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Transportation and communications in the French territories of the south Pacific

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TRANSPORTATION AND COMMUNICATIONS IN THE FRENCH TERRITORIES OF THE SOUTH PACIFIC.

Introduction : General Framework

The insular territories of New Caledonia, French Polynesia, Wallis and Futuna (300 000 inhabitants for 23 200 sq.km) form a distinct entity through their close ties with France. Their relations with each other are reinforced by a common external transport service and by the presence in New Caledonia of an important minority of people from the other two territories (1).

The relatively high quality of facilities for transportation has led to a serious spatial unbalance within the territories, and hindered the development of a good regional integration outside the territories, by strengthening unidirectional movement towards the local capitals and France.

The archipelagian aspect of the territories, particularly noticeable in French Polynesia, is not favourable to the development of functional nodal regions. The uniformity of the

oceanic space offers very little resistance to the reinforcement of locational irrationalities. This resistance is further weakened by the reduced number of human settlements and an undiversified economy. Certain important equipement, a result of circumstances, are rather painfully made to profit from an increase of traffic outside, to the detriment of a rationalization of the space inside, the territories.

The considerable distance that separates these territories from each other, from the surrounding Pacific countries and from their indispensible decision-making centre (see Table A), has far from lost all significance. This is so, regardless of the quality of the infrastructures and of the density and the regularity of the liaisons from which they benefit. The condition of the infrastructures and the particularities of the liaisons, both within and outside the territories will first be presented. Attempts to regain a certain balance will then be evoked.

I. Condition of the Equipment

The organisation of liaisons within the territories is the responsibility of the local authorities ; that of external relations is the domain of the French government. They are influenced by the local geography. Wallis and Futuna (211 sq.km for 8 000 and 4 000 inhabitants) separated by more than 250 km, offer very little natural facilities.

New Caledonia (19 000 sq.km for 145 000 inhabitants) on the contrary, has greater possibilities, although the main island hinders effective circulation by land through distance and major topographic obstacles. The sparse settlements and the concentration of more than 50 % of the population in Noumea add to this problem. On the other hand, the smaller islands, which depend on Noumea, remain easily accessible.

French Polynesia (less than 4 000 sq.km of land for 166 000 inhabitants over a marine area of more than 4 million sq.km) is a scattering of minute islands and populations with Tahiti, which contains 70 % of the population and more than a quarter of the land space, as its centre. Neither the minute subsistence economy of Wallis and Futuna, nor the once-powerful mining and metallurgic economy of New Caledonia, today in crisis, or even the undiversified economic activity of French Polynesia, which leans heavily on tourism and the 'Centre d'Experimentation Nucleaires du Pacifique', (CEP) are sufficient to justify the equipment and the needs of these territories. Maintenance is increasingly dependent on transfers of funds from France.

Roads and vehicles play but a minor role in Wallis and especially Futuna. They are an important part of internal communication in New Caledonia. The road network is quite extensive, with more than 5 600 km of classified roads. A general average of heavy motorisation although unequally distributed, reflects the geographical and social polarization of the population. (see Table B). In French Polynesia, Tahiti monopolises most of the network which is less than I/5 of its counterpart on

the main island of New Caledonia. It also monopolises the territory's regulated public transport system, with home made vehicles known as 'trucks'(2). In New Caledonia road transport of passengers, organised and partially subsidized by the local government, offers an urban network and an interurban and regional network. 'Colportage' (delivery of goods for local trade and gathering of local products), and 'Roulage' (transportation of ore) are two essential elements of land transportation of merchandise (see Table C). School transport, subsidized by the state, has contributed everywhere to the consolidation of public transport.

The ports of Wallis and in particular Futuna are only very moderately equipped. In contrast, the ports of Papeete and Noumea provide their territories with remarkable facilities for their external maritime relations. The extension and modernization of the first have coincided with the establishement of the CEP and the construction of the international airport at Faaa. In the other islands, the facilities are unequal and are determined by both environmental difficulties and reduced traffic. (See Table D). (3).

New Caledonia benefits from the facilities provided by the immense lagoon surrounding the main island. The port of Noumea developed in two stages to the west of the peninsula on which the city is situated. The setting-up of the modern port in the large harbour (Grande Rade) (800 ha) in the 1960's, forms an impressive ensemble with the private port of the nickel foundry and other specialised equipment (1) (4). The other facilities are modest, and serve the coastal traffic with the smaller islands as well as the embarkation of nickel ore near the mining centres of the main

island. Three small coasting vessels make up the local fleet, apart from some average-sized private units operating in the region and two ore carriers. The polynesian fleet of coasting vessels is more diverse, with about 20 vessels for the most part old and often small (less than 15 000 DWT). The traffic between Tahiti and Moorea is assured by 4 boats including a ferry. There are also 7 government owned ships which provide invaluable transports of various kinds for the public.

The aircraft has been a decisive means of reducing the isolation of islands tried out before, revealed during and developed after the Second World War. In the three territories, the runways built for military needs by the American troops, served as a base for the aeronautical infrastructure established and modified until the end of the 1970's. The air transport facilities of the territories consists of two runways in Wallis and Futuna, about forty in New Caledonia, approximately ten of which are open to public use ; about thirty in French Polynesia, of which two are used purely for military purposes, and the airport of Faaa built near Papeete in 1960 by filling in the surrounding reef zone (5) (6) (7) (8).

Finally, and even more recently, the modern developments in telecommunications have facilitated and multiplied the links within the territories, between the territories and with other countries. Wallis and especially Futuna are as badly equipped in this domain as in their port facilities. The other two territories however, benefit from reasonably complete facilities and equipment, largely developed since 1970. Almost completely automatic in New Caledonia

and in the central archipelago of the Society Islands of French Polynesia, the telephone is found in far greater number in the urban zones than in the rest of the country. The local networks are spreading to the various other and remote polynesian archipelagos.

The other islands are linked by radio-phone. The establishment of ground stations has enabled telecommunications by satellite to greatly improve international links. The latter is also for the most part automatic (9).

II. Transport Service Areas and Circulation.

Public transport by land has remained in its very early stages in Wallis and Futuna. It has gained a real importance, however, in New Caledonia, where the population is scattered in low altitude zones over long distances on the main island, or grouped in small isolated communities on the larger islands of Maré and Lifou. For people commuting to work in Tahiti, public transport plays a noteworthy role. Its focus is the urban zone of Papeete. Both the networks of Tahiti and the main island of New Caledonia have their respective capitals as their focal point. The networks of the Loyalty Islands, on the other hand, are centred on the airports, mostly as a result of the links they provide with Noumea. Partially subsidized, like those of the islands, the transport service area of the main island of New Caledonia seems less satisfactory in that it is limited to the major roads. The urban service area of Noumea penalizes to an extent the inhabitants of the outer suburbs. In

tahiti, apart from the flexibility of routes, the servicing suffers from the absence of intermediate lines in the urban zone. The excessive centralisation of the network is faced with insurmountable problems of urban congestion in the establishment of a transport service depot in the heart of Papeete.

