



WORK OF THE BUREAU

WORK CARRIED OUT, WORK WHICH IS IN PREPARATION, AND WORK WHICH
IT IS PROPOSED TO UNDERTAKE.

(Article 46 (a) iii, iv, v of the Proposed Definite Statutes of 1923.)

BY THE PRESIDENT OF THE DIRECTING COMMITTEE

I. — Resolutions of the I. C. H. 1919 (see Report of Proceedings).

A certain number of these Resolutions still remain to be dealt with, the action taken and the reasons for the delay in their settlement being set forth in each case.

(a) (Page 24 of Report.) Section I. Resolution E.

Delineation of contours of depths.

“It is agreed that it is desirable to adopt common symbols to indicate the contours of depths in charts produced by those nations using the metric system ; it was found impossible to arrive at an agreement as to the symbols to be used, and it was decided to refer the matter for discussion to the International Hydrographic Bureau when formed.”

This subject, on which there has been a considerable amount of correspondence, has been again under consideration, a majority of the States-Members having replied to the questions raised in Circular-Letter N^o 32 of 23rd. September 1922 : a summary of the replies has been made, and together with explanatory remarks by the Directing Committee, has now been issued to the States-Members in Circular-Letter N^o 36-H of 1924 : it is therein suggested that the matter shall be taken up at the next Hydrographic Conference.

(b) (Page 26 of Report.) Section I. Resolution F.

Proposal to institute a uniform symbol to show the colour of Light Sectors.

“The proposal was not adopted on a show of hands, but it was decided that this question should be referred to the International Hydrographic Bureau, when formed, for discussion.”

As was reported in "Hydrographic Review" Vol. I, No 2, this subject was nearly completed; replies have been received since from the great majority of the States Members, stating that they are in agreement with the proposals put forward by the Bureau in its Circular-Letter No 15-H of 6th. June 1923.

Circular-Letter No 30-H of 19th. September 1924 has been issued therefore on the subject, which terminates the matter.

The original Circular-Letter on the subject was No 40 of 16th. October 1922.

(c) Pages 28 & 29 of Report.) Section I. Resolution P. I. II. III.

Transcription of names, and authorities to be consulted thereon.

"I. — It is agreed that generally the literal transcription, and not the phonetic, is to be adopted.

"II. — It is agreed that for countries and islands that have not an official method of transcription, the transcription as adopted by the controlling Power should be used.

"III. — It is agreed that, in the case of those countries using characters other than Roman, the International Hydrographic Bureau, when formed, should as soon as possible prepare an international system of transliteration and transcription of names."

It will be remembered that, as a first step, Circular-Letter No 36 of 28th. September 1922 was issued with the following requests :

"I. — To inform the Bureau whether, in your State, any Government Department or Scientific Body is responsible generally for coastal nomenclature and the spelling thereof and, if so.

"II. — To send to the Bureau the name and address thereof in order to facilitate the examination of the problem put before the Committee in Resolution P. of Section I."

Sufficient replies now having been received to enable this portion of the subject to be dealt with, the result will be found on page 33 of this Review.

It is to be remarked that the subject of part III of this Resolution requires most careful consideration, and it is evident that if the original proposal be carried out in its entirety, it would involve a very large amount of labour to obtain a result which might not be of commensurate value. It therefore appears that the best solution is to place the matter for discussion on the Agenda of the next Hydrographic Conference, with a view to obtaining the opinions of the Representatives of those countries which are more specially concerned.

(d) (Page 33 of Report.) Section III. Resolution B. II.*A tabular method of compilation (of lists of Lights.)*

“That uniformity in arrangement is desirable. It is recognised that nations now publishing Light Lists have each adopted a form suitable to their respective requirements. It is recommended that until a uniform arrangement has been advised by the International Bureau, nations which publish Light Lists irregularly or not at all should adopt one of the forms followed by one of the nations now publishing Light Lists of the World.”

This question was raised in Circular-Letter N^o 40 of 16th. October 1922, a uniform tabular arrangement being proposed.

