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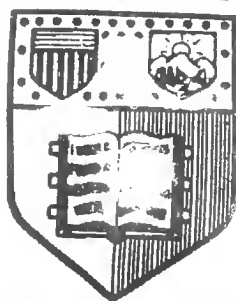
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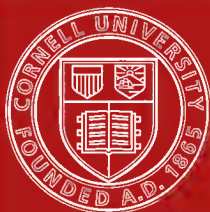
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I. GEOGRAPHY PHYSICAL AND POLITICAL

(1) POSITION AND EXTENT

THE island of Celebes¹ extends between 1° 50' north latitude and 5° 45' south latitude; its westernmost point near Cape William is in about 118° 49', its easternmost by the Limbe Strait in about 125° 15' east longitude. The island is some 800 miles long, and its total area is about 71,400 square miles. Its length is disproportionate to its breadth, which is generally between 36 and 120 miles, narrowing at one point to 18.

The political boundaries do not coincide with the geographical divisions. The Government of Celebes and Dependencies includes the island of Sumbawa and the western portion of Flores (see Handbook No. 75, *Dutch Timor and the Lesser Sunda Islands*) as well as the islands between; on the other hand, parts of eastern Celebes are included in the Residency of Ternate (see Handbook No. 76, *Dutch New Guinea and the Moluccas*). It must be remembered when dealing with official figures that the political divisions to which they refer do not correspond with the geographical areas.

(2) SURFACE, COASTS, RIVERS, AND LAKES

Surface

The shape of the island of Celebes may be compared to the letter *K* in old print. The plural form of its name shows that it was once regarded

¹ A general account of the islands off the coast of Celebes, dealing with their geography and economic conditions, will be found on pp. 29-33, in Section IV, Economic Conditions.

as several islands. From the backbone of the island there project three long peninsulas, running respectively north-east, east, and south-east, the first of which is considerably the longest. The whole island is mountainous, and individual heights such as Mt. Batang in the extreme south, and Mt. Koruwe in the centre of the island, rise to more than 10,000 ft. In the extreme north-east and south the mountains are volcanic, and solfataras and hot springs are found in Minahasa in the extreme north-east.

The part of the island that runs north and south has two parallel ranges in its southern extension with a valley between, constituting the basin of the River Walannae (Wallana), which drains into Lake Tempe. The western range terminates in the great mass of Batang, while the eastern is continued across the Salaier Strait into the island of Salaier (Saleijer, Salajar). Between the western range and the sea is an alluvial coast plain 7 to 30 miles wide, but throughout the island as a whole there is little alluvial land. North of the central block the elevation of the mountains is lower, and there is only a single ridge. In the western part of the central block is a series of mountain ridges with intervening plateaux, which run down in parallel lines to Cape Mandar.

At Cape Dondo the line of the mountains changes. The north-eastern peninsula at first runs west and east; then, after continuing for more than two hundred miles in this direction it turns to the north-east, and the volcanic region of Minahasa begins. This is the most mountainous part of the island, the highest point, Mt. Klabat, at the extreme north-east end of the island, rising to 6,560 ft. The volcanic activities of this region have had a great effect on the fertility of the soil, and the forests here are uniformly luxuriant.

In the eastern and south-eastern promontories the mountains sweep round in semicircles from the island of Peling to the island of Buton. The south-eastern promontory has much the same characteristics as the southern peninsula, and parallel mountain ranges

along the two coasts bound a swamp of no great breadth which lies along the shore.

The eastern peninsula is little known, but it appears to present the same features as the south-eastern peninsula. Along the south coast lie the Tokalla (Toekala) Mountains, more than 8,000 ft. high.

Much of the island is covered with forest, especially round the Gulf of Tolo. The vegetation grows up the mountain-slopes, and the rift valleys are extremely fertile.

Coasts

Celebes is situated in a very deep sea, of which the only shallow part is the southern section of the Straits of Macassar. The coast is, generally speaking, dangerous, fringed by coral reefs, and with many shoals and banks.

The island is deeply indented by three great gulfs: Tomini (or Gorontalo) between the north-eastern and eastern peninsulas, Tolo (or Tomaiki) between the eastern and south-eastern, and Boni between the south-eastern and southern, and in consequence of these deep indentations it has a coast-line of more than 2,000 miles.

As a rule the mountains come very close to the sea, and the strips of coastal plain are narrow, but there are some larger stretches, e. g. near Luwu at the head of the Gulf of Boni; in the neighbourhood of Macassar; and the plain of the River Tangka near Sinjai.

The numerous reefs and shoals are a great hindrance to coastal trade.

Rivers and Lakes

The rivers of Celebes are of little importance, and various exaggerated accounts of their length have been given. Their course is rapid, and their fall great. Waterfalls and rapids are very frequent, the best known being those on the River Tondano. The only rivers of any length are those which run longitudinally, and these either collect into basins of inland drainage,

like the Opa swamp or lake, or break at right angles across the mountain ranges. The Tjenrana, which drains Lake Tempe, and the Lariang, which, after flowing northward under the name of the Koro, turns westward and reaches the Macassar Strait, belong to the latter class. Others, like the Palu, flow into a longitudinal sea-inlet.

The lakes lie along the rifts between the parallel chains of mountains. In Minahasa is Lake Tondano (2,000 ft. above the sea) with a length of 9 miles and a width of $3\frac{1}{2}$ miles. The newly discovered Lake Iiloi is merely an extension of the River Poigar. In Gorontalo are Lakes Limbotto, Batudaka, and Bolano Sawu. In the centre of the island is Lake Lindu, drained by the River Gumbasa into Palu Bay; farther south in the same rift are Lakes Tempe and Sidenreng, which almost dry up during the dry monsoon, leaving tracts for the cultivation of rice and maize. East of this are the chief lakes of the island, Posso, Matana, and Towuti, which are very deep. Farther south is the swamp of Lake Opa.

(3) CLIMATE

Celebes is very hot and subject to equatorial rains. At the same time no part of the land is far from the sea, so that it is cooled by sea-breezes. Despite the heavy rainfall, there are hardly any marshes like those which give Borneo its excessive humidity, as the sloping surface of the land allows the rain to run off quickly.

The temperature ranges generally between 77° F. (25° C.) and 80° F. (26° C.), the extremes being about 90° F. (32° C.) and 70° F. (21° C.). Only on the higher mountains does it fall during the night to 54° or 55° F. (12° C.).