The lack of symmetry in the maritime exchanges outside the territories reflects the domestic exchanges. For Wallis and Futuna, external maritime relations are made via Noumea, following their political, administrative and commercial ties. These ties are reinforced by the migration of inhabitants. There are today as many Wallisians and Futunians in New Caledonia as there are in the islands. The maritime service was previously irregular and haphazard. Today, the monthly subsidized service from Noumea by a small ccasting vessel (1040 DWT) is also the sole inter-island link by sea. Neither the frequency of trips nor the capacity of the vessel are sufficient for the latter service. The passenger traffic with Noumea is increassing, marked by the excessive return of migrants. In comparison to the 10 000 t. of imports, of which more than one half comes from New Caledonia or Europe via Noumea, the return cargo is absurdly light.

The maritime relations outside the territories are more important for the other two territories. They are dominated by connections with European ports. These connections are mainly assured by the shipping companies united in the maritime conference, known as the 'Entente de Frêt Européenne'. The

'Compagnie Générale Maritime' (CGM) a national french company, plays a major role in comparison with companies from the Netherlands, Germany and England. The common ruling regarding cargo, irrespective of the actual distance of the Euopean ports from their destinations in the Pacific, applies only to products imported by the territories. Although french shipping compagnies have no official protection, the CGM assures the entire return cargo to Europe. It also has the monopoly of transports made for military purposes. The shipping companies of the 'Entente' provide a regular transport service but are rivalled by outsiders, the main one being polish. In New Caledonia, the CGM assures 50 % of external transport, excluding the transportation of ore. It assures 2/3 of the imports and almost all the exports. It, therefore, transports more than 3/4 of the metallurgical products, in decline since 1980. More than half of the international exchanges of Noumea are made with Europe and especially France, from wich comes more than half of the general cargo. The CGM also assures more than half the international maritime exchanges of French Polynesia. The CEP is its main patron, providing more than 1/3 of the cargo of the CGM and 60 % of the company's traffic to French Polynesia in 1982-83 alone. Most of this cargo is taken directly to Mururoa. The relations with Europe are rather preponderant (see Table E). Almost all the remaining transport links are with countries surrounding the Pacific. North America holds the place with Papeete that Australia and New Zealand hold with Noumea. The economic specialisation of New Caledonia is noticeable in the exportation of ore to Japan - 1.2 million t. in 1983, but now in heavy decline. The private port of the nickel foundry receives various melting products and 1/3 of the necessary hydrocarbons, apart from an

equivalent tonnage of ore for its own use, arriving from within the territory. It exports products made from the metallurgy of nickel - close to 100 000 t.

The marked unbalance in the traffic of general cargo reveals the lack of diversity in the economy of the territories and their accentuated dependence. This is particularly noticeable in the field of energy, the demand for which is increased by an artificially high level of consumption. One result of this unbalance is that the available modern means of maritime transport such as harbour facilities, Ro-Ro ships, and containers cannot be fully used.

	New Caledonia	French Polynesia
General Cargo		
Import	166 500	283 000
Export	35 000	13 500
Hydrocarbons	280 000	240 000

International traffic of the public ports of Noumea and Papeete in T., in 1983. (The unbalance of the traffic of Papeete was amplified by cyclones in 1983).

The domestic maritime transport of New Caledonia is naturally less diverse than that of French Polynesia. It covers the forwarding of ore from mining centres to the nickel foundry. The

three coasting vessels provide a regulated service for the islands - weekly for the main islands and monthly for the smaller, less populated and non-touristic islands. The total cargo traffic was only 43 000 t. in 1983 with 72 % of the embarkations at Noumea. Passenger traffic is not as unbalanced :less than 60 % of departures from Noumea. Although showing an improvement no doubt due to circumstances, it does not represent even 10 % of the equivalent air traffic.

The inter-island maritime transport service of French Polynesia was rationalised and made a public service by a local government decree in 1977. It is dominated by exchanges between Tahiti and Moorea (see Table F). The exact result of this is not well known. Passenger transport is increasing. The ratio could be of I to 3 with transport by air. For cargo transportation 72 000 t. were embarked at Papeete and less than 20 000 t. disembarked in 1983. The usual unbalance was further aggravated by cyclones. The results of this traffic are distorted by the elusive activities of 'Commerce à l'aventure' (see Table G). Copra constitutes 2/3 of the return cargo, ahead of fishery products. The activities of the administrative fleet also greatly helps to increase the actual exchanges.

Wallis and Futuna are the only islands which maintain a noticeable stream of passengers using maritime transport to travel outside the territory. This further represents only 10 % of the exchanges by air made with New Caledonia, via Fiji. The latter became regular in the 1960's and was dominated for a long time by departures. In 20 years, these weekly exchanges have increased

tenfold with 7142 passengers in 1983. Domestic exchanges between the two islands, made by a small, ill-suited plane three times a week, have forced the annual number of passengers to stagnate at 2000. The route shows a heavy deficit and has to be subsidized.

New Caledonia, used earlier as a technical stop-over, saw the establishment in the 1960's of the basis of the international aerial links existing today. The number of international passengers had more than tripled since the end of the 1960's - 252 000 in 1983 ; but now shows the uncertainty of the international and local situation by a decline. The same applies to cargo. Transit - less than 40 000 people - is limited. Australia and New Zealand supply 43 % of the passengers (Table H), a long way ahead of the number of passengers of the westward 'India Road' leading to PARIS. The french private company UTA transported in 1983 more than half of the international passengers ahead of Qantas and Air New Zealand. This situation changed in 1984 as a result of the take-over by a new local company of the Wallis and Vanuatu routes.

The society AirCal, of which the territorial government owns 3/4 of the assets, covers the domestic aerial network of New Caledonia, using Twin Otter planes. Passenger traffic is increasing rapidly - 30 % in 5 years : 138 600 passengers in 1983. The Loyalty Islands (52 % of traffic - 28 % in Lifou) and the Isle of Pines (33 %) make up most of the traffic. They are serviced by more than one flight each a day. The progress of roads on the main island and the economic crisis have revealed the vulnerability of private and commercial aviation.

