

# DISTANCE TABLES

## A STUDY OF EXISTING DISTANCE TABLES

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### FOREWORD.

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The International Hydrographic Bureau has made a study of the Tables of Distances between Ports as published at present by the official services of the various maritime countries. This study is contained in the following article which completes the enquiry undertaken on this subject by the International Hydrographic Bureau by Circular Letter 8 H-1928, the announcement of which was made during the course of the last International Hydrographic Conference held in Monaco in April 1932, before the Committee on the Work of the Bureau (Report of Proceedings, pp. 30, 152 and 178).

During the discussion before the Committee, certain Delegates apparently thought that the Bureau was undertaking the publication of a Table of Distances, but this was an error. The work entrusted to the Bureau was merely the collation and study of existing Distance Tables with a view to recommending a selection of common connecting points.

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### I. — DISCUSSION OF THE PROBLEM AT THE VARIOUS HYDROGRAPHIC CONFERENCES.

The question of publishing Distance Tables, the selection and determination of common points was considered by the 1st International Hydrographic Conference of London, 1919, and was fully discussed by Committee N° V (Commander L. BERLING, France, Chairman).

The following is extracted from the Minutes of Meeting of this Committee (See Report of Proceedings of International Hydrographic Conference, London, 1919, p. 153) :

*The Chairman* then passed on the Subsection B, "publication of Distance Tables, etc.", and said that such publications were already issued by the British and the French. The French used them for deciding the amount of the subsidies which had to be paid to their merchant vessels on account of the distance they had travelled. The compilation of such a publication would be much facilitated if other nations would publish Distance Tables for their own coasts, and unless there were any objections to this being done, he suggested that a Resolution should be drafted incorporating such a requirement.

*Captain SMITH* (Great Britain) asked the Chairman whether, in the French Distance Tables, distances between French ports were given, as he understood that only distances to ports outside France were given.

*The Chairman* replied that distances to both home and foreign ports were given.

*Captain SIMPSON* (U.S.A.) said that the United States published Distance Tables, showing the distance between the principal ports of the world, including their own ports. The distance given was the shortest navigable distance, allowing a reasonable factor of safety to clear dangers.

*Commander ALESSIO* (Italy) said that such tables were published by Italy. He thought that the most important part of the subject under discussion was the adoption of the principle that common points, from which distances should be measured, should be adopted by all nations.

*The Chairman* said he agreed with Commander ALESSIO, but he was afraid that the adoption of such common points was not possible in the present Conference, as they would be very numerous. He proposed, therefore, that the question should be left to the International Hydrographic Bureau.

*Captain SIMPSON* (U.S.A.) suggested that, as there were only a few countries which published distance tables of the world, the Hydrographers of these nations might decide on the common points, instead of leaving the question to be decided by the International Hydrographic Bureau.

*The Chairman* pointed out that there were only four countries which published such tables for the whole world.

*Captain SIMPSON* (U.S.A.) said that, if a Resolution were adopted to the effect that it was desirable that such common points should be determined, it would remind the Hydrographers to communicate with each other on this simple matter.

*Commander WILSON* (Technical Secretary) then read a proposed Resolution which was to the effect: *first*, that countries which did not publish distance tables for their own coasts should do so, including common points, so that these tables might be connected with those of adjoining countries; *second*, that it was desirable that the Hydrographers of the countries which now publish distance tables of the whole world should endeavour to agree on such common points.

*Captain SIMPSON* (U.S.A.) said that, on second thoughts, he wished to withdraw his proposal relative to communication between Hydrographers for the purpose of adopting common points. He explained his reasons, and said it now appeared to him that it was a matter for the International Hydrographic Bureau to decide.

*Commander WILSON* (Technical Secretary) then read an amended second paragraph of the Resolution, which was to the effect that the selection and determination of such common points should be referred to the International Hydrographic Bureau.

*The Chairman* asked whether any Delegate had any remarks to make with reference to this Resolution, and, as there was no response, he declared the Resolution adopted as follows:

#### SECTION V. — TIME SIGNALS, DISTANCE TABLES, AND OTHER MISCELLANEOUS HYDROGRAPHIC PUBLICATIONS.

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.