Replies from the principal countries interested have been received, but it is very evident that no country intends to make any alteration at present in its methods of compilation. In some cases the important question of expense is raised ; but it is to be remarked that no country suggests that the list of data proposed by the Bureau is inadequate.

Circular-Letter N^o 35-H of 29th. September 1924 has been issued therefore on the subject stating that no further action appears possible at present, but that it is hoped that the table proposed in Circular-Letter N^o 40 of 16th. October 1922, will be taken as the standardised form.

(e) (Page 34 of Report.) Section III. Resolution D.*Method of describing visibility as limited by the intensity of light, and the adoption of a formula for its determination.*

“As at present no formula is known which is sufficiently elastic to satisfy the varying conditions of the atmosphere between the source of light and the point of observation, the observation method adopted by many nations appears to hold the field ; in order to arrive at a unanimous solution this matter should be referred to the International Hydrographic Bureau. In the meantime each nation may retain its own method, and it is considered desirable that observations should be made by each nation with a view to accumulating data for determining constants and developing relations to serve as a basis for an acceptable formula, and these observations should be sent to the International Hydrographic Bureau.”

In “ Hydrographic Review Vol. 1, n^o 2 ” it was stated that this question was still being dealt with, and that its complete investigation will extend probably over several years.

Articles on the subject have appeared previously on pages 108 to 118 of “ Hydrographic Review, Vol. 1, N^o 1 ” and on pages 67 to 94 and 95 to 112 of Vol. 1, N^o 2 ; the latter article entitled “ Visibility of Lights ”

by P. VAN BRAAM VAN VLOTEN, the Engineer-in-Chief of the Lighthouse Service of the Netherlands, is a highly important contribution to the discussion; the writer is a well-known expert on the subject and it is hoped, after due consideration has been given to the study of the article in question, that it may be found to form a basis for eventual solution; if this is the case, it is suggested that the next Hydrographic Conference (*i. e.* in the year 1926) would be a suitable occasion for a discussion in the matter by international representatives expert in Lighting.

The original Circular-Letter on this subject was N^o 39 of 12th. October 1922.

(f) (Page 36 of Report.) Section IV. Resolution B.

Advisability of arranging Notices geographically, to correspond with Sailing Directions and Light Lists.

“ It is agreed that it is desirable that the limits of enclosed seas should, be laid down and that it might be stated to what sea or ocean a strait connecting two of them should be reckoned. ”

In “ Hydrographic Review, Vol. 1, N^o 2 ” it was pointed out that, in a question of such magnitude and general interest, it is obvious that replies from a large majority of those concerned must be received before any attempt at final settlement can be made; the following countries, whose replies are obviously essential in this respect, have now been specially desired to forward their remarks: — CHILE, CHINA, GREECE and SIAM; the matter therefore must await replies from these countries before being again considered as a whole and in the meantime questions involving parts of the world, other than those which appear likely to be affected by the four countries named, are receiving due consideration.

The original Circular-Letter on this subject was N^o 1-H of 15th. February 1923.

(g) (Page 39 of Report.) Section V. Resolution B.

Publication by each country of distance tables for its own coast, and the adoption of common points, where possible, to measure from.

“ That countries which do not already publish Distance Tables for their own coasts should in future do so, including in such tables common points for the purpose of effecting connection with the coasts of adjoining countries.

“ The selection and determination of the positions of such common points should be referred to the International Hydrographic Bureau’.

As stated in "Hydrographic Review, Vol. I, N^o 2" this subject cannot be dealt with satisfactorily until the question concerning the limits of Oceans and Seas has been completed.

II. — Researches.

The study of various problems connected with the work of the Bureau has naturally created the necessity for obtaining the decisions and opinions of the States Members, and the following are among the more important subjects dealt with : —

(a) Coasts fully or partially surveyed or superficially examined

As previously stated, the replies to Circular-Letter N^o 43 of 26th. October 1922 requesting the supply of information on this subject are still incomplete, and any attempt to bring the matter to a conclusion is out of the question at the present time.