The accession of French Polynesia to the international scene was made possible by the aircraft. It was done firstly from the west and was really only complete when the Tahiti-Faaa project was established. Contrary to New Caledonia, traffic which has been established along the same lines for 20 years, is unbalanced by the eastward flows - 275 000 passengers in 1983. UTA assures half of this total. More than one passenger out of two is transported between Papeete and Los Angeles and the french company carries 2/3 of this flow. It transports, in this manner, particularly from North America, more than 60 % of tourists. Only a third of these passengers have Paris as their ultimate destination and 2 out of 3 of these travel via America (10). Since the withdrawal of Panam in 1979, Qantas and Air New Zealand share 40 % of the traffic and provide for 90 % of transit passengers - 182 000 passagers in 1983. Almost all of the latter commute between the east and the west of the Pacific. The other exchanges, including that of Lan Chile with South America via Easter Island, are secondary both in the number of passengers as well as commercial results. The centralisation of international and domestic traffic in Faaa means an important flow - 38 648 movements and 686 000 passagers in 1983 (11).

The domestic aerial traffic, dominated numerically by shuttle type exchanges between Tahiti and Moorea, has an importance related to the scattering of archipelagos and the quantity of equipment in use. The liaisons with Moorea, which represent more than half the traffic is monopolised by a private company - Air Tahiti. Air Polynesia, a branch of UTA with the participation of the local government, assures the rest of the exchanges on a regular basis and as a public service - 200 000 passengers and 7300 flights in

1983. Three-quarters of these exchanges are made with the Windward Group of Islands - which contains less than 45 % of the population of the archipelagos outside Tahiti-Moorea (Table G). In the same manner, traffic is still significant, due to short distance effect between Tahiti and the western part of Tuamotu-Gambier, but noticeably reduced for the Marquesas and Austral Islands, which all have an equivalent population.

Postal exchanges, increasingly transported by air, and telecommunications reveal the general unbalance of links in favour of France outside and the capital inside the territory. The current increase of postal traffic has been rapid and 80 % concerns France and the french territories. There are an important number of arrivals, which underlines various kinds of constraints. The telephone exchanges of New Caledonia with France expressed in time duration are superior to the total exchanges with other countries. The unbalance within New Caledonia lies between the urban centre of Noumea and the remainder of the country. There, all of the recorded communications represent one hundredth of those exchanged in and from the urban region of the capital. The same occurs in French Polynesia, where 85 % of mail arrives from, and 70 % departs for, France. The relative importance of ties with New Caledonia, towards which 1/5 of parcels leaving Tahiti are sent, should also be noted.

All forms of traffic in French Polynesia are heavily unbalanced in favour of arrivals from France. In contrast, the weakness of domestic traffic - less than 2% of international traffic in the same categories - underlines the strong concentration of the population in Tahiti and in Grand Papeete.

Close to 2/3 of telephone communications expressed in time duration made outside the territory are made with France, and close to 11 % are made with New Caledonia. The recent improvement of equipment - automatisation and interconnection of networks in the archipelago of the Society Islands - has greatly advanced communication by telephone, although it remains dominant in the urban zone of Tahiti.

III. To balance the Unbalance !

The territory of Wallis and Futuna, without industry and tourism, and the most modestly equipped and serviced, does not appear destined for spectacular improvements in the domain of transport and communications. The situation in Futuna is in all respects the most worrying. International relations, the unilateral character of those with Noumea, the absence of regular contacts with much closer territories such as Western Samoa, or their infrequency with Fiji, are supported by the artifice of a questionable political rationale. The latter is taken advantage of by the commercial interests of Noumea. With the progressive withdrawal of UTA in the Pacific, Wallis could become a step in the framework of a possible reorganisation of the transport service areas of the three territories.

In New Caledonia, the general and varied level of equipment corresponds largely to the opportunity of economic activities. The current crisis of these activities is hardly being compensated by tourism. Their improvement and that of the service areas, far from

leading to the development of new focal points to counterbalance the centralisation of the capital, has reinforced the role of the latter, which remains the greatest employment market. The failings of the functional organisation - the few existing intermediate liaisons and sideroads on the main island - as well as a belated administrative decentralisation and today, a major political crisis, have delayed action aimed at balancing the space. The equipment of the households underlines the social reality of this spatial unbalance (Table B). The triennial development plan, 1984-1986, proposed improvements of this situation. Concrete efforts have been undertaken in favour of reducing iolation - notably in the area of telecommunications -, but they should be on a par with a necessary reinforcement of the local exchanges in the regions.

If dependence appears unavoidable in the matter of international communications, a constraint shared by the other small territories of the Pacific, it could be lessened by a common administration of the companies operating in the region. A small aviation company, largely privately owned (Air Caledonie International) was created in 1983 in Noumea. It replaced UTA for the service of the Wallis and Vanuatu routes and catered for aportion of the australian clients of the big french airline. The appearance of this company might be the prelude to a reorganisation of the external service of the French territories. UTA, while limiting its activities to the most profitable destinations on the rim of the Pacific, could supervise the activities of a regional company, administered in common by all three territories. It would

link the territories and at the same time service other pacific countries. (12).

The constraints caused by distance, by an extreme polarisation of equipment, people and activities create the greatest handicaps in French Polynesia (13). The cost of transportation for certain products imported from Europe is doubled when taken to the islands furthest away from the port of Papeete.

Added to the overcharge resulting from the centralised service area, are the blóckages kept up by the limited flows between Tahiti and the archipelagos. Since 1977, the flows are largely maintained by an active policy of aid programs plus the improvement and adaptation of the service area. The aim is to fix populations otherwise strongly attracted by Tahiti. The decentralisation of the harbour plan by archipelago in an important aspect of this effort (Table L). The entire maritime transport service remains however jeopardized by insufficient return freight.

The security and rapidity of the aircraft has, more than aid to traditional and modern productions, perhaps contributed most to limiting the drain of people from the archipelagos.

In the most populated central group, that of the Society Islands, the progress made by shipping, although favoured by the crisis, could be considered as an encouraging indicator of stabilisation.

In the domain of international relations, the more straightforward opening of French Polynesia to tourism should not prevent the realisation that this activity rests on the exploitation of a myth and the illusion of the privileges of a

position which may easily be changed.

The crushing weight of the urban centre in Tahiti poses for this island, the particular problem of a reorganisation of public transport systems for overland exchanges both on a social and urbanistic level.

The spread of local networks well implanted in the archipelagos might appear as a counterbalance to the abusive privileges of the capital city in the area of individual equipment for telecommunications.

Conclusion

For a century, political necessity has largely conditioned the organisation of international and mutual relations of the three french territories of the south Pacific.

The common handicap of insular dispersion, varied by pronounced geographical particularities, has been partially diminished by considerable equipment and systems of transport and communications.

On the other hand, the heavy polarisation of liaisons which underlies an actual strong economic dependence, the badly controlled hypertrophy of capital cities that monopolise the administrative and exchange functions to the detriment of the archipelagic space and its coherent organisation impose today a more determined policy for the creation of new balances.