Celebes is under the influence of the monsoons, and the seasons are different north and south of the Equator. South of the Equator the east monsoon (north-east to south-east) blows from April to October, the west monsoon (north-west to south-west) from October to

April. North of the Equator the monsoon is south-west from April to September, north-east for the rest of the year. To the south the rainy season begins in December and the monsoon is at its height in January. To the north the force of the wind is less, the seasons are feebly defined, and the rainfall is more equally distributed throughout the year. The climate of the east and west coast varies, and to some extent the date of the monsoons. The position of the island is very favourable ; the violence of the west monsoon is broken by the near neighbourhood of Sumatra and Borneo, and the parching south-east winds from Australia affect only the southern and south-eastern peninsulas.

Macassar has a regular wet and dry season. In Minahasa the rainfall is more evenly distributed, and the country always looks green, although occasionally subject to drought. In Macassar the average annual rainfall is 116.5 in. (296 cm.) : the driest month is August (0.4 in., 1 cm.) ; the wettest, January (28.7 in., 72 cm.). In Menado the average rainfall is 105.4 in. (267 cm.) : the driest month is September (3.3 in., 9 cm.) ; the wettest, January (18.1 in., 41 cm.). At Gorontalo, south of the mountain chain on the same peninsula, the conditions are very different, the rainfall being 47 in. (119 cm.). Again, Menado is usually dry in August and September ; Kema, on the other side of the mountains, has considerable rains in those months.

(4) SANITARY CONDITIONS

On the whole Celebes enjoys a fairly good reputation for health, and is said to be the healthiest of the four great islands. Menado is extremely healthy, and epidemics are very rare there ; the heat is tempered by sea-breezes, so that the nights are cool. Macassar too is healthy, though the site is low and flat, and Kandari Bay also enjoys a good climate. On the other hand, Gorontalo is on an unhealthy site, and there are constant outbreaks of fever. Marsh fevers and dysentery are not unknown in the island, especially

in the centre ; and near Lake Posso pulmonary affections have been common. Among other illnesses known in Celebes are meningitis and beri-beri, while cholera occurs periodically in various parts, and in 1914 a violent type of malaria showed itself in Salaier. In Talauer malaria is frequent, and malignant fevers are prevalent along the coast.

(5) RACE AND LANGUAGE

It is supposed that the oldest stratum of the inhabitants is represented by the Toala, but it is uncertain whether these are really an aboriginal race. The Toala, who live near Mt. Latimojong in the southern part of central Celebes, and the Tokea and Tomuna of the south-eastern peninsula, are thought to be members of this group, though the Tokea have a large admixture of Toraja blood. The Toala and Tomuna are a very short people, much darker than their neighbours, with a distinct language of their own.

The other native inhabitants of Celebes are members of the Malayo-Polynesian family. Most of them are known by the collective name of Toraja, a name which properly belongs to a tribe in the western part of central Celebes. The Toraja, in the wider sense of the term, inhabit central, eastern, and south-eastern Celebes ; along the coast, the population becomes much more mixed in character.

The Minahasese in the extreme north are an intelligent race, capable of development. They are quite distinct in type from the other inhabitants, and it has been supposed that they have a strain of either Javanese or European blood. Their skins are lighter than those of the other inhabitants of the Dutch East Indies, and they are on the whole taller and stronger than the other inhabitants of Celebes. There are four tribes of them, as well as the more divergent Bantik^s, and closely allied with them are the inhabitants of the Sangi Islands.

Other peoples are the Gorontalese and Mandars,

who are really members of the Toraja family; and the Buginese (Bugi) and Macassars, who are nearly related to one another, and are probably descended from Toraja tribes who have come in contact with Hinduized Javanese. The Macassars inhabit a broad belt to the west of the southern peninsula; the Buginese inhabit the rest of the peninsula, and are scattered in other parts of the coasts of Celebes, Borneo, and some other islands of the archipelago. The latter especially are a seafaring tribe, devoted to trading, and have spread abroad in the Dutch East Indies, while retaining their own language and customs.

There is a certain number of Europeans, Chinese, and Arabs. The Europeans are generally found either in Minahasa or in the neighbourhood of Macassar.

Many dialects are in use among the different Toraja tribes, who cannot as a rule speak any language except their own, though that of Palu is largely used as a *lingua franca* in central Celebes.

(6) POPULATION

Distribution

It is very difficult to give precise information as to the numbers of the population in Celebes, as up to the middle of last century much of it was unexplored. Estimates of the population are accordingly largely conjectural, and differ very widely. Thus the official figures for 1914 give the total for the whole island as 4,700,000, while the *Encyclopaedië van Nederlandsch-Indië* (1917) gives the numbers as 2,700,000. The returns are further complicated by the fact that the only details which are given in most lists are those of the parts under direct Dutch government, and where a sudden access of numbers is found it is not due to an increase in the birth-rate but to the fact that native states have come directly under Dutch government. The largely conjectural figures of 1912 give for the Government of Celebes and its Dependencies, including Salaiër, a total of 1,977,455, including

1,968,765 natives, 1,808 Europeans, 6,064 Chinese, 818 Arabs; for the Residency of Menado, which includes the Sangi and Talauer Islands, a total of 700,236, including 691,102 natives, 1,210 Europeans, 6,657 Chinese, 1,262 Arabs, and 5 other foreign Orientals. In 1913 there were only three British residents, but about fifty Germans.

The population is very unevenly distributed, two-thirds of the country being almost uninhabited. The most thickly populated parts are Minahasa, which, with a population of 200,000 inhabitants, has 1.62 people to the square mile, and the island of Salaiar, which, with a population of 75,000, has more than twice this density. The coasts are fairly well populated, but in the centre of the island the small settlements are parted from one another by tracts of mountain and forest. Of the parts directly governed by the Dutch the population averaged (in 1905) 18 per square mile in the Government of Celebes and 15.8 in the Residency of Menado; but for the whole area the average density per square mile was 4 in the Celebes Government and 1.5 to 2 in the Menado Residency.

Towns and Villages

There are few towns of any size or pretensions, and they are nearly all at the two extremities. The largest is *Macassar* (*Makasser*, population, 26,146,¹ including 20,178 natives, 1,060 Europeans, 4,672 Chinese, 141 Arabs, 95 other foreign Orientals), which was a free port from 1848 till 1906.