BRAZIL, CHILE, GREAT BRITAIN, GREECE, PERU, PORTUGAL, SIAM and SPAIN, whose replies are obviously of importance in this matter not having replied, have again been requested to supply the required information.

(b) Tidal matters.

The subject of the application of Harmonic Analysis by the States-Members has now arrived at a stage when the publication of a summary of the correspondence will be of utility and interest ; it will be found on page 39 of this issue.

The original Circular-Letter on this subject was N^o 30 of 5th. September 1922.

(c) Echo-Sounding.

The first article giving all available information on this subject was published in a Special Publication in December 1923, and its contents were repeated in "Hydrographic Review, Vol. I, N^o 2".

Special Publication N^o 3, dated October 1924, has now been issued with a detailed description of a new method of Echo-Sounding by means of ultra-audible (super-sonic) sounds, which method of measuring oceanic depths has been invented by Professor LANGEVIN of the University of Paris ; this publication also gives an amplified description of the Sonic Depth Finder invented by Dr. H. C. HAYES of the Bureau of Engineering

Navy Department, U. S. A., which was referred to on page 47 of "Hydrographic Review, Vol. 1, N^o 2".

The matter contained in Special Publication N^o 3 will be found repeated on page 51 of this issue.

(d) Engraving and repair of Chart Plates.

In addition to the replies of this subject, summaries of which have appeared already in "Hydrographic Review, Vol. 1, N^o 2" a most interesting article on the repair of plates by Captain J. C. F. HOOYKAAS, Assistant Hydrographer of the Netherlands Navy, will be found on page 123 of this issue.

A considerable amount of interest has been aroused in this connection, and it is much hoped that further remarks on this subject from other sources will be forwarded to the Bureau in a form suitable for publication.

(e) Buoyage and Port Signals.

In "Hydrographic Review, Vol. 1, N^o 2", it was stated by the Directing Committee that after satisfying itself that no over-lapping of work would arise with any existing organisation, Circular-Letter N^o 3-H of 1st. February 1924 was issued stating that it was proposed to take up the study of the Systems of Buoyage and Port Signals now in use with a view to eventual standardisation, and requesting information as to whether the Governments of the States-Members would be prepared to consider the adoption of a universal system of Buoyage and Port Signals.

The replies which have been received in answer to the above Circular-Letter are distinctly encouraging, and as a result, the Directing Committee has been in a position to place before the States-Members a proposal that the matter should be taken up by a special committee of experts during the next Hydrographic Conference.

(f) International Organisations dealing with subjects allied to Hydrography.

The official Report of the Proceedings of the Section of Physical Oceanography of the International Union for Geodesy and Geophysics, which was held in Rome during May 1922, has now been received. This Report opens with an excellent memoir of the late Prince ALBERT OF MONACO, who was President of the Section at the time the meeting took place in Rome.

The Sub-Sections were six in number, and dealt with the following subjects : Geodesy, Seismology, Meteorology, Magnetism and Terrestrial Electricity, Physical Oceanography and Vulcanology.

The following Representatives attended the Meeting in connection with Hydrographic and Tidal subjects : —

Captain A. ALESSIO, Hydrographer of the Royal Italian Navy, GENOA.

Dr. W. BELL-DAWSON, Superintendant of the Tidal and Current Survey of CANADA.

Mr. L. FAVE, Ingénieur Hydrographe en Chef, PARIS.

Mr. FICHOT, Ingénieur Hydrographe en Chef, PARIS.

Professor H. LAMB, CAMBRIDGE.

Mr. G. W. LITTLEHALES, of the Hydrographic Office, U. S. Navy.

Mr. ROLLET DE L'ISLE, Directeur du Service Hydrographique de la Marine française, PARIS.

Vice-Admiral Sir John PARRY, President, International Hydrographic Bureau, MONACO.

Rear-Admiral J. M. PHAFF, Director of the International Hydrographic Bureau, MONACO.

