B'.4.1.0.15

対日講和に関する本邦の準備対策関係

米側へ提出資料（英文）

（第二巻）

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外務省

四、経済問題ー将来の関係 つづき

JAPANESE SHIPPING

FOREIGN OFFICE
JAPANESE GOVERNMENT
MARCH 1948

CONTENTS

I. PRE-WAR SHIPPING

Shipping occupied a vital place in Japanese economy in the pre-war period. It played an important role in respect of the following phases of national life:

(1) Foreign trade
(2) Internal communications and transportation
(3) Employment

(1) Foreign Trade

During the 5 year period of 1930-34 the annual average volumes of Japan's imports and exports totaled 36,428,000 tons, as shown below.

Table 1: Total Volumes of Imports and Exports during the Period from 1930 to 1934 inclusive.
(Unit: 1,000 freight tons).

Year	Imports	Exports	Total
1930	24,462	8,470	32,932
1931	24,796	7,191	31,987
1932	28,292	7,927	36,219
1933	29,161	9,571	38,732
1934	30,284	11,978	42,262
Average	27,399	9,029	36,428

It cannot be ascertained just what percentage of this cargo was carried in Japanese bottoms. But there exist statistics showing as below, that in point of the value of trade Japanese ships carried 74 per cent in export trade and 63 per cent in import trade, while in point of the tonnage of ships entering and leaving Japanese ports, Japanese ships constituted 64 per cent. On the basis of these figures it may be safe to estimate that in point of quantity Japanese ships carried 65 per cent, or 23,700,000 tons per year during the 1930-34 period.

Table 2: Percentage of Japanese Ships in Foreign Trade of Japan during 1930–1934.

Year	Percentage in respect of Value of Trade		Percentage in respect of Tonnage of Ships using Japanese Ports
	Exports	Imports	
1930	76%	61%	62%
1931	74%	64%	65%
1932	73%	62%	65%
1933	73%	65%	64%
1934	72%	65%	62%
Average	74%	63%	64%

Japanese ships did not confine their activities to the transportation of imported and exported goods and passengers alone, but participated, as shown in Table 3, in the transportation of goods between third countries, thus contributing in a large measure to the improvement of Japan's international balance of payment.

Table 3: Specification of Total Receipts from Marine Transportation
(Average of 5 years from 1930 to 1934 inclusive)
(Payments in foreign currency not excluded)

	Annual Average	
Freight for Imports	¥72,464,000	35.3%
Freight for Exports	50,790,000	24.7%
Charge for Transportation between Third Countries	49,334,000	24.0%
Fare for Foreign Passengers	15,194,000	7.4%
Charterage	1,708,000	0.8%
Others	15,811,000	7.8%
Total	205,301,000	100.0%

It may be noted that the annual net receipts from shipping ranged, as shown in Table 4, from ¥100,000,000 to ¥160,000,000 during 1923–34. (The net receipts of ¥146,000,000 in 1934, for example, is equivalent to about $43,000,000 at the exchange rate of that year i.e. $29.5 per ¥100.)

Table 4: Comparative Table between Excess of Imports in Commodity Trade and Total Net Receipts from Marine Transportation (Unit ¥1,000,000):

Year	Excess of Imports in Commodity Trade	Net Receipts from Marine Transportation
1923	622	105
1924	724	118
1925	357	129
1926	447	125
1927	294	133
1928	334	138
1929	172	160
1930	162	125
1931	140	101
1932	68	100
1933	86	126
1934	142	146

(2) **Internal Communications and Transportation**

Ships are of great importance to Japan as the major means of inter-insular communications and transportation while coastwise shipping provides an indispensable service in conjunction with railways.

For instance, coal is produced mainly in Kyushu and Hokkaido. In order to carry it to the principal consumption centers—the Tokyo-Yokohama, Osaka-Kobe, and Nagoya districts—ships are depended upon to a great extent, as may be seen by the fact that in the 1930-34 period of the annual production of 34,000,000 tons, 14,500,000 tons or 43 per cent was carried by sea.

Although no figure are available regarding other commodities, it is estimated that the total volume of cargo carried by ships between ports in Japan during the same period was around 20,000,000 tons.

(3) **Employment**

In 1930–34 Japanese shipping companies employed some 50,000 officers and crew beside 10,000 on shore service. Moreover, when the number of persons employed in shipbuilding and related industries, estimated at 300,000 or so, is added to this, the total number will amount to about 400,000.

Thus, 1,000,000 persons including families depended upon the shipping industry for their livelihood. It may be said that Japan's shipping supported directly and indirectly a substantial segment of her population.

Table 5: The Numbers of Seamen in Past Years

Year	Officers	Crew	Total
1931	10,800	40,000	50,800
1932	10,700	39,900	51,600
1933	10,500	39,400	49,900
1934	10,300	38,500	48,800
1935	10,100	37,700	47,800
Average	10,500	39,200	49,700
At Present	14,125	28,515	42,641

II. PRE-WAR TONNAGE AND ALLOCATION

(1) Tonnage

The total tonnage held by Japan of ships of over 100 gross tons during 1930-34 averaged 4,170,000 tons for each year, representing approximately 6.5 per cent of the average annual world tonnage for the same period.