Other towns are *Menado* (population, 10,329, including 6,669 natives, 576 Europeans, 2,784 Chinese, 300 Arabs), which is the capital of the Residency of the same name; *Tondano* (population, 10,630, including 10,329 natives, 35 Europeans, 266 Chinese), in Minahasa; *Gorontalo* (population, 6,352), on the Gulf of Tomini; *Bantang* or *Bonthain* (population, 6,889),

¹ The figures for the town populations are taken from the census of 1905.

the port of an agricultural district; *Sinjai* (population, 3,779), on the west shore of the Gulf of Boni; *Amurang* (population, 2,945), on the northern peninsula; *Donggala*, on Palu Bay; *Tombuku* (or *Sakita*), a very prosperous place; *Kolonedale* on Tomori Bay; and *Kema*, which serves as an alternative port for Menado when the wind is unsuitable for the latter.

Movement

A comparison between the official figures of 1912 and those of 1905 is useless, because the estimates have been made on different bases, those of the later date including territories which had been under native government in 1905. Between 1900 and 1905 the native population of the Government of Celebes had diminished by nearly 40,000; in Menado Residency it had increased by 5,000.

The principal causes of a low birth-rate have been the early age of union between the sexes, and the frequent absence of the men from their homes when engaged in collecting forest produce. Head-hunting has also exercised its usual disastrous effect on numbers. In all these respects, however, the regulations of the Dutch Government have greatly ameliorated the conditions.

II. POLITICAL HISTORY

CHRONOLOGICAL SUMMARY

- 1512. First Portuguese settlement at Macassar.
- 1563. Portuguese priests land at Menado.
- 1666. Dutch supremacy established by Cornelis Speelman's expedition against Macassar.
- 1667-69. Treaties concluded by the Dutch with various native rulers.
- 1681. Dutch conquest of Minahasa.
- 1702. Fort Amsterdam erected near Menado on the site of an old Portuguese post.
- 1825. Confirmation of Dutch sovereignty.
- 1904. Final pacification and subjection of southern Celebes by the expedition to Gowa.

HISTORICAL SKETCH

WHEN, about the middle of the seventeenth century, the Dutch first landed in Celebes, the Portuguese were already carrying on a thriving trade with the state of Macassar; and they succeeded in rendering the Sultan so hostile to the new-comers that, before the latter could safely establish themselves, the Dutch East India Company was obliged to undertake several armed expeditions. The last and most successful of these was that of 1666 under Cornelis Speelman, whose victory over the Sultan was complete, and was followed in 1667, 1668, and 1669 by the conclusion of a series of treaties with most of the other rulers of southern Celebes, a confederation being thus formed which acted as a counterweight to Macassar.

In 1681 the Sultan of Ternate, who held sway over the small states of northern Celebes, was likewise defeated by the Company, which thus became possessed both of Ternate with its island of Halmaheira, and of north-eastern Celebes (Minahasa); and a fort was built in 1702 near the town of Menado.

When the temporary British occupation of Dutch possessions at the beginning of the nineteenth century came to an end, the rulers of all territories affected by the treaties of 1667, 1668, and 1669 assembled at Macassar, and in 1825 signed a revised agreement, by which they confirmed the existence of their confederation and the suzerainty of Holland. The state of Boni, however, with its vassals Tanette and Soepa, stood out; and, although all three were subjugated by the end of 1825, fresh troubles arose in Boni, which were not finally overcome till 1860, while as recently as 1904 an expedition had to be sent to Gowa in the neighbourhood of Macassar.

III. SOCIAL AND POLITICAL CONDITIONS

(1) RELIGIOUS

THE Torajas are mostly pagan, while many of the Alfurs have become Christian. The Minahasese are, with few exceptions, Christian, the Protestants far outnumbering the Roman Catholics. The Buginese and Macassars are Mohammedans with a strong tincture of paganism.

(2) POLITICAL

Only the Minahasa district in the north, the department of Gorontalo, and a small area in the neighbourhood of Macassar, are directly governed by the Dutch. The Government of Celebes and Dependencies, which has its seat at Macassar, includes the whole southern part of Celebes together with various islands near the coast, the most important being the populous and fertile Salaier. The Residency of Menado includes northern and part of central Celebes. A portion of eastern Celebes is still included in the Residency of Ternate, but is of no economic importance. Otherwise, with the exception of the province of Laiwui in south-eastern Celebes, which is governed under a detailed political contract with its ruler, the whole of Celebes is under native chiefs who have made what is known as the 'Short Declaration' of allegiance to the Dutch Government series.

(3) EDUCATIONAL

Educational conditions in the Outer Possessions are described in Handbook No. 72, *Sumatra*.

IV. ECONOMIC CONDITIONS

(A) MEANS OF COMMUNICATION

(1) INTERNAL

(a) Roads

A LARGE portion of the island of Celebes is unexplored and covered with forest, and regular roads are consequently confined to a few districts. The Government has, however, devoted considerable attention to road-making. There are some good main roads in the neighbourhood of Macassar and Menado, with several teak and other bridges across the rivers. Something has also been effected in other parts of the island. For instance, a new road has been made from Wattangpone to Ujong, by the help of 12,000 days of statute labour. It is 36 miles long and 4 metres broad, with a metalled crown 1 metre in width.

(b) Rivers, &c.

The rivers of Celebes are mostly unimportant: in general they are short mountain streams with deep beds. The *Walannae* (*Wallana*), however, is navigable by native boats for a considerable distance, and has a depth of 7 ft. at Ujong even in the dry season. The *Lasolo* and *Sadang* rivers, the longest in Celebes, are only navigable by small vessels. The *Jenemeja* is a broad river, navigable by small vessels for a considerable distance from its mouth. The *Posso* is navigable by native craft up to Paluasi, but is full of rapids above. The rivers of Gorontalo are only navigable by native craft for a few miles.

The facts that no point in the island is very far from the coast, and that there is everywhere ample shelter for small craft, combine to make the sea the natural

and usual means of communication for the inhabitants. There are many small ports round the coast, between which intercourse takes place by boat. A typical port of the kind is Badjowe, the outlet for Wattangpone, where there are 140 praus, each capable of loading ten tons.

(c) *Railways*

There are no railways in Celebes, but a steam tramway connects Macassar with Bonthain.