The International Hydrographic Bureau began to examine the problem of the selection and determination of common points, but it was stated in the Report on the Work of the Bureau published in *Hydrographic Review*, Vol. I, N<sup>o</sup> 2, May 1924, p. 22, that "this subject cannot be satisfactorily dealt with until the question concerning the limits of oceans and seas has been completed".

At the Second International Hydrographic Conference held in Monaco, October-November, 1926, the Committee on the Work of the Bureau examined the action of the Bureau with regard to Distance Tables:

*The Chairman* (Great Britain) recalled that, in the opinion of the Bureau, this question could not be dealt with as it should be, so long as the question of limits of oceans and seas had not been fully settled.

*Captain CROSLY* (U.S.A.) saw no connection between the two questions and did not share the opinion of the Bureau.

*The Chairman* supported this opinion and pointed out that Distance Tables were already in existence and that starting points had already been adopted.

*Captain CROSLY* (U.S.A.) moved the following:

"In the opinion of the Committee the decision taken by the Bureau on this point, i.e. to wait for decisions on the limits of oceans and seas, is not in accordance with what was desired.

"To settle the question Hydrographic Offices should be advised to publish Distance Tables as soon as they think possible".

*The Chairman* moved the following amendment :

"The Committee considers therefore that, in order to solve this question, the various Hydrographic Offices should be advised to publish Distance Tables at their early convenience".

In the opinion of the *Chairman* the question could be taken up again when the future work of the Bureau came under discussion.

(Report of Proceedings of the 2nd Intern. Hydrogr. Conf., Monaco, Oct.-Nov. 1926, p. 345).

The Conference adopted the following Resolution :

C) Resolutions concerning Work of the Bureau :

*Distance Tables.* — On the question of drawing up Distance Tables, the Bureau should not have waited for the decision on the Limits of Oceans and Seas, it being generally considered that the latter has no connection with the subject.

(Distance Tables are already in existence and starting points have already been adopted; therefore, in order to solve this question, the various Hydrographic Offices should be advised to publish Distance Tables at their early convenience.)

(Report of Proceedings of the 2nd Intern. Hydrogr. Conf., Monaco, — Oct.-Nov., 1926, p. 99-100).

By Circular Letter N° 8-H of 22nd May, 1928, the Bureau undertook to collate all information concerning Tables of Distances already published or to be published in the near future by the various countries and requested the following particulars :

- 1) Has your Government published any Distance Tables ?
- 2) What area is covered by these Tables ?
- 3) What are the common points, or starting points of the distances, adopted ?
- 4) If up to the present no Table has been published, is such publication considered for the near future ?
- 5) Give any particular information concerning the Tables published.
- 6) If your Government has published any such Distance Tables, the Directing Committee would be grateful if you would forward a copy thereof to this Bureau.

At the First Supplementary International Hydrographic Conference held at Monaco in April, 1929, the Committee on the Work of the Bureau was informed that the work had just begun and that it would be limited to the choice of common departure points and to the publication of the bibliography of existing Tables of Distances.

"The Committee considered that the collation of all information concerning existing Distance Tables and choice of common departure points is of interest and should be encouraged".

(Report of Proceedings of the 1st Supplem. Inter. Hydrogr. Conf., Monaco, April, 1929, p. 326).

In answer to Circular Letter N° 8-H of 1928 and to further correspondence by the Bureau, information has been received from the following countries : France, Italy, Monaco, Netherlands, Germany, Great Britain, Sweden, Den-

mark, U. S. Coast and Geodetic Survey, U. S. Hydrographic Office, Argentine, Japan, Spain, Australia, China, Egypt, Chili, Siam, Portugal and Greece.

During the third International Hydrographic Conference, held at Monaco in April, 1932, the Committee on the Work of the Bureau was informed that the International Hydrographic Bureau was collating and studying Tables of Distances from Port to Port published by various countries, and that the Bureau had so far collated a documentation consisting of a series of volumes published by the different Hydrographic Office giving such distances from port to port.

During the Committee Meeting,

*Captain RUDE* (U.S.A.) asked whether the work involved great expense.

*Com. BENCKER* (I.H.B.) replied that, until now, no expenditure had been entailed. As regards the distances from port to port the Bureau had so far only collected a documentation consisting of a series of volumes, published by the different Hydrographic Offices giving this information. No completed publication had been issued so far.