Table 6: Comparative Table between the Total Tonnage held by Japan and the World Total of Ships over 100 Gross Tons during 1930-1934:
(Unit: 1,000 gross tons)

Year	Japan	World
1930	4,134	68,034
1931	4,239	68,723
1932	4,230	68,368
1933	4,169	66,628
1934	4,716	64,358
Average	4,170	67,220

Table 7: Number of Ships over 4,000 Gross Tons Classified according to Types.
(Unit: 1,000 gross tons)

Year	Cargo Boats	Corgo-Passenger Boats	Passenger Boats	Tankers	Total
1930	1,700	521	31	94	2,346
1931	1,745	599	66	88	2,498

1932	1,745	603	66	115	2,529
1933	1,727	616	66	115	2,524
1934	1,769	581	66	115	2,531
Average	1,734	584	59	105	2,485
World Total					44,490

(2) Allocation

In 1934 there were on foreign service routes 791 ships aggregating 3,310,000 gross tons. Counting the chartered foreign ships in excess of 200,000 tons, ships with a total tonnage of more than 3,500,000 tons were sailing the world's sea lanes under the Japanese flag.

Table 8: Allocation of Japanese Shipping on Foreign Routes, 1934.
(Unit: 1,000 gross tons) (Note 1)

Routes	Liners Total tonnage	Trampers Total tonnage	Total Grand total
KINKAI (near seas) 1st Zone	557 (238)	674 (217)	1,231 (455)
KINKAI (near seas) 2nd and 3rd Zones	156 (35)	290 (67)	446 (102)
ENYO (far seas)	1,225 (171)	410 (63)	1,635 (234)
Total	1,938 (444)	1,374 (347)	3,312 (791)

III. PRESENT CONDITION

(1) General

Japanese shipping has sustained a deadly blow from the War. The tonnage, not counting fishing vessels and special ships (such as dredgers and tugs), dropped from the 1941 peak of 6,329,000 tons to 1,540,000 tons—a figure equal to that for 1913. Most of the ships are now operated under the control of a semi-governmental body known as the Civilian Merchant Marine Committee, while only a few are owned and operated independently.

Table 9: Present Tonnage (As of Sept. 1, 1947)

Civilian Merchant Marine Committee Vessels	No.	Gross Tons
Cargo-Boats		
Wartime Standard Type	370	803,507

Note 1. Figures in parentheses are the numbers of ships.
1st Zone: North of 21° N.L., West of 175° E.L.
2nd and 3rd Zones: North of 11° N.L., East of 94° E.L., West of 175° E.L.

Ordinary Type	194	287,158
Cargo-Passenger Boats	51	107,841
Tankers		
Wartime Standard Type	75	218,432
Ordinary Type	25	22,430
Independently owned and operated	110	42,858
Railroad Ferries	31	57,383
Total	856	1,539,609

The shipping decline is not merely quantitative. Worse still, it is qualitative. 66% of the existing ships consist of those of the wartime standard, which are far inferior to the ordinary type, while the remainder are superannuated ships as old as 22 years in average. How inefficient and uneconomical the wartime standard ships are may be indicated by the fact that the best of the class—the so-called "Improved-E" ships—are less than 50% efficient as compared with the ordinary ships of the same type in point of speed and movability (Speed: 5 against 8 knots. Movability: 8 against 11 months).

(2) Foreign Routes Ships

All the large luxury liners are gone. Of the ships that can be assigned to foreign routes there remain only five: *Hikawa Maru*, *Arimasan Maru*, *Takasago Maru*, *Kōei Maru*, and *Nissho Maru*.

(3) Internal Transportation

The current carrying capacity of the ships now held by Japan—10,000,000 tons per year (Note 2)—is utterly inadequate even to meet the need for internal transportation. Efforts are being made to switch the wartime system of land transportation of cargo back to marine transportation—but so far without success, so that railways must continue to labor under unduly heavy burdens. By the way, the railways at present possess a carrying capacity of 9,000,000 tons a month, of which 92 per cent is devoted to the transportation of coal, food, iron, fertilizers, etc., the remaining 8 per cent alone being available for the transportation of other commodities.

(4) New Era of Shipping

Reconstruction of the shipping industry on a democratic and purely competitive basis is now in progress following the dissolution of the *Zaibatsu*, and the passage of the Anti-trust Law and the Economic Decentralization Law and the consequent removal of old time leaders from the shipping circles.

Moreover, the Diet enacted in 1947 a new Seamen's Law, which embodies all the provisions of the International Convention on Maritime Labor. With reference to the hours of work, manning scale, holidays with pay, etc., the stipulations of the new law have been made even more favorable to the worker than those of the Convention in consideration of the current international labor situation.

It may be said that the Japanese shipping is entering upon a new era under new leadership and upon a new basis, outlawing both monopolization and unfair competition.

Note 2. According to the actual record in 1947, the amount of transportation by Japanese ships ranged from 850,000 to 950,000 tons per month.

IV. FUTURE NEEDS AND PROBLEMS

(1) Foreign Routes Shipping

Under the general recovery program it is expected that the year 1955 will see the war-shattered Japanese economy rehabilitated and stabilized at the level of 1930-34 period with respect to both production and consumption and to the living standard.

It is estimated that Japan will then have a population of about 82,500,000 (Note 3), and her imports of food, raw materials and other commodities will total 29,250,000 freight tons, excluding petroleum (Table 10). (If petroleum included, the total amount to be imported will be 32,250,000 freight tons.)

Obviously the country cannot rely upon foreign bottoms alone for carrying this vast volume of its import trade.

In the first place it would cost too much. Some 20 million tons of the 30 million tons, excluding the imports from Korea, China and Saghalien, will have to be brought over long distances, which alone will entail $400,000,000 in freight charges on the basis of $20 per ton on the average. This, together with the excess of imports, which will be greater than ever, would upset her international balance of payment completely.

In the second place, Japan, wholly dependent on foreign bottoms, would

Note 3. According to a most recent survey, the population in 1955 is set at 84,094,000. Therefore, the figure for the needed imports in this report may be regarded as conservative estimates.

find it extremely difficult to conduct her trade on a planned and stable basis. In fact, her trade would be constantly exposed to the danger of interruption, even total suspension, for foreign Powers might withdraw their ships from Japanese routes at their own convenience and for the reasons of their own, economic or otherwise.