(d) *Posts and Telegraphs*

In 1914 there were 53 post offices on the island and 95½ miles of telegraph wires. The services are adequate to the districts of which Macassar and Menado are the centres; elsewhere the country is too sparsely populated to require a more extensive service.

(2) EXTERNAL

(a) *Anchorage and Ports*

Although for the most part there is deep water close inshore round the coast of Celebes, the approaches to the island are rendered dangerous to large vessels by the reefs and shoals which almost everywhere surround it.

The harbour of *Macassar* affords safe anchorage at all seasons; there is a depth of 60 ft. of water at the entrance, and the rise and fall of the tide is 5 ft. Steamers load and discharge at a wharf, about 1,640 ft. long, belonging to the Government. There is also a Government pier, about 250 ft. long, reserved for Government vessels, and another, about 450 ft. long, belonging to the Asiatic Petroleum Company and used by their vessels. Harbour and anchor dues have been collected at Macassar since August 1906: for fifty-eight years previously it was a free port.

In 1911 the Government authorized harbour improvements which it was estimated would cost fls. 7,500,000. The actual expenditure in 1911, 1912, 1913, and 1914 was fls. 68,116, fls. 428,366, fls. 1,084,055, and

fls. 1,326,016. The plans included the construction of a quay 1,804 ft. in length, alongside which ships of 29½ ft. draught could moor at low tide. In 1914 an additional quay of the same length was begun, capable of accommodating even larger ships. Between the new quay and the old pier a stretch of nearly 1,000 ft. was reserved for the construction of a harbour for lighters, the plans for which were subsequently altered in order to provide better protection against the prevailing winds. When the new works are complete, the length of wharf available for ships of 30 ft. draught will be 3,608 ft., and this may subsequently be extended by another 787 ft.; there will be a further 1,722 ft. of wharf available for ships of 23 ft. draught, and 1,148 ft. of quay for lighters. There will also be ample room for sheds, goods and storage yards, warehouses and stores. When there was a glut of copra in December 1917 owing to lack of freight room, it was possible to store about 100,000 tons at Macassar.

The following table shows the nationality and numbers of steamships, engaged in foreign trade, which entered the port of Macassar in 1912:

Nationality.	With Cargo.		In Ballast.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
British . . .	3	9,192	4	15,266
Dutch . . .	394	653,064	12	19,919
German . . .	73	136,928	4	11,190
Totals . . .	470	799,184	20	46,375

In 1914 648 vessels called, with a total tonnage of about 968,683.

At *Menado* there are no docks or wharves, and vessels have to load and discharge by lighter. About 100 yards from the shore the bottom shelves suddenly, the depth increasing from 7 to over 20 fathoms. The harbour is exposed towards the west, and when the *barat*, a strong south-west wind, is blowing there is a heavy swell. Ships consequently have to anchor by the stern, and be ready to get up steam and put to sea at half an hour's

notice. The praus used for lightering are very small and primitive, largely owing to the fact that the bar at the mouth of the Menado river is only covered by about one foot of water at low spring tides, and at all times constitutes a danger which prevents the improvement of the boats. The arrangements at the water-side at Menado are also primitive. In fair weather the praus unload on the sloping shore outside the bar, and coolies carry up the goods. In rough weather the praus pass up the river and discharge alongside a bad sloping quay wall of basalt, at which goods are also loaded for export. There are two custom-houses.

It has been proposed to canalize the Menado river and construct a wharf on the left bank for some 300 yds. up stream. The river and the large sand-bank before its mouth would be dredged so as to give a depth of 10 ft. at low spring tide, and a dredging machine would be stationed at the port. Two piers would have to be built to protect the entrance to the harbour in the *barat* season, and prevent it silting up.

As regards intercourse with China, Japan, and America, Menado, which is on the direct route from Hong Kong to Port Darwin (Australia), has a much more central position than Macassar. If the harbour could be made suitable for ocean-going vessels, Menado should develop a great export and transit trade in copra from the Sangi and Talaur Islands, and from Talisse, a small island off the north coast of Minahasa; in copra, ebony, and mace from Amurang, Kwandang, and other ports of the north coast of Celebes; in copra, rattans, ebony, and gum damar from Gorontalo and the Gulf of Tomini generally; and in spices from the northern Moluccas and New Guinea.

On the other hand, it has been suggested that Menado might be abandoned as a harbour in favour of the other ports in the neighbourhood. *Kema*, 19 miles east of Menado, beyond Cape Polisan, claims to possess a good harbour available in all seasons, and the boats of the Koninklijke Paketvaart Maatschappij already touch there in preference to Menado from

December to February. Recent reports, however, describe Kema as inconveniently placed and exposed to a heavy swell during the east monsoon. Another rival is *Amurang*, to the south-west, which is said to have a much better protected roadstead than Menado; it has been proposed that all export business should be transferred thither, but this plan does not seem likely to be carried out.

Gorontalo has an indifferent harbour, formed by an inlet in the mountainous south coast of the northern peninsula. In the middle of the bay there is a depth of 40–70 fathoms, but the two rivers flowing into it bring down a quantity of sand, so that in some parts the depth decreases to 3 ft. and even less. It is proposed to improve the accommodation by building a dam from the east side of the bay to an island which has been formed by silt in mid-stream. This would confine the river to the west side of the channel, and a harbour would be formed for praus. The mountains here rise so steeply from the shore that very little room is available for storage. Only one prau can unload at a time, by means of a landing-board from the threshold of the warehouse. The custom-house is very primitive, and a road which was constructed at great expense from the custom-house to Gorontalo is frequently damaged by land-slides. Even without these drawbacks, however, Gorontalo would not have the prospects of Menado, though it possesses one advantage in an ample labour supply. It has no hinterland, and its exports—for example, ebony, gum damar, and rattan—come mainly from the coasts in the immediate neighbourhood. Kapok-trees grow well and might be made profitable. The export of copra from Gorontalo is less than a quarter of that from Menado.

From *Boni*, which gives its name to the great gulf in the south of the island, are exported maize, rice, fine woods, coco-nuts, copra, deer-horns, hides, arms, pottery, and carved wood. This old port is typical of many in Celebes in the variety of its trade, but the total value is inconsiderable.