*Ing. Hyd. Gen. COT* (France) stated that the French Hydrographic Service had published a table of distances from port to port; the edition was now exhausted. As the Bureau was about to issue this publication the French Service intended to cease doing so. From this point of view the expense incurred by the Bureau would be profitable, at least as regards France.

*The Chairman* (Ammiraglio di Divisione G. CANTU, Italy) stated that the Italian Hydrographic Service had made a similar decision.

The Committee approved the work done by the Bureau on the lines indicated under N<sup>o</sup> 13, p. 30, of the Reports of the Proceedings of the third International Hydrographic Conference.

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In consequence of the above the Directing Committee of the International Hydrographic Bureau has decided to publish the present article in the Review.

## II. — RESULTS OF ENQUIRY MADE BY THE INTERNATIONAL HYDROGRAPHIC BUREAU. DESCRIPTION OF THE VARIOUS DISTANCE TABLES PUBLISHED BY THE MARITIME NATIONS.

### FRANCE.

The French Government has published, in 1882 and 1893 respectively, two Distance Tables :

1. *Tableau des Distances pour la Navigation au cabotage international* (Distance Tables for International Coasting Navigation). — Seas comprised between the 30th and the 72nd parallels North, the 15th meridian West of Paris and the 44th meridian East of Paris.

2. *Tableau des Distances pour la Navigation au long cours* (Distance Tables for Long Distance Navigation). — Navigation outside the zone defined in paragraph 1 above.

From 1908, Annual Supplements have been published. The Tables are completed by an alphabetical index published in 1910, including a summary of the distances published from 1882 to 1908.

The *Tableau des Distances* was prepared by the Ministry of Marine. These Tables consist of two volumes of 1200 pages of tables. The tabulations are kept up to date by means of periodical supplements; up to 31st December, 1927, 47 supplements to the *Tableau des Distances pour la Navigation au long cours* and 35 supplements to the *Tableau des Distances pour la Navigation au cabotage* had been published.

Distances given in these tabulations are expressed in Nautical Miles of 1852 metres. When the formation of the coast does not permit direct junction of the two ports, the distance has been reckoned from the group of arcs of the great circle forming the shortest navigable track and passing through waters outside of dangers and at suitable distances from the various capes and headlands.

The *Tableau des Distances pour la Navigation au long cours* is divided into three parts:

Europe and the Atlantic; the Indian Ocean; the Pacific Ocean and the China Seas.

The ports of departure are given in geographical order starting from the Baltic Sea. The ports of arrival are geographically arranged as headings of columns.

A table given at the end of the volume facilitates research.

The *Tableau Général des Distances pour la Navigation au cabotage international* is divided into three parts:

Baltic Sea, North Sea, Atlantic and the Northern Seas (Coasting).

Mediterranean Sea, Black Sea and the Sea of Azov.

The points of departure and of arrival consist of the principal ports of all the maritime countries.

Two control points have been selected for the determination of the distances between two ports not given in the same part, point S: Skagerrak and point G: Gibraltar Strait.

Point S (Skagerrak): 57°50' N. 9°00' E. (Gr.).

Point G (Strait of Gibraltar): 35°56' N. 5°34' W. (Gr.).

and the distance S-G has been selected: 1720 nautical miles.

When the direct junction of two ports of the austral hemisphere at an arc of the great circle passes through latitudes in the vicinity of the polar regions where ice constitutes a serious obstruction to navigation, distances have been calculated along combined arcs tangent to the 57th south parallel.

The number of distances recorded in the two volumes is about 562,465.

The alphabetical index to the *Tableau des Distances au long cours et des Distances de cabotage* facilitates research in the volumes and their supplements up to the year 1908.

## ITALY.

In 1888 the *Italian Hydrographic Office* published a *Prontuario delle Distanze fra i principali Porti commerciali del Mondo*. This volume was used for

the application of the law then in force for the premium to the Mercantile Marine.

This publication is now exhausted.

The *Italian Hydrographic Office* does not intend for the present to compile a new *Prontuario*.