It is, therefore, taken for granted that Japan will be permitted to own and operate an adequate amount of shipping such as will make her foreign trade economically safe and sound, and free from external hazzards. The question is what will be this amount. A tentative estimate has been worked out upon the following premises.

1. The scope and character of Japanese shipping are to be determined solely by the needs of her import trade.

2. Consequently all the ships are to be cargo boats of moderate speed and size, not exceeding 10,000 gross tons with the exception of a few passenger and cargo boats of 2,000—5,000 tons totalling 74,000 tons for communications with China, Korea, and other neighboring countries.

3. As regards the share of Japanese shipping in Japan's import trade, it is set at 50% in the case where the trading nations are maritime nations and at 90% in the case of Korea and Saghalien, and 80% in the case of all other non-maritime countries. It is believed that these percentages are fair and reasonable in the light of the actual records in the past.

4. It is assumed Japan will continue to import food, raw material, etc. from those countries in the same proportions as in the 1930–1934 period, except that her dependence on the United States is estimated to be much greater than in the same period.

It is on these premises that figures in Table 10 relating to the volumes of imports from various countries, and the tonnages required for carrying them have been calculated. In brief, Japan will require in 1955.

Cargo boats:	2,420,000 G/T
Cargo and Passenger boats:	74,000 G/T
Total:	2,494,000 G/T

Since 74,000 tons of cargo and passenger boats will correspond to 49,000 tons in term of cargo boats, the total tonnage in all cargo-boat basis will be reduced by 25,000 tons. That is to say, of the 6,210,000 D/W required

for carrying the Japanese imports which amount to 29,250,000 tons, the tonnage allotted to Japan comes to 3,710,000 D/W (2,470,000 G/T).

The ratio of these figures as against the amount of essential materials to he imported, namely, 29,250,000 tons (except mineral oil), is 8.5 to 100. This ratio, if compared against the ratio of 13 to 100 between the actual record of foreign routes shipping in 1934, namely, 3,380,000 G/T, and the amount of importation (except mineral oil) of that year, namely, 26,800,000 tons, will bear out that the above-mentioned figures of necessary bottoms are a conservative estimate, both in the amount of bottoms and in its ratio against the volume of trade.

Table 10: Amounts to be Imported as Classified by Goods.
(Unit: 1,000 freight tons)

Coal:	5,000	Non-ferrous Metals and Ores:	416
Iron Ore:	1,940	Paper Pulp:	266
Pig Iron:	2,475	Phosphorous Ore:	1,000
Fibre:	775	Organic Fertilizer:	1,543
Salt:	1,500	Soda:	41
Potassium:	320	Coke:	45
Fats and Oils:	256	Plate Glass:	91
Machinery:	100	Fodder:	1,300
Rubber:	96	Graphite:	80
Lumber:	3,085	Asphalt:	60
Food:	7,610	Chemicals:	129
Magnesia Clinker:	30	Sundry Goods:	1,095
	Total:	29,253	

Table 11: Amounts to be Imported and Bottoms Required as Classified by Regions

From	Importation	Bottom	Percentage of Japanese Bottoms	Japanese Bottoms	Type of Ships required
	1,000 freight tons	1,000 D/W		1,000 D/W	D/W
North & South Americas	6,683	2,470	50%	1,240	10,000
Europe	357	170	50%	90	"
Australia	1,453	340	50%	170	"

India & the Near East	1,796	515	50%	260	10,000 to 8,000
Africa	381	105	80%	90	10,000 to 8,000
French Indo-China, Siam, Malaya	2,558	380	80%	310	10,000 to 4,000
The Netherlands East Indies, Philippines, South Seas Islands	3,360	575	50%	290	10,000 to 6,000
China, Formosa, Manchuria	9,216	995	80%	800	8,000 to 3,000
Saghalien	1,926	260	90%	240	8,000 to 3,000
Korea	542	40	90%	40	3,000 to 1,000
Others	1,000	360	50%	180	10,000 to 6,000
Total	29,250	6,210 (4,140 G/T)		3,710 (2,470 G/T)	

(2) Domestic Cargo Shipping

The amount of domestic cargo to be carried by ship in 1955 is 26,700,000 tons as shown below in Table 12, and the bottoms necessary for that purpose amounts to 870,000 gross tons.

Table 12: Amount to be carried by Domestic Marine Transport as Classified by Goods
(Unit: 1,000 freight tons)

Coal:	19,580	Non-ferrous Metals and Ores:	1,624
Iron Ore:	1,100	Cement:	400
Coke:	480	Paper Pulp:	300
Pig Iron:	1,887	Soda:	30
Food:	90	Plate Glass:	30
Lumber:	870	Fertilizer:	238
Charcoal:	100		
Total:	26,729		

(3) Miscellaneous Vessels

Besides the above-mentioned ships, 690,000 tons of miscellaneous vessels such as coastal passenger boats (200,000 G/T), railroad ferries (120,000 G/T), tankers (200,000 G/T), sight-seeing ships (20,000 G/T), dredgers and tugs (150,000 G/T), will be needed.

(4) Total Tonnage Required

Thus the total tonnage, exclusive of fishing craft, aggregates some 4,000,000 gross tons.

Foreign routes shipping	2,470,000 G/T
Domestic cargo shipping	870,000
Miscellaneous	690,000
Total	4,030,000

(5) Construction and Repair Facilities

Japan will have to maintain a reasonable scale of building capacity as well as adequate facilities for repairs. With 4,000,000 tons of her own shipping and 1,700,000 tons (Note 4) of foreign bottoms expected to participate in Japanese trade, the existing shipyards would not suffice even for repair work alone. Worse still, more important portions of their installations and equipment are earmarked for reparations.