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des Ports autonomes, Affaires Maritimes, Affaires Economiques, Direction du Plan, Services des Statistiques, ainsi que les renseignements fournis par les agences et les compagnies.

(Distances en Km)

	Europe (France)	Et. Unis (San Fco) *USA*	Australie (Sydney) *Australia*	N. Zél. (Auckland) *N.Z.*	Japon (Yokohama) *Japan*	P.F. *FP*	N.C. *NC*	W.F. *WF*
PF *FP*	17000	6000	6100	4100	9000		4700	2700
NC *NC*	20000	10000	2000	1900	7000	4700	-	2000
WF *WF*	20000	7000	4700	2800	7200	2700	2000	

Tableau - A - : Les distances entre les territoires français du Pacifique sud et les principales destinations extérieures de leurs échanges

P.F. : Polynésie Française — *FP : French Polynesia*
N.C. : Nouvelle-Calédonie — *NC : New Caledonia*
W.F. : Wallis et Futuna — *WF : Wallis and Futuna*

Distances between the french territories of the south Pacific and the major destinations in their international exchanges

Average	Automobile *Cars*	2 Roues moteur *Motor Cycles*	Bateau *Boats*	Téléphone *Telephone*	Téléviseur *Television*	Radio *Radio*	proportion des ménages de chaque subdivision Territoriale *% of households/Subdivision*	
Moyenne Polynésie	59.5	20.2	15	36.3	73.5	70.5		
TAHITI	71	18.5	6.6	45.5	85.1	70.4	72.8	
MOOREA	48.7	33.3	29	21.7	51.8	85.2	4.3	
ISLV *(WG)*	32	33	44.7	12.1	57.8	72.7	10.6	100
TTU-GAM	13	18.2	40.8	0.8	17.7	71.8	5.6	
MARQ.	21.5	13.4	30.7	16	36.5	59	3.5	
AUSTRALES	24.4	23	37	11.3	28.7	57.8	3.2	
Moyenne Nouvelle-Calédonie	62.3	6.5	9.9	28	69.5	65.9		
NOUMEA	73.6	9.9	8.2	39.5	87.2	64.8	47.5	
SUD	69	5.4	13	28.1	74	66.6	24.4	
OUEST	53.8	3	17.5	12.6	51.8	64.8	10.6	100
EST	30	1	8.8	9.2	32.4	66.4	9.3	
ILES	24.6	1.6	1.9	3	18.6	69.5	8.2	

Tableau : Proportion des ménages équipés de moyens de transport et de communication en Polynésie Française et Nouvelle-Calédonie dans les différentes subdivisions (Recensement de 1983) - (En %).

- B -

I.S.L.V. : Iles Sous Le Vent - *WG : Windward Group of Islands*
TTU-GAM : Tuamotu-Gambier
Marq. : Marquises - *Marquesas*

Percentage of households equipped with private means of transport and communications in French Polynesia and New Caledonia (1983 Census).

	Noumea and vicinity Nouméa et sa région	*E main island* Est Grande Terre	*W main island* Ouest Grande Terre	*other islands* Iles	Total
Colporteurs	14	4	20	2	40
(dont fruits et légumes) *fruit + vegetables*	(8)	(2)	(18)	(1)	(29)
(dont produits de la pêche) *fish products*	(5)	(2)			(7)
Roulage mines *Ore transportation*	8	29	13		50
Autres transports routiers *Other*	37	15	9		61
Transports en commun voyageurs - *Public transport (passenger)*	41	5	5	4	55
Taxis *Taxi*	49	42	21	1	113
Total	149	95	68	7	319

(Source : RIDET - Service des statistiques)

Tableau : - C - Transporteurs routiers figurant au répertoire d'identification des entreprises de Nouvelle-Calédonie.

(Toutes les entreprises ne sont pas encore enregistrées. Elles sont localisées par les adresses des chefs d'entreprises. Certaines disparités sont possibles entre les données de ce tableau et les ordres de grandeur indiqués par ailleurs).

Road transportation firms appearing on the list of companies know to exist in New Caledonia.

(All companies are not yet registered. They are located through the address of the head of the entreprises. Some differences are possible between the figures given above and the values mentioned elsewhere)

	Polynésie Française *French Polynesia*								Nouvelle-Calédonie			Wallis-Futuna
	I.V.	I.S.L.V. *WG*	TU - O	TU - C	TU - E	Gambier	Marquises	Australes	GT - Ouest *Main Island*	GT - Est *Main Island*	Iles	
Quais gros navires - *Quay large ships*				HAO		MORUROA						
Quais navires moyens - *Quay medium-size ships*		BORA-BORA RAIATEA							NEPOUI	THIO KOUAOUA PORO UGUE		
Quais "Goëlettes" (300-1000 t PL) *Quay-"Schooner"*		HUAHINE	APATAKI				NUKU-HIVA	TUBUAI				UVEA
Quais Caboteurs (100-200 t PL)- *Quay Coasting vessels*	MOOREA	MAUPITI TAHAA	TIKEHAU RANGIROA	MANIHI TAKAROA FAKARAVA TAENGA		MANGAREVA	UA POU HIVA OA	RAIVAVAE	PAAGOUMENE	TOUHO	BELEP OUVEA LIFOU I. PINS MARE	
Wharfs sur platier et classiques *Wharfs on coral reef and ordinary*			KAUKURA	FANTAGAU HIKUERU NAPUKA NIHIRU PUKA PUKA TAKAPOTO TAUERE	AKIAKI NUKUTA-VAKE		UA HUKA TAHUATA FATU HIVA					FUTUNA
Havres ou Quai à Baleinières *Harbour or quay - whalers*	MAIAO		ARUTUA MAKATEA MATAIVA	AHE, ANAA AMANU ARATIKA FAKAHINA HERE HERE-TUE KAUEHI MAKEMO MAROKAU MARUTEA/N RAROIA	PUKARUA REAO TATAKOTO VAHITAHI	FANGATAU-FA TUREIA VAIRAATEA		RAPA RURUTU				
Passe sans ouvrage *Pass without opening*				RARAKA TAHANEA TOAU								
Mouillage rade *Harbour anchorage*									PAAGOUMENE KAREMBE TEOUDIE POYA BOURAIL N'GO	MONEO KOUAOUA NAKETY N'GOYE OUINNE		

Tableau : Les équipements portuaires des Territoires français du Pacifique Sud. - *Harbour equipment of the French territories of the South Pacific.*
- D - (Source : Equipement-Affaires Maritimes-Capitaineries)

