The Panama Canal.—The Panama Canal, which was opened to commercial traffic on Aug. 15, 1914, has been a waterway of great importance to the ports of British Columbia, from which vessels leave direct for United Kingdom and other European ports throughout the year. As an alternative route to that of the transcontinental railway lines this water passage is of vital importance in the solution of the larger transportation problems of the Continent. During World War I the great expectations based upon the opening of the Canal were not realized, owing to the scarcity of shipping. However with the postwar decline in ocean freight rates, an increase in traffic between Canada's Pacific ports and Europe took place and, while the proportion carried in vessels of Canadian registry was comparatively small, the cargo tonnage nevertheless assumed considerable proportions. During World War II the volume of Canadian traffic through the Canal was again reduced but has since increased considerably.

## 14.—Traffic to and from the East and West Coasts of Canada via the Panama Canal, Years Ended June 30, 1946-55

Note.-Figures from 1921 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

| Year                                 | Originating on-   |   | Destined for-                                 |   |                                      | Originating on-  |   | Destined for-                                       |   |
|--------------------------------------|---|---|---|---|--------------------------------------|--|---|---|---|
|                                      | West<br>Coast   | East<br>Coast   | West<br>Coast                                 | East<br>Coast   | Year                                 | West<br>Coast  | East<br>Coast                                       | West<br>Coast                                       | East<br>Coast   |
|                                      | long tons   | long tons   | long tons                                     | long tons   |                                      | long tons  | long tons   | long tons   | long tons   |
| 1946<br>1947<br>1948<br>1949<br>1950 | $1,756,989 \\2,981,348 \\2,824,394 \\2,298,492 \\2,707,047$ | $184,850 \\ 316,898 \\ 244,121 \\ 188,506 \\ 185,076$ | $111,161\\132,521\\162,561\\154,524\\226,673$ | $\begin{array}{r} 62,516\\ 99,745\\ 67,215\\ 145,477\\ 143,395 \end{array}$ | 1951<br>1952<br>1953<br>1954<br>1955 | $\begin{array}{c} 2,910,246\\ 3,644,888\\ 3,560,925\\ 4,153,577\\ 4,109,456 \end{array}$ | 240,904<br>287,872<br>532,810<br>398,778<br>301,450 | 372,534<br>281,960<br>341,548<br>402,335<br>427,825 | $142,741 \\ 114,319 \\ 219,567 \\ 230,295 \\ 303,585$ |

## 15.—Commercial Traffic through the Panama Canal, Years Ended June 30, 1946-55

Note.-Figures from 1915 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

|                                      | Atlantic to Pacific  |   | Pacific to Atlantic                       |   | Totals                                    |  |
|--------------------------------------|--|---|---|---|---|--|
| Year                                 | Vessels  | Cargo<br>Tonnage  | Vessels                                   | Cargo<br>Tonnage  | Vessels                                   | Cargo<br>Tonnage   |
|                                      | No.  | long tons   | No.                                       | long tons   | No.                                       | long tons  |
| 1946                                 | $1,516 \\ 2,021 \\ 2,286 \\ 2,387 \\ 2,689$                          |   | 2,231<br>2,239<br>2,392<br>2,406<br>2,759 |   | 3,747<br>4,260<br>4,678<br>4,793<br>5,448 | 14,977,940<br>21,670,518<br>24,117,788<br>25,305,158<br>28,872,293 |
| 1951<br>1952<br>1953<br>1954<br>1955 | $\begin{array}{c} 2,784\\ 3,184\\ 3,674\\ 3,852\\ 4,002 \end{array}$ | $\begin{array}{c} 11,132,472\\ 15,128,995\\ 17,329,066\\ 18,377,724\\ 18,419,006 \end{array}$ | 2,809<br>3,340<br>3,736<br>3,932<br>3,995 | $\begin{array}{c} 18,940,550\\ 18,481,514\\ 18,766,283\\ 20,717,343\\ 22,227,295 \end{array}$ | 5,593<br>6,524<br>7,410<br>7,784<br>7,997 | 30,073,022<br>33,610,509<br>36,095,349<br>39,095,067<br>40,646,301 |

## Subsection 4.-Aids to Navigation

Included under aids to navigation are the lighthouses and the whole system of marine danger signals on the east and west coasts of Canada, on Hudson Bay and Strait, the St. Lawrence River and Gulf, the inland rivers and lakes, and at the entrances to harbours a very extensive system designed to provide safe navigation in all Canadian waters. In addition a pilotage service is maintained in waters where navigation is difficult; this service is described under Marine Services at p. 843. A further aid to safe navigation is found