Professor J. PROUDMAN, Tidal Institute, LIVERPOOL.

Professor F. VERCELLI, Director of the Geophysical Institute, TRIESTE.

Commander H. D. WARBURG, R. N. Hydrographic Department, LONDON.

The principal work of the various Sub-Sections consisted of receiving reports, arranging financial matters, and making arrangements for the execution of future work.

Admiral PARRY was honoured by being appointed Vice-President of the Section of Physical Oceanography, the importance of the connection of the International Hydrographic Bureau with 22 associated States being specially referred to. He was elected to serve on the Commission de l'Atlantique as was also Admiral PHAFF.

Admiral PHAFF served on the Tidal Committee the meetings of which he attended and which were of considerable interest, and the following were among the most important subjects referred to : —

The seiche-like oscillations of the Adriatic Sea, which are of sufficient importance to affect navigation ; the observation of tides in deep water ; a variety of points were raised in connection with harmonic analysis, harmonic constants, time-differences, and mean sea-level.

The subject of the compilation of an International Vocabulary of Oceanography was reported upon by M. ROLLET DE L'ISLE, and it was decided that the French text, when ready, should be forwarded to the International Hydrographic Bureau, as being an organisation interested in the matter.

During the Conference a message was received from the Spanish Government inviting the General Assembly to hold its next reunion in Madrid in September 1924, and this was unanimously accepted.

At the time of writing, it is expected that the President of the Directing Committee will attend at Madrid as Vice-President of the Physical Oceanographic Section, when several important matters will come up for discussion.

An International Congress of Geography and Ethnology is to be held in Cairo in April 1925, and its Committee has requested the adhesion of this Bureau. After due enquiry into its organisation, aims and objects it is now proposed that a representative of the Bureau should attend.

(g) Scale and Code for Disturbance of the Surface of the Sea.

The British Meteorological Office requested the assistance of this Bureau in obtaining the opinions of the States Members as to the value and utility of a scale and code proposed for recording and reporting the disturbance of the surface of the sea, and states that if the opinion is favourable the scale etc. will be laid before the International Meteorological Committee for use in the international exchange of meteorological information.

The opinions of the States Members on this matter were requested in Circular-Letter n^o 16-H of 20th. June 1924, but a sufficient number of replies has not yet been received to make it possible to issue any statement on the subject.

(h) Record of documents of Hydrographic interest.

As previously reported in the "Hydrographic Review, Vol. I, N^o 2" Circular-Letter N^o 19-H of 22nd. June 1923 was issued to the States-Members requesting that the following be sent to the Bureau : —

- (a) A catalogue of documents of Hydrographic interest, both ancient and modern.
- (b) Names and addresses of public or private organisations, which are known to contain such documents.
- (c) Names and addresses of persons other than as above who might be consulted usefully on this subject.

The article "ARCHIVES OF THE FRENCH HYDROGRAPHIC SERVICE" by the Director of that Service, which appeared in the "Hydrographic Review, Vol. I, N^o 2", is an excellent example of a reply to (a); a few other replies have since been received, but with the exception of that from Italy, it is doubtful whether their contents can be utilised for the purposes of the Bureau.

(i) Work carried out and projected.

The issue of Circular-Letters giving the work projected and that carried out by the various Hydrographic Services has continued as before, and from enquiries made in this connection and from the greater care and accuracy now shown generally in the preparation of the required material by the Hydrographic Offices, it is evident that the publication of this information is appreciated.

(j) Requests for assistance.

Requests for assistance in obtaining data for miscellaneous purposes have been received from a variety of sources, and were dealt with, in some cases by Circular-Letters to the States Members.

(k) Aids to Navigation.

A somewhat new departure in promulgating information of an unusual character was adopted by the Bureau in issuing Circular-Letter N° 10-H of 7th. May 1924, the contents of which dealt with the establishment of a Radiogoniometric Station and a light on Cape Guardafui, also a light on Ras Hafun. This was done at the special request of the Italian Hydrographer, and the great importance to navigation of the establishment of these safeguards in such a vital position appeared to the Directing Committee to be a sufficiently good reason for adopting this unusual procedure.