	Europe Afrique *Africa*	Amér. N. *North. Am.*	N. Zel. *N Z*	Aust.	Japon *Japan*	*Hong-Kong* H - Kong Singapour *Singapore*	Divers Amér.	Divers Asie	Reste Océanie
Poids *Weight*	38.6	32	9.36	4.42	0.82	13.9	0.28	0.46	0.16
Valeur *Value*	55.9	19.8	9	3	4.2	6	0.22	1.67	0.16

Tableau : Part relative des importations de la Polynésie Française
- E - en poids et valeur par provenances (1983), (en %)

Percentage of imports of French Polynesia relative to weight and value from the countries of origin (1983)

	Nombre de navires *Number of vessels*	Tonnage *Tonnage*	Capacité passagers *Passengers Capacity*	Fréquence (sur nombre de jours) *Frequency of trip (over number of days)*	Population desservie *Number of population serviced*	Nombre de passagers (manifestes) 1983 *Number of recorded passengers*
I S L V	3	2166	300	1/7	19060	17573
TTU Ouest	8	1619	40	1/15-30	11793	4579
TTU Centre	2	1018	24	1/30		
TTU Centre S	1	350	70	1/30-50		
TTU Centre N	3	2120	49	1/30-50		
TTU Est	2	1452	95	1/30-50		
Gambier	1	350	70	1/30-50		
Australes	1	694	140	1/30-90	6283	5121
Marquises	3	4372	173	1/30-50	6548	1598
	24	14141	961		43684	28871 *

Tableau : La desserte maritime interinsulaire en Polynésie Française, (Source : Affaires Economiques).
- F -

* Au cours de la même année, le quai de Moorea dans le Port de Papeete a vu passer près de 240.000 passagers.

Inter-island maritime service area in French Polynesia

* *During the same year close to 240.000 passengers were recorded through the quay of Moorea in the Port of Papeete.*

	1982			1983		
	E	D	TOTAL	E	D	TOTAL
I S L V	30848	8409	39257	35490	7755	43245
TTU - Gam	13210	12800	26010	14758	8259	23017
Australes	8872	1650	10522	11065	1846	12911
Marquises	11874	4146	16020	10752	2022	12774
TOTAL	64804	27005	91809	72065	19882	91947

(Sources : Affaires Economiques)

Tableau : Trafic contrôlé des marchandises entre les
- G - archipels et le Port de Papeete (en tonnes)
E : Embarquement (vers les îles)
D : Débarquement (à Papeete)

Controlled traffic of cargo between the archipelagos and the Port of Papeete (in tonnes)

E : Embarkation (towards the Islands)
D : Disembarkation (at Papeete)

Australia - N. Zel *Paris via India* *Japan*

		Australie - N. Zélande			Paris par Indes			Japon	Vanuatu	Wallis	Divers - *Diverse*				
		Auckland	Brisb.	Sydn.	Paris	Djak.	Singa.	Tokyo	P. Vila	Hihifo	Fidji Nadi	Poly.F Ppte	Nauru	USA Los. A	Divers
1978	F.H. *WF*	2/7	3/7	3/7	3/7	2/7	3/7	1/7	11/7	1/7	6/7	3/7	2/7	3/7	
	Part du Trafic (%)	8.1	3.3	28.8	10.9	1	2.8	6.3	23.8	2.6	3.8	7.6	0.2	0.4	0.4
1982	F.H. *WF*	2/7	2/7	3/7	2/7	2/7	2/7	1/7	7/7	1/7	3/7	2/7	2/7	2/7	2/7
	Part du Trafic	11.2	3.9	28	12.9	1.3	3.2	10.4	16	2.7	1.8	6.9	0.2	0.9	1.6 *

Tableau : Desserte internationale et ventilation du trafic passagers de la Nouvelle-Calédonie 1978 et 1982
- H -

F.H. : Fréquence Hebdomadaire - *WF : Weekly frequency*

* Desserte THAI (dernière année)

International service and the distribution of passengers for New Caledonia, 1978 and 1982.

	MOOREA	ISLV	TTU - GAM	MARQ. AUSTR.	TOTAL
Trafic FAAA	206000	149000	35000	15000	405000
Trafic interiles *Inter island traffic*		25600	4950 (1)	4920 (2)	35470

(1) dont plus de 86 % à partir de RANGIROA - *More than 86 % as from Rangiroa*
(2) dont plus de 86 % aux Marquises (Nuku Hiva) - *More than 86 % in the Marquesas*

Tableau : Récapitulation du trafic aérien intérieur en Polynésie Française
- J - *Recapitulation of domestic air transport traffic in French Polynesia*

Aérodrome *Airport*	*Passengers* Passagers Transportés *Transported*	*Population* Population commune (1983)	*Distance* Distance de Faaa (km) *from Faaa*	Archipel	C.R. (%)
MOOREA	206271	7249	18	IV	63.3
BORA BORA	98669	3238	260	ISLV	66.7
RAIATEA	58342	7400	218	ISLV	71.3
HUAHINE	37793	3877	180	ISLV	77.1
RANGIROA	24304	1674	355	TTU.O.	67.3
NUKU A TAHA	8527	1797	1405	M	67.4
TETIAROA	6700	-	60	IV	Privé
MANIHI	5837	455	515	TTU.C	38
MAUPITI	5013	794	310	ISLV	67.2
TUBUAI	4920	1741	650	A	52.7
RURUTU	4490	1971	570	A	63.9
ATUONA	2501	1522	1435	M	58.3
HAO	1604	1315	910	TTU.E	59.8
TAKAPOTO	1547	471	565	TTU.N	75.9
UAPOU	1463	1791	1375	M	49.2

Seat occupation ratio
C.R. Coefficient de remplissage Source : DAC

Tableau : Les quinze premiers aérodromes de Polynésie Française (hors FAAA)
- K - *The 15 major airports of French Polynesia apart from Faaa.*

I.V. : Iles du Vent *Windward Group*
I.S.L.V : Iles sous le Vent *Leeward Group*
T.T.U. : Tuamotu O (Ouest) C (Centre), E (Est), N (Nord)
M. : Marquises
A. : Australes

	Société *Society Group*	TTU - Gambier	Marquises	Australes
Ports principaux *main harbours*	TAHITI RAIATEA	RANGIROA, HAO MAKEMO MANGAREVA	HIVA OA NUKU HIVA	RURUTU TUBUAI
Ports secondaires *secondary harbours*	BORA BORA HUAHINE MAUPITI MOOREA TAHAA	ANAA APATAKI MANIHI	UA POU	RAPA RAIVAVAE
Ouvrages minimum *minimum equipment*	MAIAO	*	UA HUKA TAHUATA FATUHIVA	RIMATARA