The connecting points adopted in the *Prontuario* in 1888 are the following:

a) Mediterranean Basin :

Gibraltar .....	Lat. 35°37' N. Long. 5°37' W.
Suez (Canal) .....	Lat. 29°56' N. Long. 32°33' E.

b) Baltic :

Kattegat.....	Lat. 57°48' N. Long. 10°43' E.
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c) Atlantic :

Union of South Africa	Cap of Good Hope .....	Lat. 34°25' S. Long. 18°16' E.
		Agulhas Point .....
	Buffalo Lighthouse .....	Lat. 33°15' S. Long. 28°30' E.
		Cape Horn .....
	Straits of Magellan .....	Lat. 52°30' S. Long. 68°10' W.
		Panama Canal.....

d) Indian Ocean :

Suez Canal.....	Lat. 29°56' N. Long. 32°33' E.
Agulhas Point.....	Lat. 34°53' S. Long. 20°00' E.
Buffalo Lighthouse .....	Lat. 33°15' S. Long. 28°30' E.
Sunda Strait.....	Lat. 5°57' S. Long. 105°47' E.
Singapore Strait .....	Lat. 1°12' N. Long. 103°24' E.

NOTE. — Distances in miles between the principal Italian ports and Mediterranean ports are given in the Italian Light List.

GERMANY.

Information concerning Distances between ports of the World (*Mittlere Entfernungen auf Dampferwegen in Seemeilen*: Mean distances along Steamship Routes in Sea Miles), compiled by Captain F. HEGEMANN, was published in

*Beiheft I* of the *Annalen der Hydrographie, Heft IV, April, 1897, Nachträge 1 & 2*. A similar work by R. JANNASCH (*Wege und Entfernungen zur See im Weltverkehr, Berlin, 1904*) is now exhausted. Also the publication *Der Pilot* by the *Deutsche Seewarte, Hamburg*, for the years 1903, 1904 and 1905, shows many distances reckoned on ship tracks.

Data concerning Distance Tables are to be found in the *Dampferhandbuch des Stillen Ozeans* and in the *Dampferhandbuch des Atlantischen Ozeans* issued by the *Deutsche Seewarte, Hamburg*.

The most complete Distance Tables published in Germany are the LUEN-SEE Distance Tables (*Entfernungstabellen*).

Reg. Rat. a.d. Seewarte S. LUENSEE published in the *Deutsche Seewarte, Hamburg, 1923*, the *Entfernungstabellen* showing mean distances along steamship routes between the principal ports of the world. In this publication, ports of departure are classified according to geographical sequence by sea and ocean. In each section they are arranged alphabetically. Ports of arrival are likewise arranged alphabetically for each section. A sketch shows the general distribution of the sections *A* to *R* on the surface of the world and also the connecting points of the different sections which enables distances between ports in different areas to be reckoned by means of simple addition.

The book consists of about 180 pages. An alphabetical list of ports aids in finding the page concerned.

The distribution of the different sections is similar to that adopted for the British Admiralty Distance Tables (see further on), and the connecting points are the following :

North Cape.	Singapore.
Holtenuau.	Sunda Strait.
Skagen.	Lombok Strait (Panida I.).
Elbe I.	Torres Strait.
Pentland Skerries.	Cape Leeuwin.
Bishop Rock.	Eddystone (Tas.).
Ushant.	Wilson Promontory.
Cape Finisterre.	South Cape, N. Z.
Gibraltar.	Bougainville Strait.
Constantinople.	Arena Point.
Port Said.	Colon.
Cape of Good Hope.	Cape Pillar (Magellan Strait).
Perim.	Dungeness (Magellan Strait).

## GREAT BRITAIN.

From 1912 onwards the British Government has published Distance Tables for the whole world in 5 volumes.

The following is the complete list of Distance Tables, compiled by the *Hydrographic Department*, for the various parts of the world :

### ADMIRALTY DISTANCE TABLES.

VOL. I. — North and West coasts of Europe from Kara Sea to Cape Finisterre, including the British islands, Iceland, Faeroes, and the Baltic, with the Azores, Madeira, Canary islands, Cape Verde islands, and Gibraltar. — 3rd edition, 1919.

VOL. II. — Mediterranean, Black and Red Seas. — 2nd edition, 1917.

VOL. III. — Eastern shores of the Atlantic Ocean and off-lying islands (excluding the

British islands, France and north coast of Spain), and the shores and islands of the Indian Ocean, including the north and west coasts of Australia. — 2nd edition, 1917.