(l) International Low Water.

The Bureau has now taken up the subject of the study of the question of the proposed uniform datum plane referred to as "International Low Water", which was discussed at the London Conference of 1919 (*see* Section VI, Resolutions E and F, page 41 of Report), and Circular-Letter N° 20-H of 8th. July 1924 has now been issued requesting the supply of all harmonic constants, including the value of Mean Sea Level. It is hoped that this application will be successful in its results.

(m) Terminology for Submarine Relief.

Circular-Letter N° 21-H of 5th. July 1924 was issued on the above subject: the opening sentences of this letter explain the position of the

Bureau in the matter, and the result at which it is hoped to arrive ; they are as follows : —

“ The Bureau has received a suggestion from the Director of the Italian Hydrographic Institute proposing the adoption of standard terminology in the various languages for such submarine and topographical coastal features as would be useful in the compilation of Sailing Directions and Charts. It appears to the Directing Committee, however, that the various countries should themselves select a word in their own languages which represent the feature described by means of standard definitions, and that any attempt on the part of the Bureau to undertake more than the drawing up of proposed definitions is undesirable, as it would create inevitably more uncertainties than it would prevent.

In the domain of Oceanography the time would appear to be ripe for the adoption of terms in each language, by means of which certain elementary features of Submarine Relief (or configuration of the bottom of the ocean) may be characterised, on account of the great development and wide application of Sonic Depth-finding, and the consequent increase in data which eventually will be available to establish such configuration definitely.

Should agreement be reached with reference to a basis for the principal submarine forms, it would prove valuable as a foundation for a later agreement with reference to the other definitions referred to in the first paragraph. ”

Reference is made to the various Committees which have, from time to time, considered the matter, and all existing attempts to reach agreement in the required direction are summarised ; the English, French, German, Italian, Portuguese and Spanish terms, which correspond with the definitions now dealt with, are given.

The principal primary and secondary forms only are dealt with, and full explanations are given for the reasons for the adoption of the definitions now used. Consequent upon the issue of this Circular-Letter information was received from the Director of the French Hydrographic Service that the Physical Oceanographical Section of the International Committee of Geodesy and Geophysics at the Paris meeting of January 1921, nominated a Committee to prepare an International Vocabulary of Oceanography ; the Committee consists of Monsieur ROLLET DE L'ISLE and members from the following countries : — DENMARK, GREAT BRITAIN, ITALY, JAPAN, PORTUGAL, SPAIN and the U. S. OF AMERICA. M. ROLLET DE L'ISLE has forwarded to the Bureau a copy of a preliminary examination which he has made on the subject. Copies of the Bureau's Circular-Letter on the subject have been sent to each of the Members of this Committee for their information.

(n) Photographs of Surveying Vessels.

The Directing Committee is of opinion that the reproduction in the “ Hydrographic Review ” of photographs of modern Surveying Vessels

will be of interest and utility to the States Members, and Circular-Letter N^o 27-H of the 27th. August 1924 has been issued accordingly on the subject ; various essential particulars to accompany the illustrations have also been asked for, and it does not appear to be too much to hope that these reproductions, with pertinent details concerning them, will have a considerable amount of practical interest to those contemplating new construction.

(o) Bibliography.

It will have been noticed on pages 187 *et seq.* in the " Hydrographic Review, Vol. I, N^o 2 " that reviews of certain publications were inserted under the heading " Notes on publications received by the Bureau ".

A new heading entitled " INTERNATIONAL HYDROGRAPHIC BIBLIOGRAPHY " will be found introduced in this number of the " Review " under the following classification : —

- (1) Bibliographic Review.
- (2) Books of Reference.
- (3) Documentary Bibliography.