Bonthain, *Sinjai*, and *Pare Pare*, on the south western peninsula, have good anchorages. *Palu Bay* is likely to develop into an important harbour. *Palu* lies at the base of the long northern peninsula, where the neck is not more than 18 miles across; it is proposed to cut a canal connecting *Palu* on the west with *Parigi* on the east. *Donggala*, at the entrance of *Palu Bay*, is growing rapidly, and speculators expect it to rival *Macassar* in importance when the canal is completed.

There are several other bays affording anchorages, such as *Kwandang* and *Dondo* on the north coast, *Tambu* on the west coast, *Tomori*, *Kendari*, and *Staring* on the Gulf of *Tolo*, *Mengkoka*, *Palopo*, *Usu*, and *Sopang* on the Gulf of *Boni*, and *Posso* and the Gulf of *Poh* in the Gulf of *Tomini*.

(b) *Shipping Lines*

In January 1914 the Koninklijke Paketvaart Maatschappij instituted a weekly express service between *Surabaya* and *Macassar*, with an extension once a month to *Menado*. Praus make the trip from *Macassar* to *Surabaya* in about eight days. Before the war the Deutsch-Australische Dampfschiff-Gesellschaft used to call at *Macassar*, where it had an agency, and was obtaining a large share of the carrying trade. Norddeutscher Lloyd steamers used also to touch at *Macassar*, and had agencies there and at *Menado* and *Gorontalo*. The Java-China-Japan Line and the Ocean Steamship Co. (Alfred Holt & Co., Liverpool) both have agencies at *Macassar*, the latter being associated with the Nederlandsche Stoomvaart-Maatschappij Oceaon of Amsterdam. The Japanese South Pacific Trading Company takes copra in its own motor-schooners direct from *Menado* to Japan. A representative of the Nippon Yusen Kaisha visited *Menado* recently, and in 1917 the Nanyo Yusen Kaisha was endeavouring to obtain the consent of the Japanese Government to run a regular service to *Menado*, beginning early in 1918.

(c) *Cable and Wireless Communication*

Macassar has been connected by a Dutch cable with Banarukan in Java, via Buleleng on Bali Island, since 1888. Another Dutch cable from Balik Papan in Borneo to Kwandang and Menado was laid in 1903. There are also cable connexions between Kema and Ternate, and along the coast from Kema to Gorontalo.

There is a wireless station at Macassar.

(B) INDUSTRY

(1) LABOUR

The dearth of labour is most acutely felt in the Minahasa district. There the boys mostly become clerks in Java or join the army, and the women far outnumber the men. On March 8, 1915, there were 1,795 contract coolies in the Residency of Menado, comprising 1,260 Javanese men, 120 Javanese women, and 415 Gorontaloese. In future it may be possible to supply the labour so badly needed at Menado by drawing yet further on Gorontalo. The conditions under which contract labourers work are described in Handbook No. 72, *Sumatra*. Agricultural wages are low, about 4*d.* being paid for a day of ten-hours. The Government has the right to demand statute labour from the natives at the rate of one day in seven.

The opium monopoly has an important bearing on the problem of labour, for while opium does not appear to affect the industry of the Chinese it utterly demoralizes natives who become addicted to its use. The monopoly was applied to the whole of Celebes in 1907, and although in Macassar the consumption of opium is permitted to all classes, in Menado and throughout the greater part of the island it is absolutely forbidden to the natives.

(2) AGRICULTURE

(a) Products of Commercial Value

Cereals.—The staple food of the natives is rice, but it is carelessly grown, mostly on the 'dry' system. With care and better irrigation the output could be greatly increased and a higher quality produced. Maize is grown in the hills, and the sago-palm in the marshy areas.

Coffee.—The coffee grown in Minahasa has a high reputation, ranking with the best in the Dutch East Indies. In 1914 there were in Minahasa about 2,180 bouws¹ (3,815 acres) planted with coffee, either alone or with other crops.

Copra.—A quantity of copra is produced on the island, but the preparation of it is unsatisfactory. In the north the natives persist in the production of a mixed low-quality article, with the result that Minahasa copra has a bad name in the market. The chief demand is for sun-dried copra, which fetches a good price, and the Government has been urged to compel the natives to abandon their primitive method of roasting it in ovens. The Resident, however, has been reluctant to interfere. The difficulty is that there is practically no dry season in Minahasa, such as obtains at Macassar and in Java, so that there is little opportunity for drying the copra in the sun. On the other hand, it is urged that a Dutch company on Talisse has made very good sun-dried copra, and that by systematic supervision and more careful treatment a much better quality could be obtained in Minahasa.

At the moment the prospects of copra export to New York and San Francisco are bad, owing to the lack of freightage. In 1917 all the godowns at Menado were crammed with copra; prices were falling, but firms continued buying and sending to Macassar,

¹ 1 bouw = $1\frac{3}{4}$ acres.

where also there was a glut by the end of the year. The future prospects depend largely on the kind produced, for America wants only the best and will certainly not take inferior mixed. If, however, the quality can be improved, Menado may expect to do an excellent trade in copra, not only with America but with Europe and Japan, and likewise to export the klapper (coco-nut) oil prepared in Minahasa. The Oliefabriek Insulinde has been considering plans for setting up a factory at Menado.

Cotton.—Cotton cultivation in Celebes, Saleier, &c., has, at any rate for the time being, been killed by the importation of superior European yarn.

Kapok.—The natives of southern Celebes have shown remarkable energy in the cultivation of kapok. The kapok-tree (*Eriodendron anfractuosum*) grows much better when planted in bulk with maize or similar food crops between, than when planted along the roadside or as a support in pepper gardens, as is usual in many parts of the Dutch East Indies. It is also hoped to cultivate kapok on a large scale in Minahasa, where there were 10 bouws planted with the tree in 1914. There is a great demand for the produce in America. It is hoped that the establishment of oil factories like that opened by the firm of Manders, Seeman & Co. at Macassar in 1913 will enable the native to obtain a good price for his kapok seed.

Rubber.—In 1914 rubber, chiefly *Hevea brasiliensis*, was being grown on six estates in Menado, and occupied 635 bouws (1,111 acres) either alone or mixed.

Sugar and tobacco have been successfully grown.

Live Stock.—The chief domestic animals are buffaloes, which are used for ploughing and can be bought for £2 each. Horses of an excellent type, sturdy though small, are much used for transport, and cost a little more. Sheep and goats are rarely seen. The Alfurs eat pork, but the Mohammedan Macassars and Buginese are mainly vegetarian. Wild deer are plentiful and are hunted and eaten by the Torajas.