VOL. IV. — Western shores of the Atlantic Ocean from Cape Farewell to Cape Horn, including Hudson Bay, the Gulf of Mexico and the Caribbean Sea, with Cross-Atlantic distances. — 2nd edition, 1918.

VOL. V. — Pacific ocean. — 1st edition, 1919.

The whole of the publication is contained in about 740 pages.

These Tables give the shortest navigable distances in nautical miles between various ports arranged in sections *A* to *R*.

These sections are shown in an index chart in a jacket at the end of each volume, showing the ports and sections concerned. The names in red on this index are the connecting points of two or more sections of the different volumes.

The first edition of these volumes was published from 1912 to 1919.

At the beginning of each volume is the list of ports of departure contained in the volume in alphabetical order by countries. Under the heading of each port of departure, the ports of arrival are arranged alphabetically and the distance given. In some cases distances of alternative routes have been given, reference being made by foot-notes at the bottom of each page where necessary.

Volumes IV and V give cross-oceanic distances. Distances reckoned on the eastbound and westbound routes as agreed to by the principal steamship companies in 1913 and as shown on Admiralty Chart No 2058 are given for routes across the North Atlantic Ocean. The distances across the South Pacific Ocean are calculated for the most southerly track used by vessels of the principal steamship companies crossing this ocean.

In the publication of the Hydrographic Department of the British Admiralty "Ocean Passages for the World", 1923, the distances have been taken from the Admiralty Distance Tables in case where the shortest navigable track between ports is that recommended to be followed. In routes which combined great circle with rhumb line tracks, special calculations of distance have been made.

The connecting points adopted for the reckoning of distances can be obtained from the notice placed at the beginning of each volume.

The following is the list of connecting points :

The Skaw.	Constantinople.
The Naze.	Port Said.
Dunkerque.	Perim.
Dover.	Singapore.
Longships.	Sunda Strait.
Bishop Rock.	Lombok Strait.
10 miles W. of Ushant.	Kapala Tanah (Timor).
Cape Wrath.	Torres Strait.
Barra Head.	Cape Leeuwin.
Inishtrahull.	Cape of Good Hope.
Inishtearaght Rock.	Las Palmas.
Fastnet.	Colon.
Tuskara Rock.	Magellan Strait.
10 miles W. of C. Finisterre.	Cape Horn.
Gibraltar.	Panama.



Arena Point.  
South Cape, N. Z.  
Eddystone, Tas.

Wilson Promontory.  
Rossel Spit.  
Bougainville Strait.

A Distance-Time Table is given at the end of each volume.

## GREECE.

The *Ydrografiki Yperesia* of Athens published in 1917 the *Pinakis apostasion eis millia metaxi limenon ellenikon akton kai ton kourioteron limenon tes mesegeiou* (Distance Tables between the Ports of Greek Coasts and also from some Principal Ports of the Mediterranean).

This work, consisting of some 60 pages, gives 48 tabulations of distances. The total number of starting points included is 271 and the total number of distances given is 41,138. The starting points are arranged in geographical order. Ports of arrival are given as headings in the tabulations and distances are given in nautical miles and reckoned on rhumb lines. The letter *K* inserted after the distance means the passage through the Corinth Canal and the letter *X* means the passage through Chalkis Pass. A supplementary list gives the distances between 15 of the most important ports of Greece and 39 foreign ports of the Mediterranean and Black Seas. The Table is completed by a Distance-Time Table and a Time-Distance Table.

In pursuance of a Resolution of the International Hydrographic Conference, the headings of the Table, the foreword and explanations are also given in English.

## JAPAN.

The *Hydrographic Department* of Japan compiled Distance Tables in 1919 (a booklet of about 400 pages) which cover mainly the shores of Japan, of the Eastern Seas, of the Pacific Ocean, and also the coasts of the Eastern Archipelago, East of Singapore and those of Australia.

The ports are arranged in alphabetical order in the book and for each one distances are given to other ports also arranged alphabetically.

Distances are given from the principal ports and harbours in the above-mentioned area.

It is noticed that the Roman spelling of Japanese place-names given in the table is the old system which was used before 1922, when the new system of Roman transliteration of Japanese place-names was adopted by the Hydrographic Department of Tokyo.