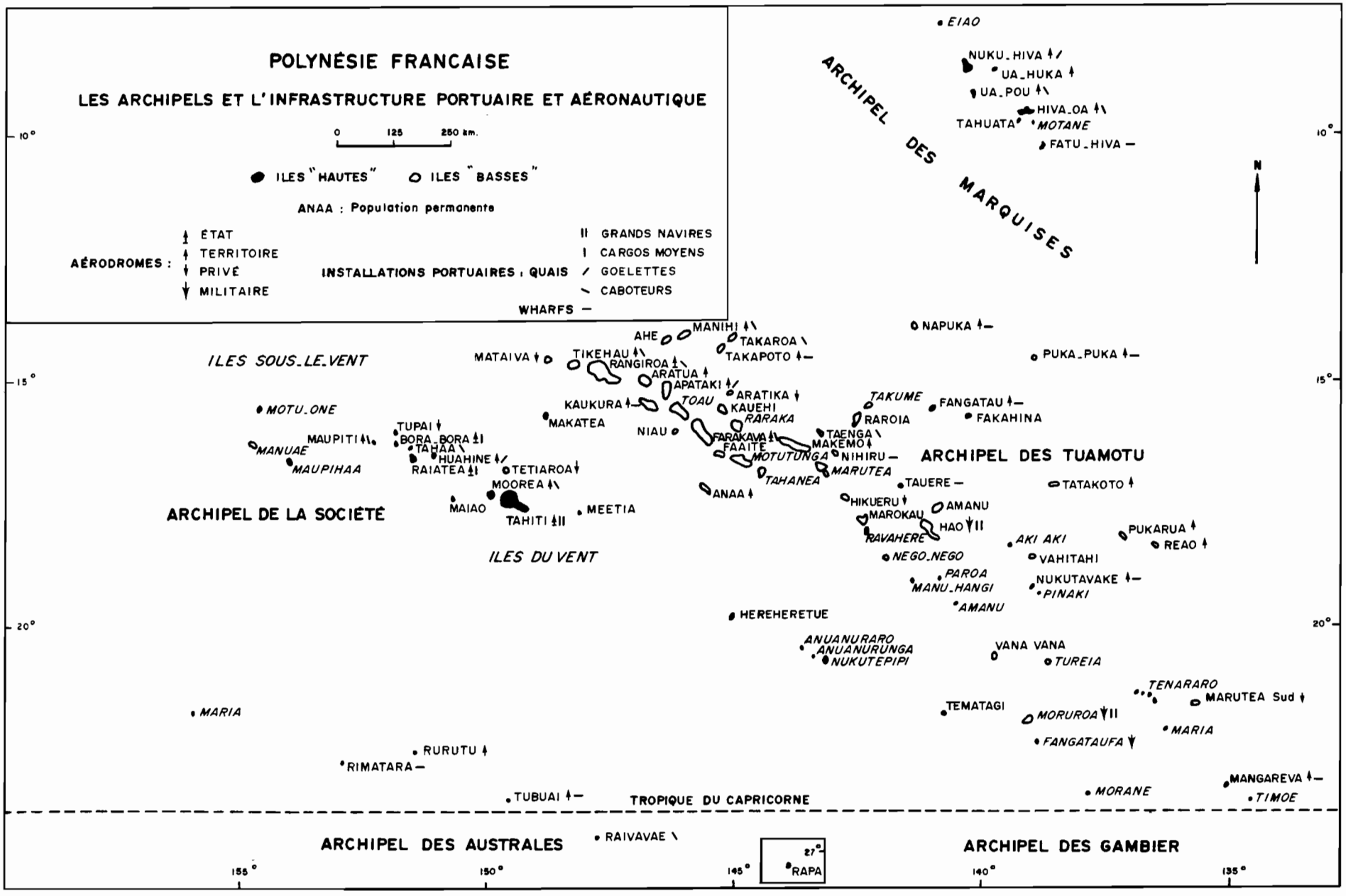
* Le service de l'Equipement considère que chaque île ou atoll des Tuamotu-Gambier devrait possèder à terme l'une des installations minimales des types suivants :
- Quai dans une passe avec chenal accessible aux baleinières dans le lagon
- Darse à baleinières creusée dans le récif frangeant
- Wharf accessible depuis l'océan au moins aux baléinières.

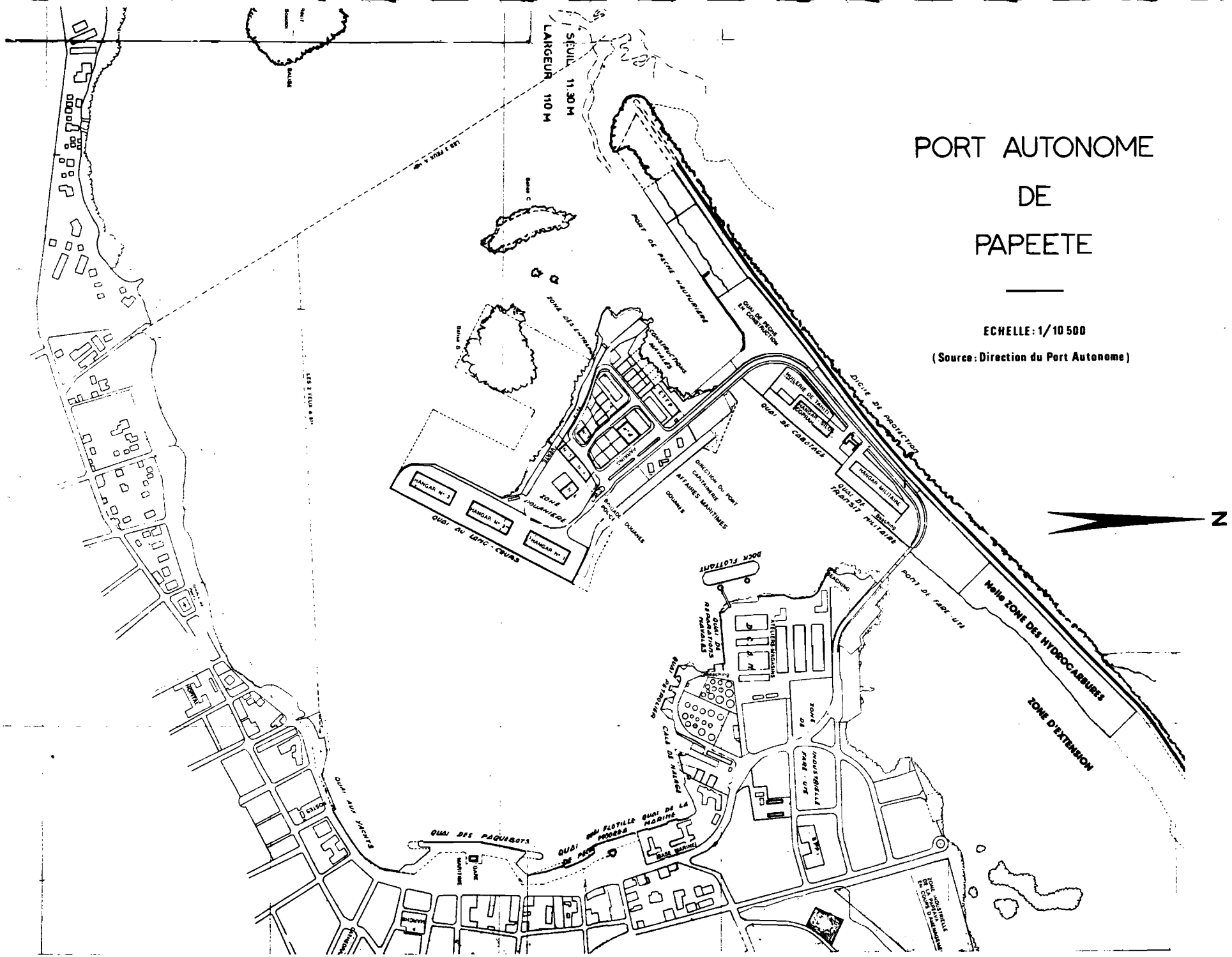
Tableau : La hiérarchisation en cours des équipements portuaires dans les archipels de Polynésie Française. (Source : Equipement) (Souligné : travaux 1981-1985).