An annual ship building capacity of 6 per cent (5% for regular replacement and 1% for covering accidental losses and destruction) of the total tonnage is deemed desirable from the standpoint of both economy and efficiency. But it would be too much to expect an early realization of this goal. Only in parallel with the general recovery of the country and the improvement of the world condition, may the Japanese ship building industry be reorganized and re-expanded so as to bring its construction capacity up to the required level.

Meanwhile, since Japan would not be in a position where she can purchase many new ships from abroad, nor would she be able to build them, even if permitted to do so, the chartering of foreign vessels may be considered as a stop-gap measure for alleviating the shipping shortage.

Note 4. The figure of 1,700,000 tons is the balance between 4,140,000 G/T of the total bottoms required for the importation and 2,470,000 G/T of the Japanese bottoms as shown in Table 11.

PROBLEM OF CIVIL AVIATION IN JAPAN

FOREIGN OFFICE
JAPANESE GOVERNMENT
JANUARY 1948

With the War's end civil aviation was prohibited to the Japanese nation. Presumably this state of affairs will continue in the future. The present paper is intended to give a brief survey of various handicaps which the Japanese people are experiencing, and will experience on their road to national rehabilitation as a result of their inability to have access to the facilities of civil aviation.

CONTENTS

I. DOMESTIC CIVIL AVIATION.

It is a universal practice among the nations to utilize aeroplanes for carrying swiftly passengers, cargo and mail, to distant places beyond their national boundaries, as well as within their own domains. Japanese islands stretch from north to south describing a long arc, the distance between the northern tip of Hokkaido and the southern extreme of Kyushu being 2,100 kilometres, which is approximately the distance between New York City and Dallas. The travel by the fastest train from Sapporo, Hokkaido, to Kagoshima, Kyushu, requires at least 4 days, while special delivery mail takes a minimum of 6 days between the two cities. It will, however, be a matter of only a few hours if air service is available.

Before the war Japan's regular air service lines totalled 22,427 kilometres, covering various points, as shown on the Chart No. 1. These lines carried 94,813 passengers, 1,160,904 kilograms of cargo and 631,653 kilograms of mail in 1941. Despite intense public demand, Japan's civil aviation, owing to the priority given to military needs, was compelled to operate on a pitifully small scale. If adequate material, fuel and crew had been supplied, the above figures would have been multiplied by many times.

As a result of war damage, the transportation and communication capacity of the country, by railway and ship and by telegraph and telephone, has fallen off notoriously as shown below (Note 1). The very need of supplementing the deficiency in this respect increases the necessity of civil aviation.

It is scarcely necessary to dwell on the fact that great facilities are provided by aeroplanes not only for general transportation but also for other special peaceful purposes such as aerial photographic surveys, meteorological observations, ocean fishery aid, disaster reliefs, agricultural aid, and forest

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Note 1.

	1934	1947
Express Trains Tokyo-Sapporo	4 lines per day	2 lines per day
Express Trains Tokyo-Fukuoka	6 " " "	2 " " "
Long Distance Telegraphic Circuits connecting Tokyo and other principal places	648 circuits	382 circuits

fire surveys. The necessity of utilizing aeroplanes for these special purposes is acutely felt in Japan particularly under actual conditions, as are described in the Annex.

II. POSTWAR CONDITION AND FUTURE PROBLEMS

The war put an end to Japanese civil aviation. All her aeroplanes were turned over to the Allied Forces, and the Japan Airways Company was dissolved. Although for some time Japanese government officials were given accommodation on Allied planes in case of urgent official trips within the country, this privilege was withdrawn as from February, 1946 and no Japanese can now travel by air. And, air facilities, as explained in the Annex, being provided for the present by the Allied Forces for special purposes such as meteorological observation, disaster relief and aerial photographic survey, there remains the question of how these purposes are to be accomplished after the restoration of peace.

It is earnestly hoped that the Allied Powers will see fit to provide Japan, in one form or another, with air facilities for domestic passenger and cargo services and for other special purposes. The question will then arise as to how and by whom these facilities are to be provided.

The Allies may assign the undertaking to foreign companies and let Japan rely upon their services. They may allow Japan to operate its domestic aviation. Naturally Japanese would like to operate these kinds of aviation by themselves. There may be objection to this from the standpoint of demilitarization or for some other reasons. However, with the rapid progress of aviation technology the discrepancies in function between military and commercial planes are ever widenning, while Japan without any aeroplane factory of her own will be obliged to purchase all planes from abroad. The Allies, therefore, would be in a position to exercise the necessary control easily and completely by merely keeping tabs on the number and types of planes and the quantity of fuel imported by Japan.

Judging from the present trend of world aviation, Japanese territory is likely to be used for terminals or junction points for international air routes. It will be, if so, highly important to perfect air navigational aids facilities of the country in order to ensure the safety of international aviation. It would be an obvious obligation on her part to keep her air ports in perfect order, for which the Japanese government is of course prepared to devote its best efforts.

ANNEX

UTILIZATION OF AEROPLANES FOR SPECIAL PURPOSES

1. Aerial photographic surveys

Aerial photographic survey surpasses land survey by far in respect of speed, precision and cost. This method of survey was in use in Japan to a certain extent before the war. But now it is thought that Japan, being obliged to make every effort for a speedy reconstruction of national economy, will find all the more acute the necessity of aerial photographic surveys in various fields.