Circular-Letter N^o 25-H of 19th. July 1924 was issued to the States Members requesting them to supply, for publication by the Bureau, a list of works on Hydrography and its allied subjects published in their own countries.

It is fully realized that the lists now published herein are incomplete, but a beginning will have been made, and it is hoped that the States Members will co-operate in the production of a compilation which should be of distinct utility to students of Hydrography.

(p) Concerning the necessity for the early issue and rapid distribution of important Notices to Mariners.

Various suggestions for dealing with this highly important matter were received by the Bureau, and Circular-Letter N^o 1-H of 28th. January 1924 was eventually issued on the subject, giving in detail the proposals and the practice at present existing in certain countries.

The proposals resulting therefrom were as follows : —

(a) The establishment of a uniform W/T code for international use in the promulgation of important Notices to Mariners.

(b) The establishment of an Agent at certain of the principal ports on largely-used ocean routes, who would receive advice, as soon as possible, from all Hydrographic Offices when necessary, of important Notices of alterations, etc. affecting the navigation of the seas and coast on and near the route where the port concerned is situated.

(c) The promulgation of such Notices at least two months, and if possible three months, prior to the date fixed for the execution of the alteration, etc. concerned ; their periodical repetition and their being broadcasted by W/T on action having taken place.

The Directing Committee then put forward its remarks for the consideration of the States Members, and in conclusion, stated that, with reference to the foregoing proposals, it considered that : —

(a) Is both desirable and feasible, and the suggestion for the utilisation of the " International Signal Code " for W/T in connection with the promulgation of warnings affecting navigation should be adopted.

(b) Appears a practical proposition, although the bringing into effect thereof in a satisfactory manner undoubtedly presents difficulties.

(c) The more exact definition of the advance period of notification of important warnings appears humanly impossible of fulfilment, although the special attention of the Members is called to this important matter by the Bureau, with a view to every possible care being observed at all times.

The remarks of the States Members on the above proposals were then requested ; replies were received from the majority of the States Members and they formed the basis for another Circular-Letter, *viz.* N^o 26-H of 31st. July 1924, on the same subject.

All opinions were summarised therein, and they were followed by the remarks of the Directing Committee : in conclusion the Directing Committee made the following recommendations : —

1. That notices to Mariners be issued and despatched DAILY BY LETTER POST, and not as ordinary Printed Matter, which is the practice in many countries.
2. That no time be lost between the receipt of the information respecting intended changes in aids to Navigation from the Superintending Authority, and the despatch of the Notice in which this information is inserted.
3. That this information be given, if feasible, two or three months in advance, and that it be repeated in the Notices as often as considered necessary.
4. That a Notice reporting the accomplishment of the event should be given on receipt of a report from the Hydrographic Office concerned only, and that reports from other sources be accepted with reserve.
5. That the issue of a frequent Summary of the outstanding Temporary and Preliminary Notices for each sea is desirable.
6. That every country which gives information with reference to the whole world should send all Notices to its national Consular Offices in the principal ports abroad, and that these should be held at the disposal of Captains of vessels who desire to consult them.
7. That it is essential to make such consultation compulsory. Until this is effected the Representatives of the States Members should bring the question before their National Marine Boards and impress these Authorities with the importance of these consultations.
8. That Navigational warnings referring to accidental events be sent by telegraph to

neighbouring Hydrographic Offices, and broadcasted, after the Weather Report, by W/T from Stations which cover limited areas outside pilotage waters.

9. That the warning be preceded by the initials of the four words which mean in each language "National Notice to Mariners", as previously given herein.

10. That the warnings be broadcasted as at present until a Table of such Signals has been inserted in the International Code of Signals.

11. That the information be repeated as often as is thought necessary by the National Hydrographic Office concerned.

12. That information requested by vessels as to changes in aids to navigation be supplied by the Station covering the area designated.

13. That the next International Hydrographic Conference should appoint a Committee to draw up and propose the insertion of a suitable Table of Navigational Warnings in the International Code of Signals.

The remarks of the States Members on these recommendations are now awaited.