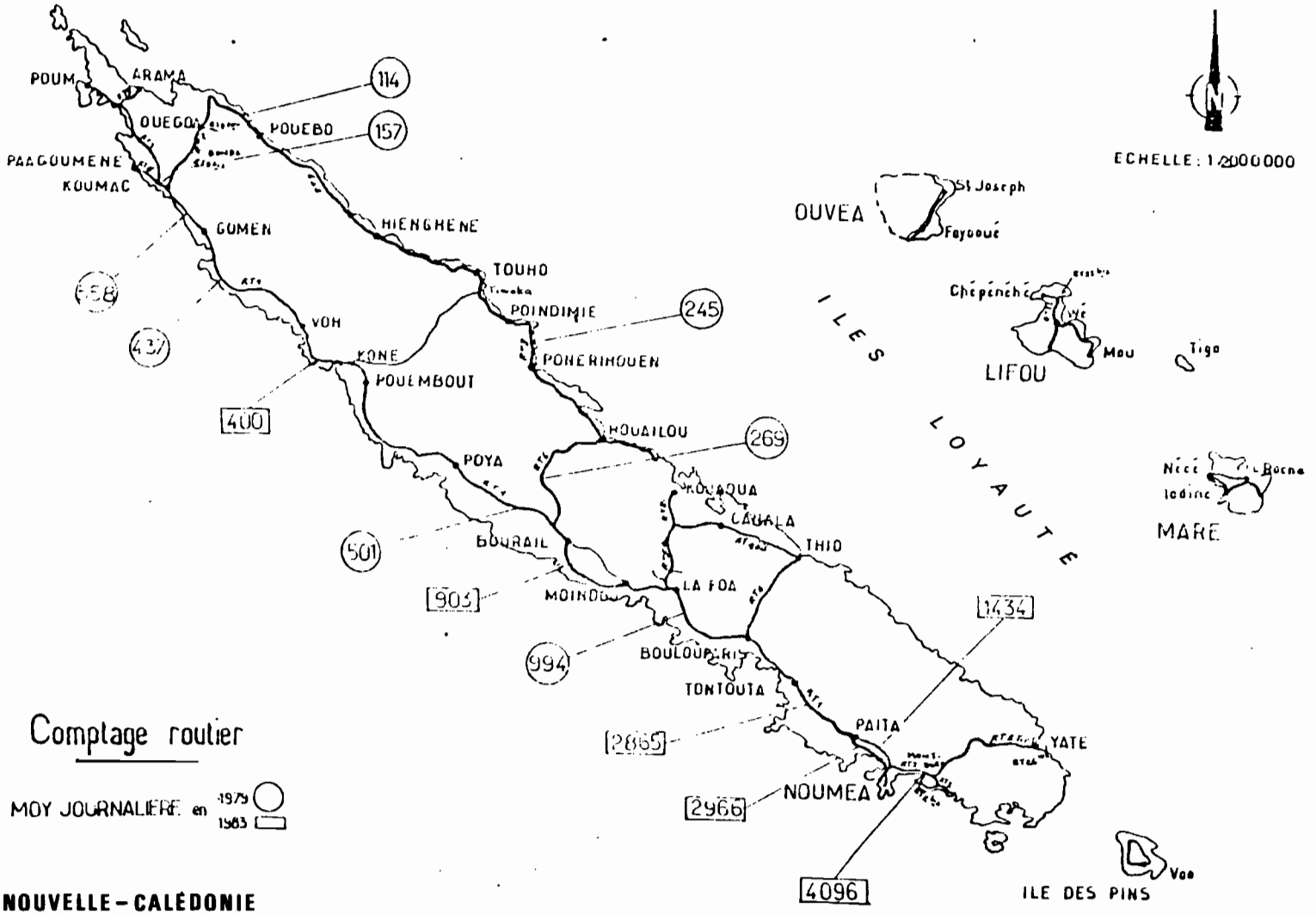
- L -

The hierarchy in progress for harbour equipment of the archipelagos from F.P. (underlined names : works undertaken between 1981 and 1985)

** For PWD, each island or atoll of this group should at least be equipped in the next future with either*
- A quay in a pass, with a channel for whalers in the lagoon
or - A port for whalers, dug out in the fringing reef
- A wharf open at least to whalers, ocean Side.