(A) Investigation of tilled and un-tilled lands

The existing agricultural land registers, which constitute the sole basis for the determination of food delivery quotas, were made scores of years ago by means of imperfect methods of survey. Through comparison with the aerial photographs loaned by the Occupation Forces, it has been discovered that the degree of inaccuracy of these antiquated land registers runs up sometimes as high as to 30 per cent. If aeroplanes were to be made available for a quick nation-wide survey of tilled lands, it would be possible to fix precise quotas for food delivery and also to determine the areas of land for future development.

(B) Other surveys

The inaccuracies of the existing maps of Japan have been frequently pointed out by the Occupation authorities. Moreover, because of the successive natural calamities and war devastation that have overtaken Japan, a wholesale resurvey of the country is needed. Without the use of aeroplanes, this work would take many years and entail a large amount of expenditure.

Of the objects of survey the following are the most urgent:

Rivers.

For flood prevention; irrigation; and planning dam constructions for hydraulic power generation.

Forests.

For timber production expansion, and planning afforestation looking to flood prevention.

Roads and Railways.

For post-disaster reconstruction and repair; accident prevention schemes; and general planning for national communication network.

Cities.

For postwar rebuilding; and future city-planning.

2. Meteorological observations

Typhoons strike the country from summer to autumn. The monsoon that blows in October to March is often very severe. These meteorological disturbances have serious effects upon crops. It is necessary to know in advance these visitations of storm and to take precautionary measures, for which meteorological observation from an aeroplane is effective.

Again, the cold current which sweeps along the eastern coast of Honshu has an important bearing upon the climate of north-eastern Japan. For instance, in the year in which the temperature of this current is low, the region will suffer from an abnormally cold weather in early summer which does immense damage as well to the crops as to the fishery along the coast. And the summer temperature of the current can be foretold by observing the amount of icebergs in the waters north of Hokkaido in the preceding winter, for which the use of aeroplanes is the most convenient method. Prior to the war, the Central Meteorological Observatory used to maintain two air bases of its own, one at Mio, Shizuoka Prefecture, and the other at Memambetsu, Hokkaido, each equipped with 3 planes for the purposes of meteorological observation. Besides, the Observatory utilized the Japan Airways Company's regular service planes, by sending thereon its own technical experts. Since the War's end, observation by air being no longer possible, balloons and radio *sonde* are used, which alone are inadequate as may be readily seen from the Chart No. 2. Fortunately for the present, Japan can rely upon the Allied Forces for aerial observation of typhoons. But when this arrangement is discontinued, Japan without even an adequate number of observation ships will be put in a difficult position for obtaining accurate forecasting data.

3. Detection of fish shoals

Bonitos, tunas, mackerels, horse-mackerels, sardines, etc. flock to Japanese waters from time to time in the course of their seasonal migrations. The catch depends largely upon timely detection of the fish shoals, which is best

accomplished by means of the aeroplane. If ordinary fishing boats are despatched on the mission, they often return without having sighted a single shoal after wasting a quantity of precious fuel, the cost of which ultimately is shifted on to the price of fish.

By employing an aeroplane it has been found possible to discover 7-8 shoals in a single flight. The actual records of the detection flights conducted from the Shimizu airfield, Shizuoka Prefecture, during the years 1935-1939 are as follows:

	1935	1936	1937	1938	1939	1940
No. of Flights	48	44	43	33	—*	48
No. of fish shoals detected	328	326	387	232	—	189

(*No flight owing to disability of planes.)

In the prewar days the method of detection by aeroplane, though strongly called for by the fishery interests, could not be extensively applied owing to the lack of material and crew for civil air navigation. It was only the three fishery experimental stations of Yamaguchi, Shizuoka and Chiba Prefectures that employed the method. These stations maintained respectively airfields at Senzaki, Shimizu and Katsuura, which were equipped respectively with 2,2, and 1 planes. The Senzaki air base, covering the Japan Sea, engaged in the detection of sardines during March - May, and horse-mackerels during September - November. The other two bases, covering the entire coastal waters of the Pacific, looked for bonito shoals moving up the north-ward course from Kyushu to the sea off north-eastern Japan in February - August; throughout the year for tunas along the Pacific coast and for mackerels in the cold currents of the Pacific and the Japan Sea; and for mackerel-pikes descending south along the Pacific coast in October - December. The Katsuura base took, in addition, the principal part in the detection of sardine shoals during October - December. (See Chart No. 3.)

4. Disaster reliefs

Japan, because of its geological and meteorological conditions, is a country where the occurence of natural calamities—earthquakes, tidal waves, floods and droughts—is very frequent, causing great damage.

On the occasion of the Wakayama and Shikoku earthquake of December, 1946, the British air force carried 11,000 suits of clothes to Shikoku,

while at the time of the Kanto floods of September, 1947, it was American planes which supplied the isolated localities with food and water. In these cases the aeroplane proved most effective for investigating the state of devastation and sending food, clothing, medical supplies and other necessaries to the stricken area.

As regards the marine disasters in the adjacent waters, Japan, if equipped with aeroplanes, would be in a better position to render speedy and effective relief. Chart No. 4 shows the figure, basing upon the statistics of the Ministry of Agriculture and Forestry, of fishing craft disasters that occurred during the 10 years from 1926 to 1935.

5. Prevention and extermination of crop pests

Today when food production expansion is the primary objective of the nation, it is desired that planes will be made available for combatting crop pests. Much can be accomplished through aerial inspection for taking preventive measures, or through spraying of infected fields for minimizing the damage. The figure, basing upon the statistics of the Ministry of Agriculture and Forestry, on the crop damage caused by blights and insects during the 9 years from 1926 to 1934 is given in Chart No. 5.

6. Forest fire investigation and prevention

Immense losses are caused annually by forest fires, as shown in Chart No. 6 based on the statistics compiled by the Ministry of Agriculture and Forestry for the years 1926 – 1935. Aeroplanes provide effective means for early detection, and for checking or putting out such fires.