(b) Methods of Cultivation

The method of cultivation practised by the natives is primitive, and, where not under direct control of the Dutch, consists in merely turning over the surface of the soil to a depth of 10 or 12 inches. Sometimes light ploughs are used, but more often the soil is merely broken up with bamboo rods. In Minahasa, however, conditions have greatly improved. Artificial irrigation is backward, but an engineer has been appointed to prepare plans for an elaborate system for the whole island. The Torajas have adopted 'wet' cultivation of rice, where this method has been shown to them.

(c) Forestry

In the forests teak and ironwood abound, and gum-bearing and oil-producing trees of many kinds, such as the gum damar and badu, are numerous. As yet there is little official control over the timber, but Government exploitation of teak has begun on Muna island.

(d) Land Tenure

According to the native system, land is held in common by the tribe. In practice the individual retains his right in the land he occupies so long as he continues to cultivate it. If he fails to do so it reverts to the tribe. For further details see Handbook No. 72, *Sumatra*.

(3) FISHERIES

Fishing is one of the chief occupations of the Buginese and Macassars, who consume or sell locally most of the fish they catch. In the Sangi Islands, north-east of Celebes, fishing is also the occupation of a large proportion of the inhabitants. Large quantities of dried fish are imported into Celebes from south and east Borneo, and there is also some export, which amounted in 1913 to nearly 500 metric tons. The pearl fisheries on the east coast of Celebes are important, but the Celebes Trading Company, an Australian concern, devotes its

attention chiefly to those in the neighbourhood of the Aru Islands, which are the principal pearl fisheries in the Dutch East Indies.

(4) MINERALS

Coal has been found in the neighbourhood of Macassar and to the west of the Latimojong Mountains, but has never been worked. The Government has, however, since 1912 reserved for its own exploitation two large areas in southern Celebes, where coal is known to exist. It maintains a stock of about 5,000 tons of coal at Macassar, imported from Cardiff and Sumatra.

Gold, so far as is known at present, constitutes the chief mineral wealth of Celebes. It is washed in primitive fashion by the natives in several districts, and in some parts ancient underground galleries are found, proving that it was worked on a considerable scale in former times. Eight concessions for gold-mining have been granted in the Residency of Menado. The most important mines are those of Paleleh and Totok, which in 1911 yielded gold to the value of £67,650 and £56,650 respectively. Both undertakings are said to be under-capitalized. Since 1912 the Government has reserved territory at Sassak for official gold prospecting. *Silver* is always found in conjunction with the gold, and in 1907 about three tons were produced in the island.

Copper is found near Gorontalo and worked by the natives, as are also *tin* and *nickel*, which occur in small quantities. The occurrence of *petroleum* has been verified in the Sadang valley in the north of the south-western peninsula, and near Lake Tempe, but the mineral resources of Celebes are as yet largely unexplored. Lack of labour and transport will be the chief obstacles to development for many years to come.

(5) MANUFACTURE

The Government salt monopoly does not apply to Celebes or to the adjacent islands, and a regular salt

industry exists in the southern Residency. Near Macassar and on the island of Saleier salt-pans have been constructed, which in the dry season (August to October) provide work for numerous hands. Salt from this district supplies not only the whole of Celebes, but to a great extent the Moluccas, and also Portuguese Timor. Dutch Timor evaporates its own salt. In favourable years the production of salt in southern Celebes and Saleier averages some 5,000 tons, and the price varies from about 75 cents to fls. 6 the picul (133·3 lb.). In 1913 the Residency of Menado imported 1,262 tons of salt for private consumption (other than industrial).

Macassar oil is extracted by the natives from the seeds of the badu, but the export is diminishing, and at all times much of that sold by hairdressers was spurious. Domestic native industries include boat-building, smith's work in gold, silver, iron and copper, the plaiting of bamboo and rattans, wood-work, both useful and ornamental, and pottery-making.

There are several oil-mills, a rice-mill, a soap factory, several ice and mineral-water factories, shoe factories, and brick-works.

(C) COMMERCE

(1) DOMESTIC

(a) *Principal Branches of Trade*

In almost every village in Celebes an active trade is carried on in copra, rattan, wax, gums, resins, oils, and hides. Villages on the coast deal also in dried fish, trepang, and tortoise-shell. As in Java, the traders are Chinese, the natives living by the sale of their produce, usually on terms of barter.

As the Dutch bring the mountain districts under control they make the natives leave their fortified villages on the hills and live in *kampongs* by the river banks. They are thus more easily controlled and they

also get better crops out of the level soil. Each new *kampong* has its *aloun-aloun*, a small stretch of turf, where markets are held.

(b) *Organizations to promote Trade and Commerce*

There are Chambers of Commerce at Macassar and Menado. These are official institutions, each consisting of five members, commercial men of standing appointed by the Government. There are also commercial unions (*Handelsvereenigingen*) at these towns.

(c) *Foreign Interests*

During the ten years that preceded the war, British merchants appear to have neglected Celebes as a field of operation, while German firms were obtaining a footing at all the ports, and, operating through nominally Dutch companies, were establishing a dominating financial interest both in import and export trade. Even British goods were largely imported through German firms, who held agencies for British manufacturers. The German Government maintains a vice-consul at Macassar and also at Menado, the British at Macassar only.

Very considerable attention is being paid to Menado as a future centre by the Japanese, who in this are following the efforts of the Dutch to advance the development of the place. Two important Japanese firms, namely the South Sea Trading Company (*Nanyo Boyeki Kaisha*) and the South Pacific Trading Company, are established there in large offices, and appear to have hopes of extensive business in north Celebes. Japanese influence in Minahasa is steadily increasing, and the Japanese already hold concessions for klapper (coco-nut) plantations well situated in the neighbourhood of Kema and elsewhere on the coast.

It is evident that the Japanese are alive to the future importance of Menado, and intend to take full advantage of it, and it is to be expected that the Germans will follow their example.

(2) FOREIGN

(a) *Exports*

Quantities and Values.—The exports from Celebes and Dependencies to foreign countries were valued approximately at £2,352,600 in 1913, but full and precise statistics are not available.