## UNITED STATES OF AMERICA.

### HYDROGRAPHIC OFFICE.

In 1923 the United States *Hydrographic Office* issued a publication N<sup>o</sup> H.O. 117, the title of which is: *Table of Distances between Ports via the Shortest Navigable Routes*.

A small proportion of the distances in these tables are published on Hydrographic Office charts N<sup>os</sup> 1262, 1308, and 526. (Oceanic distances are

also shown on the United States of America Pilot Chart for the Indian Ocean, November, 1928).

The book consists of about 290 pages. The ports of the world are arranged alphabetically and for each of them distances to other ports of the world are given in alphabetical order. Distances are shown via Panama Canal and via the Horn. Distances on the great circle between Ambrose Channel Lighthouse and Bishop Rock and to or from Fastnet, eastbound and westbound routes, are also given.

#### COAST & GEODETIC SURVEY.

The United States *Coast & Geodetic Survey* published in 1929 the *Serial Pamphlet No 444* — a booklet of about 45 pages giving distances between the United States ports.

The purpose of this Table of Distances is to give in a condensed and convenient form the distances between ports of the United States and its off-lying territories. Distances are also given between the principal United States ports and few foreign ports. The ports listed were selected with the idea of including all important harbors and a sufficient number of minor ports so that distances could be given between points at short and fairly regular intervals along the various coasts.

For ready reference and for use in combining these tables with those issued by other nations, a number of distances from United States to foreign ports are included.

The distances are given in sectional tables. The distance between any two ports in a section may be obtained directly by an inspection of the proper table. Each table also lists points connecting it to the adjoining sections so that the distance from a port listed in one table to a port listed in any other sectional table can be obtained by a short computation. Index-charts showing the ports, connecting points and general routes along the various sections of the Atlantic and Pacific coasts are provided to aid in combining distances.

Connecting points are as follows :

- Cape Cod Canal, East entrance.
- Pollock Rip Channel.
- Nantucket Shoals Lightship.
- 4 miles 130° true from Montauk Point Light.
- New York Battery.
- Delaware Bay (Overfalls Lightship).
- Chesapeake Bay Entrance, 1.7 miles 49° true from Cape Henry Light.
- Cape Hatteras (Diamond Shoal Lightship).
- 2 miles 170° true from Sand Key Light.

#### FINLAND.

The *Sjöfartsstyrelsen* of Helsingfors issued in 1927 local Table of Distances between ports of Finland, consisting of 60 pages giving the ports arranged in geographical order according to the Finnish pilotage districts.

#### BRAZIL.

The *Directoria de Navegação* of Rio de Janeiro issued in 1927 a booklet

consisting of some 20 pages showing distances in nautical miles between foreign ports and those of Brazil (*Distancias em milhas nauticas entre diversos pontos do Territorio Brasileiro*).

#### SIAM.

The Hydrographic Office of the Royal Siamese Navy, Bangkok, issued in 1928 *Distance Tables in Siamese Waters and adjacent Waters*, reprinted from the original Tables compiled by the Naval General Staff in Siamese characters. The present edition is printed in English. The names of the starting points as well as of the termini are given in alphabetical order.

The booklet consists of 70 pages.

#### CHILE.

The *Department of Navigation and Hydrography* of Chile published in 1928 *Cuadros de Distancias desde Arica a Cabo Virgenes*. The distances in these *cuadros* are measured from anchorage to anchorage. The *cuadros* consist of a single sheet, chart N<sup>o</sup> 4.

#### YUGOSLAVIA.

The *Hidrografiski ured Mornarice* issued in 1929 the *Daljinar istocne obale Jadranskong Mora* (Distance Tables for the Adriatic Sea). This pamphlet of a few pages gives distances in nautical miles between several ports of the Adriatic.

#### ARGENTINE.

A sheet giving the tabulation of distances between ports of the coast of the Argentine is given in the *Derrotero Argentino*.

#### EGYPT.

The Egyptian Government has published several sheets bearing the title: *Egypt Squadron Distance Tables, showing distances for the Egypt Coast, the Suez Canal, the Sudan Coast and the Red Sea*.

#### PORTUGAL.

Some tabulations showing distances for the coast of Portugal have been published by the Portuguese Government. However, they do not constitute a special publication but are inserted among other specifications given in the Tide Tables for Lisbon and Oporto. They are limited to the coasts of Portugal.