APPENDIX

LIST OF CHARTS

B'4.1.0.15(第二卷)

CHART NUMBER 1

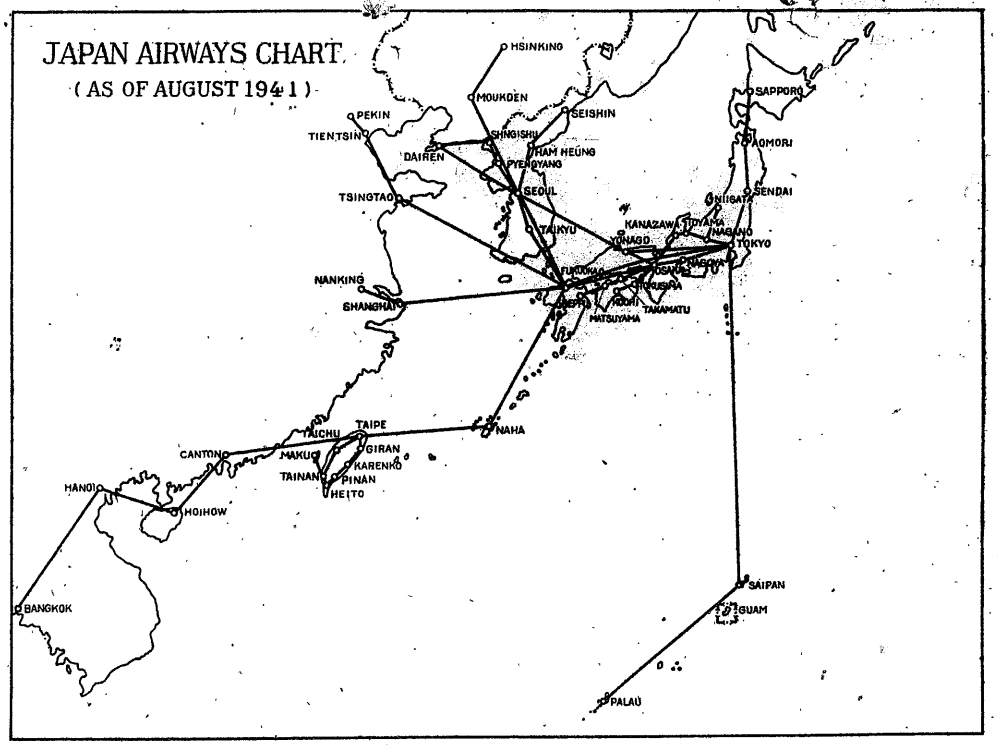
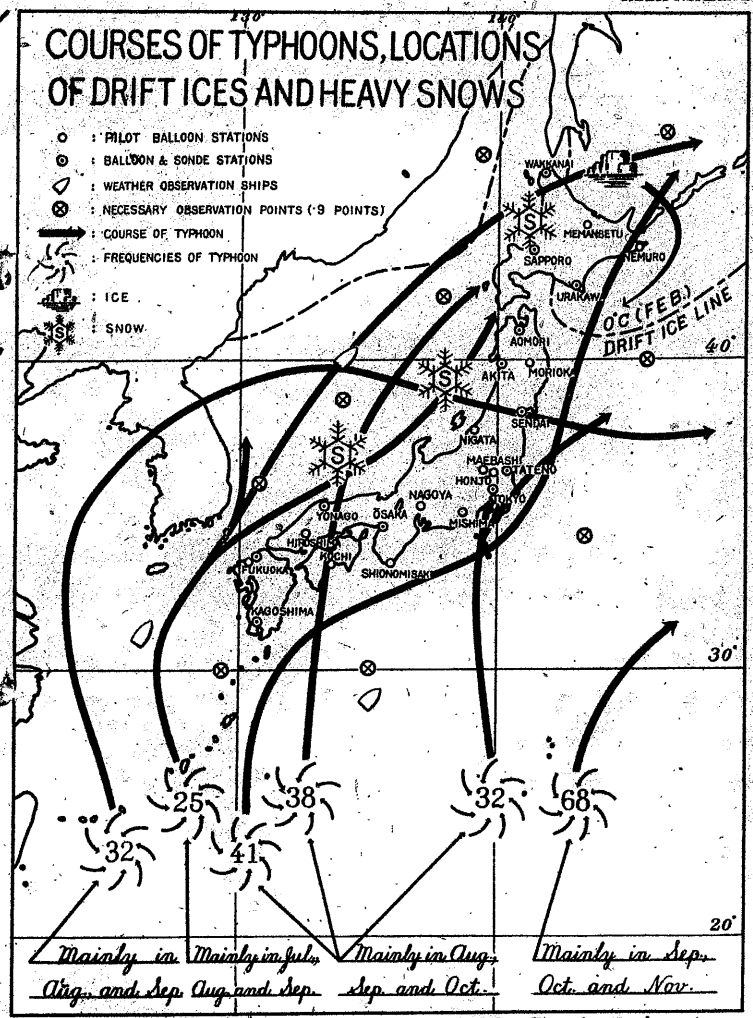


CHART NUMBER 2



1. ✳ shows the courses of typhoons which approached Japan during 1891-1943 more than 20. The numbers show frequencies.
2. ✱ shows the snow. Usually heavy off the coast of the Sea of Japan.
3. ⊗ shows a place where it is desired to make necessary aerial observation.
4. ⊘ shows a place where establishment of a weather-ship station is approved by the G.H.Q (SCAPIN 417-A July 18, 1947) There is another such point not depicted in the chart (In the northern Pacific: 39°N; 153°E)