The vegetable products exported include coffee, copra, gum copal, gum damar, rice, maize, cajeput oil, cloves, mace, nutmegs, and rattans. The figures given in the official report published at Batavia in 1915 are inconsistent, sometimes referring to individual ports, sometimes to the island of Celebes, sometimes to Celebes and Dependencies. The export figures¹ given for Macassar port in 1913 were 1,630 metric tons of coffee grown by private owners, 2,622 metric tons of copal resin, 913 metric tons of gum damar, 615 metric tons of husked rice, 503 metric tons of kapok, 97 metric tons of mace, 243 metric tons of nutmegs, and 10,161 metric tons of rattans. In the same year 989 metric tons of gum damar were exported from Malili, and 755 tons from Gorontalo, while 2,541 tons of rattans were exported from the latter port. The export of maize from Celebes and Dependencies amounted to 7,717 metric tons. Figures are not available for the export of copra in 1913, but in 1914 37,258 metric tons were exported from Celebes and 33,398 metric tons from Menado. The export of mace from Menado in 1913 amounted to 102 metric tons.

Among animal products, buffalo and cowhides and deerskins are exported, and deer-horns. There is also an export trade in shells. The value of mother-of-pearl exported in 1913 was £12,600, while trocas, green snail, and other shells together amounted in value to £33,000, and turtle and tortoise shells to £15,000. There is an important export trade in bird-of-paradise skins. In 1913 the value of the skins exported was £127,359.

Countries of Destination.—Germany was the largest

¹ Figures for values are not available.

purchaser of better-class rattans, inferior qualities going to Hong Kong and Singapore. A large proportion of the gum copal is cleaned and sorted at Singapore before shipment to Europe and America. Quantities of copra go to Japan for soapmaking and similar purposes, but it is doubtful if this traffic will retain its importance after the war. The South Pacific Trading Company takes copra direct to Japan in its own motor schooners. About 80 per cent. of the deer-horns exported in 1913 went to Holland and Germany, while the younger horns are exported to China, where they are used as medicine and food. A product exported exclusively to China was the seaweed agar-agar. Holland was the chief purchaser of kapok and sandalwood. Of the 94,888 bird-of-paradise skins exported in 1913, 65,199 went to France, 13,946 to the United Kingdom, 7,706 to Germany, and 6,296 to Austria-Hungary. The mother-of-pearl shell went chiefly to France, the United Kingdom, and the United States; trocas and green snail shells chiefly to Austria-Hungary, France, and Japan, and turtle and tortoise shells to Japan, Hong Kong, and Singapore.

(b) Imports

Quantities and Values.—The total value of the imports into Celebes and Dependencies in 1913 was about £1,695,000. The chief articles imported are cotton, woven and unwoven, and cheap manufactured goods for domestic use. According to the British Consular Report, cottons imported at Macassar in 1913 amounted in value to £316,754, yarns to £169,740, woollen goods to £1,861. Rice is largely imported. In 1913 the Celebes Government imported 16,314 tons of rice from countries outside the Dutch East Indies, and Menado Residency imported 20,435 tons.

Countries of Origin.—The imports into Menado Residency are mostly carried in vessels of the Koninklijke Paketvaart Maatschappij, and the great bulk of them come from Singapore.

(D) FINANCE

(1) *Public Finance*

The finances of the Dutch East Indies as a whole are dealt with in No. 71, *Java and Madura*.

(2) *Banking*

The Javasche Bank has an agency at Menado and a branch at Macassar, where there are also branches of the Hong Kong and Shanghai Banking Corporation, the Chartered Bank of India, Australia, and China, the Mercantile Bank of India, the Nederlandsche Handel-Maatschappij, the Nederlandsch-Indische Escompto Maatschappij, and the Nederlandsch-Indische Handelsbank. German merchants formerly obtained all the facilities they desired from the Nederlandsche Handel-Maatschappij and other Dutch concerns. It has been proposed, however, to open branches of German banks both at Macassar and Menado after the war.

(E) GENERAL REMARKS

That Celebes possesses great potential wealth is certain, and there is every reason to suppose that in future its resources will be developed more rapidly than in the past. Commercial energy is being particularly directed to the northern part of the island, and it is to be expected that Menado will rapidly grow in importance.

A warning, however, should be added. It is true that the prospects of Celebes in respect to copra production are excellent. Moreover, Menado is on the direct route from Hong Kong to Australia, and Macassar occupies a central position in the Malay Archipelago. But it must not be forgotten that the coco-palm can be grown in profusion on practically every island in the Dutch East Indies, and it is probable that in a few years places little known at present will have become important centres of export. The rapid

multiplication of motor craft, which is a certainty of the near future, and the possibility of development in aerial transport, will be important factors in the development of the archipelago, and it is difficult as yet to foresee the manner in which they may modify the direction of trade.

ISLANDS CONNECTED WITH CELEBES

Sangi Islands

The Sangi (or Sangir) Islands continue the north-east extension of Celebes towards Mindanao; they are set upon a long narrow ridge on the volcanic band, with great depths on both sides of them. They are volcanic, but fringed with recent coral formation (*karang*). Some of the volcanoes are still active, including Mount Abu (or Awu) on Sangi, which has had recent disastrous eruptions (1892, &c.), and the island of Ruang, west of Tangulandang. The most important islands are Sangi, Siau, and Tangulandang. Sangi (27 miles by 9 to 17 miles) has an area of about 300 square miles; it is mountainous in the north, but attains only moderate heights in the south; the coast is generally steep. Siau is extensively cultivated, containing nutmeg and coco-nut plantations. Apart from agriculture and fishing, its chief industry is the production of *kofo*, a fibre resembling Manila hemp, which is obtained from the wild banana-tree, and woven by the women. The volcanic soil makes both these islands exceptionally fertile. Tangulandang has two peaks of about 2,500 ft., the island sloping from them to the westward. Its principal industry is boat-building. Timber is plentiful on all the islands of the group.

The population of Sangi is about 45,000, mostly Christians; that of Siau, 24,000, including 8,000 Christians; that of Tangulandang, 6,000, of whom about half are Christians.

The chief port is Taruna, on Sangi, which is regularly

visited by steamers of the Koninklijke Paketvaart Maatschappij. Copra and rattans are sent to Menado for trans-shipment.