There is also a Table giving distances from Lisbon to several colonial ports.

Manuscript Distance Tables have been compiled by the *Portuguese Hydrographic Department* for the different ports of the coasts of Portugal and the colonies. The starting points are Lisbon, Oporto, Loanda, S. Thomé, Vianna, Lourenço Marques.

#### ESTONIA.

Local Distance Tables are given in the *Eesti Lots*.

## SPAIN.

The Spanish Government, for the use of its navigation companies, has adopted a Table of Distances (*Cuadros de Distancias aproximadas*) between ports of the Peninsula and between those colonial and foreign ports which are regularly visited by Spanish navigational lines.

## NEW ZEALAND.

Coastal distances between the ports of New Zealand are published on a sheet inserted in the *New Zealand Nautical Almanac and Tide Tables* issued by the New Zealand Government, Wellington, N. Z.

## AUSTRALIA.

The Tables in use are those published by the British Admiralty. A Table of Distances between local Ports not included in the Admiralty Tables and a supplement to these will be published in due course. (Letter dated 21st August, 1928).

## CHINA.

The Chinese Government has not published Distance Tables, but is considering the publication of such Tables as soon as the pressure of business will permit. (Letter dated 24th July, 1928).

## DENMARK.

Denmark does not publish Distance Tables and the publication of such Tables is not contemplated for the near future. (Letter dated 14th June, 1928).

## MONACO.

The Monegasque Government does not publish Distance Tables. The distances from Monaco to the principal harbours are published either in the French, Italian or British Distance Tables.

## NETHERLANDS.

The Netherlands Government has not published Distance Tables and such publication is not being considered for the near future. (Letter dated 29 May, 1928).

## SWEDEN.

No Swedish Authority has published or is at present preparing to publish Distance Tables. (Letter dated 5th June, 1928).

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It is also interesting to note that several unofficial Distance Tables have been published, e.g. :

The Sir Benjamin CHAVE Ocean Distances and other Tables of the Union-Castle Line, Southampton, 1923.

BROWN'S North Sea, Baltic and Mediterranean Distance Tables giving 14,000 distances between 600 seaports and headlands, Glasgow, 1909.

J. H. LUBBI'S Route, Afstand en Reisduur van de voornaamste Buitenlandsche Zeeplaatsen naar Rotterdam, Amsterdam en Antwerpen, published in 1904 at Rotterdam.

BROWN'S Distance Chart — a tabulation showing distances between all the principal ports of the world, compiled by Captain W. D. CAMPBELL.

### III. — SUMMARY AND PROPOSALS.

I. From the above it may be seen that Distance Tables have already been published by the following countries and that some connecting points have been selected :

Great Britain.	Germany.
France.	Greece.
United States of America.	Siam.
(C. & G. S. and H. O.).	Yugoslavia.
Japan.	Brazil.
Italy (*).	Finland.

II. The following countries although not having published special books of Distance Tables have included such Tables in their nautical books or have used tabulations of distances calculated for their own ports :

Argentine.	Portugal.
Estonia.	Chile.
Egypt.	Spain.
(Italy).	New Zealand.

III. The following nations intend publishing Distance Tables in the future :

Australia, for local ports not included in British Admiralty Tables.  
China.

IV. No official Distance Tables are published by the following countries and such publication is not contemplated for the future :

Denmark, Monaco, Netherlands, Sweden.

V. No answer has been received from :

Norway and U.S.S.R.

VI. The following nations have discontinued the publication of their Distance Tables which are now exhausted :

France, Italy.

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(\* NOTE. — The Italian Light List (*Elenco dei Fari*) contains a distance table.

The above mentioned Distance Tables use main connecting points as follows :