CHART NUMBER 3

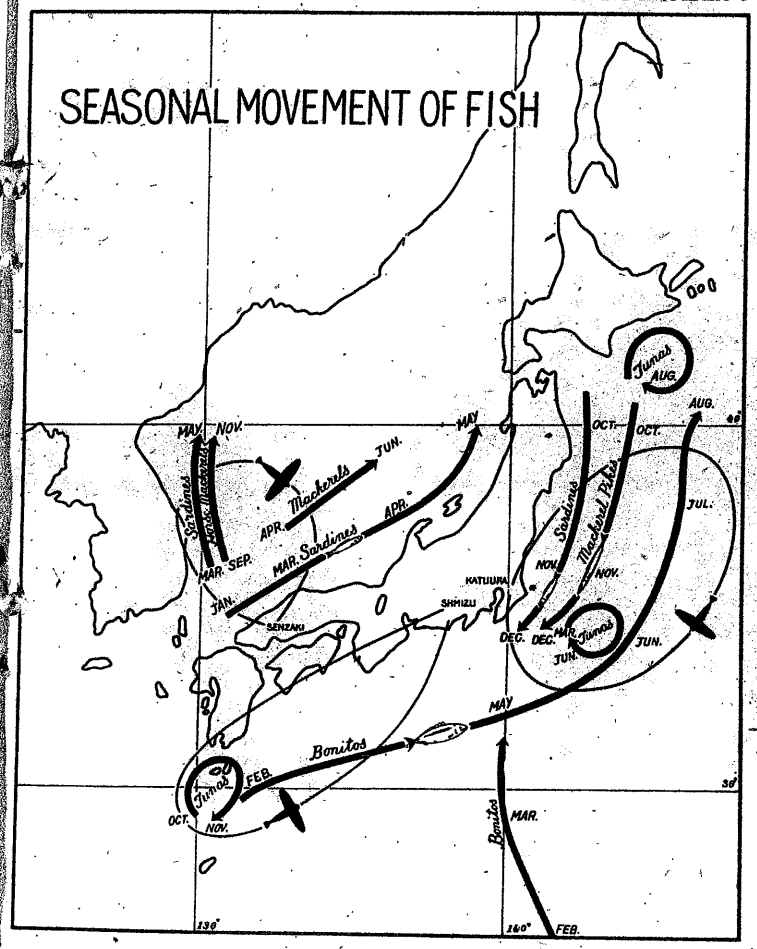


CHART NUMBER 4

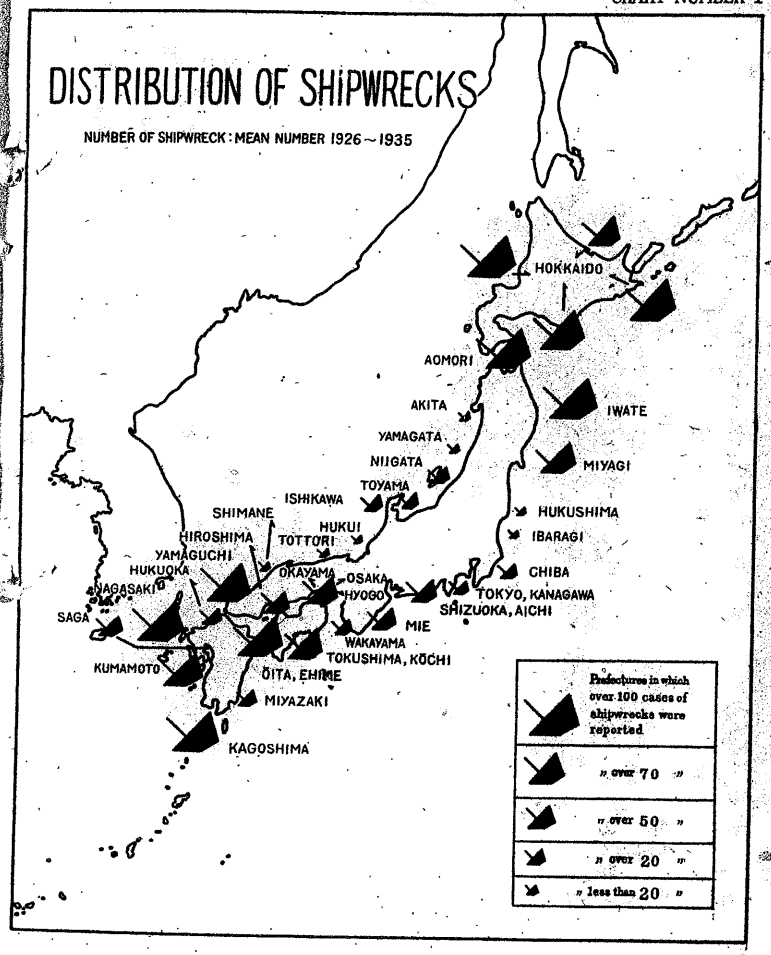
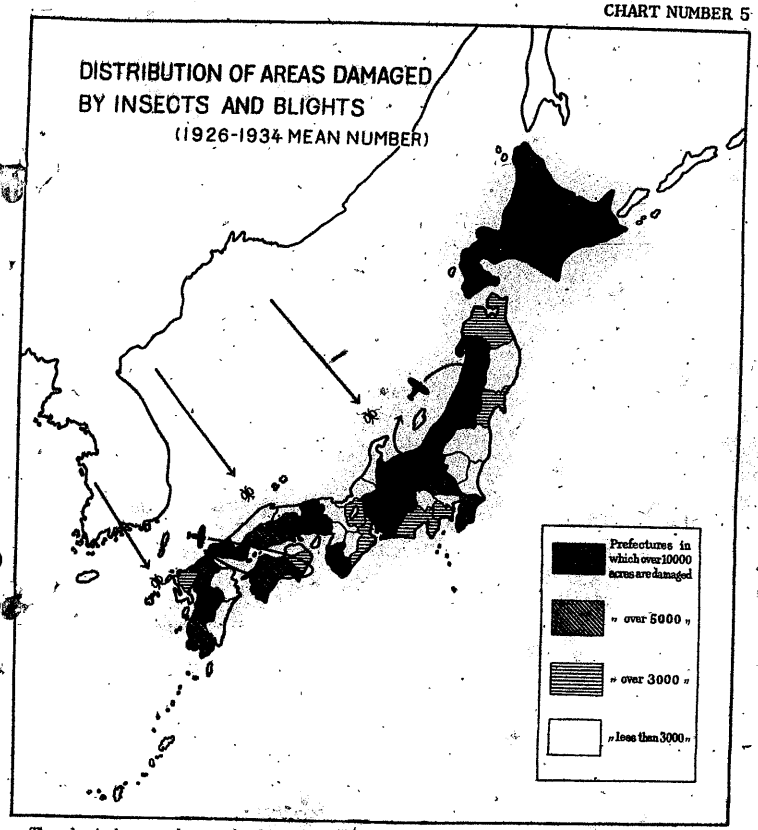
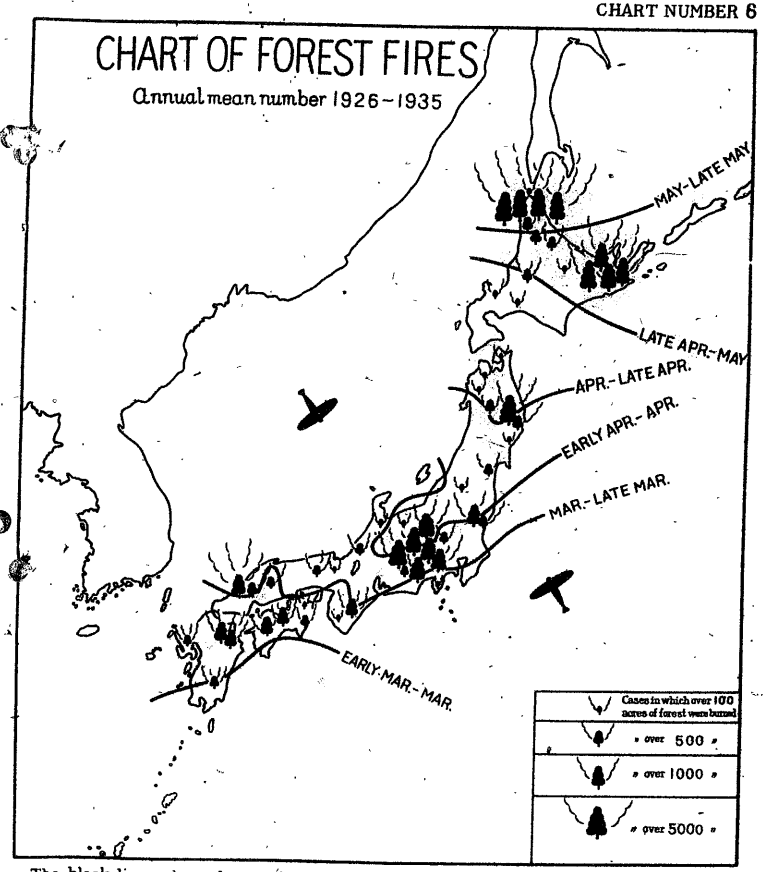


CHART NUMBER 5



The chart shows prefectures in which more than 3,000 acres of rice and wheat fields were damaged annually by blights and insects during 1926-1934 (mean number). It is especially desirable to make aerial investigations in the case of puccinia deseaae brought by loess staub from Manchuria between February-April. After making aerial investigations by means of spore-traps insecticide powders are sprayed from planes.

CHART NUMBER 6



The black lines show places where vapour tension is 6. From early March to June, this line moves from the south to the north and corresponds to areas where the dangers of forest fires are greatest.

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JAPAN'S POPULATION PROBLEM

FOREIGN OFFICE

JAPANESE GOVERNMENT

JUNE 1948

CONTENTS

I. INTRODUCTION

With her territory reduced to Honshu, Hokkaido, Kyushu, Shikoku and their adjacent islands, Japan faces a population problem more acute than ever, which is being doubly aggravated with the influx of numerous repatriates from abroad.

The problem of population is inseparably bound up with (1) economic conditions and (2) standards of living. Three antidotes are generally prescribed for over-population: (1) birth control, (2) higher industrialization and (3) emigration. The present report will deal with these questions pertaining to Japanese population in brief outlines.

It may be added that Japan's population preblem will have to be attacked not only from the numerical point of view, but also from the angle of quality. For instance, the character and the abilities and attitudes of the people constitute the key that opens the door to emigration, although the qualitative phase of the problem is not touched upon in the present report.

II. EXISTING CONDITIONS OF JAPANESE POPULATION

1. General Trend of Japanese Population

The census returns show that Japanese population as of October 1st, 1947, was 78,627,000. But the Statistical Study Group of the Economic Stabilization Board estimates that it will have attained 81,618,000 as of October 1st, 1950 (Note).

A population of 81,618,000 will represent 86 per cent over that of 1900, when Japan has no colonial possessions and depended little on foreign trade: 48 per cent over 1920: 28 per cent over 1930. (See Table I.)

The density of population per square kilometre of cultivated area is 1,405 in Japan, which compares with 907 in Britain, 803 in the Netherlands and 763 in Belgium. The significance of this comparison may still be accentuated, if the fact is taken into account that Britain, the Netherlands and Belgium have vast overseas territories. (See Table II.)

Note: This being considered underestimate, another calculation is currently being made.