Talaur Islands

The Talaur (Talaut, Talauer) Islands lie to the north-east. The chief of them is Karkelong, or Karekelang, which is 39 miles in length by 15 miles in width. Its southern part is said to reach a height of 2,300 ft. The coast is generally steep, except on the south, where it is fringed by a reef nearly a mile wide. Esang Bay and several others afford anchorage. Karkelong is divided by a strait of about a mile in width from Salibabu, which sometimes gives its name to the group. The inhabitants are described as a timid, inoffensive race of semi-pagans. The islands produce copra and various fibres, which the women weave.

Schildpad Islands

The Schildpad or Togian Islands lie in the Gulf of Tomini, between Cape Panjang in the north-eastern peninsula and Cape Api in the eastern peninsula. They run for nearly 80 miles east and west. The chief islands, Talata Koh, Togian, and Batu Daka, are separated by such narrow channels that they practically constitute one island, and the passages between them are difficult for navigation. Batu Daka is almost uninhabited. The other islands are hilly and densely wooded. Detached from the rest of the islands is Una Una (Nanguna), with an active volcano, the lower slopes of which are very fertile. The natives, who number about 2,000, are engaged in cultivating coco-nut trees, collecting the eggs of the *malco* (a variety of brush turkey), and fishing for turtle and trepang along the coasts.

Banggai Archipelago

The Banggai, or Peling, group lies off the eastern peninsula of Celebes, and belongs politically to the Residency of Ternate. The four chief islands are

Peling, Banggai, Labobo, and Bangkulu. All these are inhabited, but, with the exception of part of Peling, they are very imperfectly known. Peling is greatly indented, and is mountainous and wooded. It has many bays affording anchorage, and others obstructed by reefs. The population of the group is about 20,000; along the coasts are a mixed race of Mohammedans, and in the interior are uncivilized pagans who avoid the other inhabitants. Copra is the chief product, but the islands are rich also in valuable timber, especially ebony. Trepan and turtle abound. Mica is found on Peling. Trade consists in bartering produce for textiles.

Sula Islands

The Sula, or Sulla, Islands lie immediately to the east of the preceding group, and like them belong to the Residency of Ternate. They comprise three of considerable size, Taliabu, Mangola (Mangoli), and Sula Besi, and several smaller ones. The first two, together with Lifamatula, form a chain extending east and west for about 135 miles. They are high, mountainous islands, thickly wooded, but thinly populated. Taliabu, the largest, is little known. It has mountains 3,000 or 4,000 ft. high, and contains hot springs. Mangola, the middle island, is 65 miles long; it is narrow and generally high, the highest point being Mount Buja, in the west. Lifamatula, the eastern island, is uninhabited. More important than these is Sula Besi, which lies to the south. It is thickly inhabited and well cultivated.

The inhabitants number about 20,000, of whom about half are Mohammedans, who live on the coasts, and half are pagan Alfurs, who live inland. These last rarely approach the coast or mix with the Mohammedan population; they are most numerous on Taliabu. Rice is grown, but is mainly used in payment of taxes and in barter for textiles. The staple food is maize on Sula Besi, sago on Mangola and Taliabu. Coco-nut palms grow on the coasts of all the islands, and copra is now the chief export. With the excellent timber produced on the islands the natives build fair-sized

sailing-boats. From the forests are also obtained wax, gum damar, and rattans. Coal of inferior quality is found on Sula Besi. The women of Sula Besi weave mats and sarongs of imported yarn. The same island contains the chief port of this group, Sanana, where there is a good anchorage.

Islands off the South-eastern Peninsula of Celebes

The most important of this group are Kabaena (Kubaina), Buton, Wuna, and Wowoni. They are separated from the peninsula by the Tioro and Wowoni Straits, both of which are dangerous. The Buton Strait, between Wuna and Buton, is very narrow, but is navigated by small craft that confine themselves to its waters. Buton is about 100 miles long, and 35 miles broad at its widest part. Along its axis runs a chain of limestone hills, 600 or 700 ft. high. It is penetrated on the eastern side by a great bay, Kali Susa or Dwaal Bay, with some good anchorage but full of dangers. The population numbers about 10,000; the natives build praus, and collect turtle, pearls, and sharks' fins. The chief town is Buton (or Bolio), which is visited by vessels of the Koninklijke Paketvaart Maatschappij. The chief exports are timber, cajeput oil, cotton, coffee, hides, agar-agar, and bees-wax; the imports are yarns, rice, opium, iron-ware, and pottery.

Wuna is less hilly, and its hills run less definitely north and south; it possesses valuable teak forests, and on it, as on Buton, cotton is grown. Kabaena consists partly of limestone, partly of volcanic hills. None of the islands of this group have been much explored.

Salaier

Salaier (Saleier, Saleijer, Salajar), which is 50 miles in length by 8 miles in breadth, is an extension of the eastern mountain-chain in the southern promontory of Celebes. It is traversed by a chain of mountains reaching 2,000 ft., which descend steeply to the sea on

the east side, and gradually slope to the flat plain on the west. Its streams can be entered only by praus.

It is a populous and prosperous island. It is inhabited mainly by Macassars, who number more than 75,000. The Salaiere are bold seamen; they build their own praus and sell many of them in Celebes, and there is constant prau traffic between Salaier and Macassar, Bonthain, and Sinjai. The women weave excellent sarongs, and both men and women make sail-cloth. The fertile plains along the west coast are especially devoted to the cultivation of cotton, but also to some extent to that of tobacco, Manila hemp, and coco-nuts for the Macassar market, and a little indigo, coffee, and Spanish pepper are likewise grown. Rice, barley, and maize are cultivated, but there is not enough rice for local requirements. In the marshes are fishponds and salt-pans. On the shores are found turtle and trepang.

A good road runs the whole length of the west coast. There are daily markets at Salaier town (known also as Bentang and Panggilijang), Padang, and Tile-Tile. The chief export from the island is copra; Macassar oil and ricinus (castor) oil are prepared for export; fish, both fresh and dried, is exported, and there is an important trade in salt. Vessels of the Koninklijke Paketvaart Maatschappij call at Salaier town. The island owes much of its prosperity to its proximity to Macassar.

Spermunde Archipelago

This archipelago lies off the west coast of Celebes, north of Macassar, where the sea is comparatively shallow. It consists of a great number of low islands, surrounded by coral reefs. Coco-nuts are grown, but the sandy soil is unsuited for other produce.

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