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|-------------------------------|--|
| 1. <i>North Cape.</i>         | 20. Perim.   |
| 2. The Naze.                  | 29. Singapore.   |
| 3. The Skaw.                  | 30. <i>Hongkong.</i>   |
| 4. <i>Holtenau.</i>           | 31. <i>Simonoseki.</i>   |
| 5. <i>Elbe I.</i>             | 32. Sunda Strait.  |
| 6. <i>Peniland Skerries.</i>  | 33. Lombok Strait.   |
| 7. Dunkerque.                 | 34. Kapala Tanah (Timor).  |
| 8. Dover.                     | 35. Torres Strait.   |
| 9. 10' W. of Ushant.          | 36. Cape Leeuwin.  |
| 10. Bishop Rock.              | 37. Eddystone (Tas.).  |
| 11. Longships.                | 38. Wilson Promontory.   |
| 12. Cape Wrath.               | 39. South Cape, N. Z.  |
| 13. Barra Head.               | 40. Rossel Spit.   |
| 14. Inishtrahull.             | 41. Bougainville Strait.   |
| 15. Tuskara Rock.             | 42. <i>Hawaii, Honolulu.</i>                                       |
| 16. Fastnet.                  | 43. Arena Point (San Francisco).                                   |
| 17. Inishtearaght Lighthouse. | 44. Panama.  |
| 18. 10' W. of Finisterre.     | 45. Cape Horn.   |
| 19. Gibraltar.                | 46. <i>Cape Pillar</i> (Magellan Strait).                          |
| 20. <i>Bonifacio.</i>         | 47. <i>Dungeness</i> (Magellan Strait).                            |
| 21. <i>Messina.</i>           | 48. Colon.   |
| 22. <i>Corinth E. W.</i>      | 49. <i>Off Sand Key Light.</i>                                     |
| 23. <i>Chalkis Pass.</i>      | 50. <i>Diamond Shoal Lightship.</i>                                |
| 24. Constantinople.           | 51. <i>Chesapeake Bay Entrance.</i>                                |
| 25. Port Said.                | 52. <i>Delaware Bay Entrance</i> ( <i>Overfalls Lightvessel</i> ). |
| 26. Las Palmas (Canary).      | 53. <i>Ambrose Channel Lightvessel.</i>                            |
| 27. Cape of Good Hope.        | 54. <i>Nantucket Shoal Lightvessel.</i>                            |

Ports marked *in italics* are connecting points in tables other than British Admiralty Tables.

The information published by several maritime countries concerning the question of distances between ports seems to be already considerable and well suited to the various purposes for which it is required.

It appears from the Proceedings of the third International Hydrographic Conference, 1932 (page 152), that some of the Delegates had the impression that the International Hydrographic Bureau was about to undertake the publishing of Distance Tables and therefore attention is invited to the fact that such procedure is not in accord with instructions given by any International Hydrographic Conference and consequently has not been contemplated by this Bureau. Furthermore, such a publication would be beyond the present capacity of the Bureau.

The drawing up of a general Distance Table for all the ports of the world and suited to the needs of all nations is difficult owing to all the different merchant marine regulations concerned when making special calculations of distances.

The general Distance Tables published by the British Admiralty for the whole world in 5 volumes is quite complete, easy to consult and seems to meet general requirements.

It is hoped that in future editions the number of connecting points might be increased by the insertion of some connecting points already selected by

other countries for their own Distance Tables and a close definition of the position of these points be given. This would facilitate the reciprocal connection of the various Distance Tables published, although the method of reckoning the distances might slightly differ from one table to another.

The Directing Committee, in accordance with the resolutions of the International Hydrographic Conferences, recommends the States that have not already done so to publish Distance Tables at their early convenience.

It is also recommended that the connecting points already in use by several countries, shown in the above list, be used, thereby connecting the particular local Tables with the general British publication already in use.

The Directing Committee, as instructed by International Hydrographic Conferences, will be glad upon request to submit its recommendations as to any other connecting points that may be necessary.

The International Hydrographic Bureau will welcome all useful information or any new suggestions that the readers of the *Hydrographic Review* may like to communicate to the Bureau on the subject of the improvement of Distance Tables.

NOTE. — In the above-described Distance Tables various values of the Nautical Mile have been used as this unit is not defined in the same manner by different countries.

Attention is called to the fact that the International Hydrographic Conference of 1929 adopted the following resolution:—

*Adoption of a uniform Length for the International Nautical Mile.*

The length represented by 1852 times that of the international prototype of the metre shall be the International Nautical Mile.

It is hoped that, in future, such standard value for the Nautical Mile will be used in the preparation of new Distance Tables or new editions of the existing Tables.

An article, in which the reader will find further indications on this subject, was published in *Hydrographic Review*, Vol. V, N<sup>o</sup> 1, Monaco, May 1928, pp. 227-232.

