any seatime requirements, which is a noted requirement under 1.7 of the "Standards". On questioning, Mr Schrupf told the Board that all officers, before entrance to ENSIETA, had experience of at least one year as a naval officer as part of their service.

Chairman

A letter would be prepared to SHOM outlining the various points above and noting that SHOM had not requested approval of its courses, but only a review at this time.

Process of submitting courses

It was proposed by Mr Ewing, and supported by the Board, that, in view of the difficulty of reviewing the R.A.N. submission, training institutions should be requested, in making their submissions, to provide these in a format in which the training courses can be compared side by side with the appropriate sections in the "Standards".

11. PREPARATION OF BIBLIOGRAPHY

It was agreed that there would be no bibliography prepared concerning the mathematics subjects. It was further agreed that only training manuals and reference books would be included in the bibliography. In the identification of material, this should be selected in conformity with the level of the subject in the syllabi.

Cdr Ingham

Commander Ingham agreed to undertake the task of compiling a bibliography based on the submission of Messrs. Bourgoin, Kerr and Burki, on the Hydrographic Society's reading list, and submissions from the U.S.A. Individual submission and correspondence on the bibliography should be referred directly to Commander Ingham.

12. ANNUAL REPORT OF THE BOARD

Chairman

It was decided that the "Information Papers" would be used as the basis for the annual report and would include the major items from the Minutes of the meeting. These information papers would be sent to all Focal Points with extra copies for distribution to concerned institutions.

13. CHANGES TO "GUIDE NOTES TO STANDARDS OF COMPETENCE"

Commander Ingham proposed a number of changes to the above, and after discussion there was agreement on the following changes:

- 1.3 Delete "implied". Add "defined in 1.2.1 and 1.2.2, though it must be conceded that educational qualifications must form the basis for an international standard. Thus the coverage of the required knowledge is indicated in this document by subject syllabi and any international approval scheme must necessarily be related to the course programme and not individuals."
- 1.7 Delete "sea training in". After "hydrographic surveying" add: "including ship and launch operations". At end of paragraph add a new sentence: "If necessary the concerned institution may arrange for such practical training to be undertaken in cooperation with industry or other organizations."

1.8 At the beginning, add: "While the syllabi relate to courses and programmes at Category A or B, it is considered that" "a minimum aggregate period, etc...."

Delete: "qualified" and replace by: "competent".

Delete: "Categories A and B" and replace by "either category".

2.3 Second paragraph, delete all after "International Advisory Board." and replace by: "It is desirable that courses be developed which cover all areas of the standards, if necessary by several different institutions in collaboration."

2.5 At end add: "The list of approved programmes which will be maintained at the IHB, and may be published from time to time, will show the date of approval". (*Item 9 of this Report.*)

3.1.2 At end, add: "Staff to student ratios, number of students, and student intake should also be provided."

4.3 Specialized Subjects. At top of page 9, after "Appendix II", delete next sentence from "A course which coverscourse respectively."

At end of page 9, under "Subject areas suitable for advanced study", add "Law of the Sea".

14. DATE AND PLACE OF NEXT MEETING

The next meeting will be held at Monaco during April 1980, sometime between 11 and 22 April (dates of Hydrographic Society Symposium and proposed African-Arab Seminar).

The Meeting adjourned at 11.30, 12 April 1979.

SECOND MEETING OF THE IHO-FIG ADVISORY BOARD

ON TRAINING OF HYDROGRAPHERS

10-12 May 1979

AGENDA

1. Opening of the session.
2. Administrative arrangements.
3. Adoption of the Agenda.
4. Approval of the Minutes of the inaugural meeting and matters arising.
5. Membership of the Advisory Board.
6. Review of comments received from National Focal Points and other authorities on the "Standards of Competence".
7. Consideration of modifications to be made to the "Standards" in the light of comments received.
8. Review of policy pertaining to certification of individuals.
9. Consideration of policy for review of course programmes.
10. Review of training programmes.
11. Preparation of bibliography.
12. Discussion on desirability of publishing an Annual Report on the Board's activities.
13. Any other business.
14. Date and place of next meeting.

LIST OF MEMBERS OF THE IHO-FIG ADVISORY BOARD ON THE TRAINING OF HYDROGRAPHERS
AND INVITED PARTICIPANTS AT THE SECOND SESSION

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