POLYNÉSIE FRANCAISE
LES ARCHIPELS ET L'INFRASTRUCTURE PORTUAIRE ET AÉRONAUTIQUE
0 125 250 km.
ILES "HAUTES" ILES "BASSES"
ANAA : Population permanente
AÉRODROMES : ÉTAT, TERRITOIRE, PRIVÉ, MILITAIRE
INSTALLATIONS PORTUAIRES : QUAIS : GRANDS NAVIRES, CARGOS MOYENS, GOELETTES, CABOTEURS
WHARFS
N
ARCHIPEL DES MARQUISES
EIAO
NUKU_HIVA
UA_HUKA
UA_POU
HIVA_OA
TAHUATA
MOTANE
FATU_HIVA
ILES SOUS_LE_VENT
MOTU_ONE
MANUAE
MAUPITI
MAUPIHAA
TUPAI
BORA_BORA
TAHAA
HUAHINE
RAIATEA
TETIAROA
MOOREA
TAHITI
MAIAO
MEETIA
ARCHIPEL DE LA SOCIÉTÉ
ILES DU VENT
AHE
MANIHI
TAKAROA
TAKAPOTO
MATAIVA
TIKEHAU
RANGIROA
ARATUA
APATAKI
ARATIKA
KAUKURA
TOAU
KAUEHI
MAKATEA
RARAKA
NIAU
FARAKAVA
FAAITE
TAENGA
MAKEMO
MOTUTUNGA
NIHIRU
MARUTEA
TAHANEA
ANAA
TAUERE
HIKUERU
MAROKAU
AMANU
HAO
RAVAHERE
NEGO_NEGO
PAROA
MANU_HANGI
AMANU
HEREHERETUE
ANUANURARO
ANUANURUNGA
NUKUTEPIPI
VANA VANA
TUREIA
TEMATAGI
MORUROA
FANGATAUFA
TENARARO
MARUTEA Sud
MARIA
MARIA
RURUTU
RIMATARA
TUBUAI
MORANE
MANGAREVA
TIMOE
NAPUKA
PUKA_PUKA
TAKUME
FANGATAU
RAROIA
FAKAHINA
ARCHIPEL DES TUAMOTU
TATAKOTO
AKI AKI
PUKARUA
REAO
VAHITAHI
NUKUTAVAKE
PINAKI
TROPIQUE DU CAPRICORNE
ARCHIPEL DES AUSTRALES
RAIVAVAE
RAPA
ARCHIPEL DES GAMBIER
10°
15°
20°
27°
155°
150°
145°
140°
135°

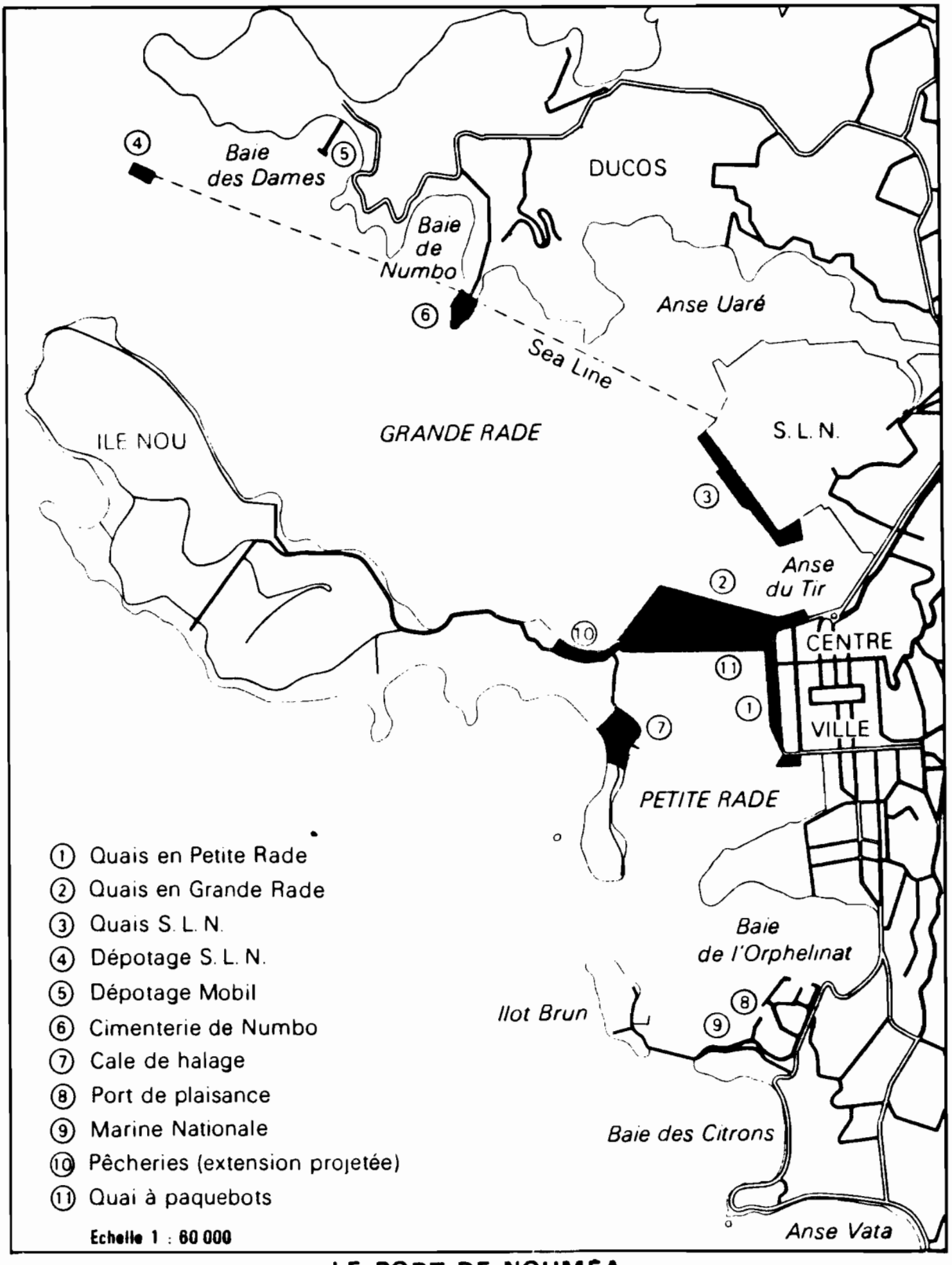

PORT AUTONOME
DE
PAPEETE
ECHELLE : 1/10 500
(Source : Direction du Port Autonome)
N
SEUIL 11.30 M
LARGEUR 110 M
DIGUE DE PROTECTION
QUAI DE CABOTAGE
QUAI DE TRANSIT MILITAIRE
QUAI DE PECHE EN CONSTRUCTION
PORT DE PECHE HAUTURIERE
ZONE DES ENTREPRISES
CONSTRUCTIONS NAVALES
GENDARMERIE
DIRECTION DU PORT CAPITAINERIE AFFAIRES MARITIMES DOUANES
HANGAR MILITAIRE
HANGAR N° 1
HANGAR N° 2
HANGAR N° 3
ZONE DOUANIERE
QUAI DU LONG-COURS
DOUANES
DOCK FLOTTANT
SLIPPING
QUAI DES REMORQUEURS NAVALES
ATELIERS MAGASINS
PONT DE FARE UTI
Malle ZONE DES HYDROCARBURES
ZONE D'EXTENSION
ZONE DE FARE UTE
MAISONNEUVE
CALE DE HALAGE
QUAI DES PAQUEBOTS
QUAI AUX YACHTS
QUAI DE LA MARINE
QUAI FLOTILLE PROPRIA
BASE MARINE
GARE MARITIME
POSTES
HOPITAL
MARCHE
ZONE INDUSTRIELLE EN COURS D'AMENAGEMENT



NOUVELLE-CALÉDONIE

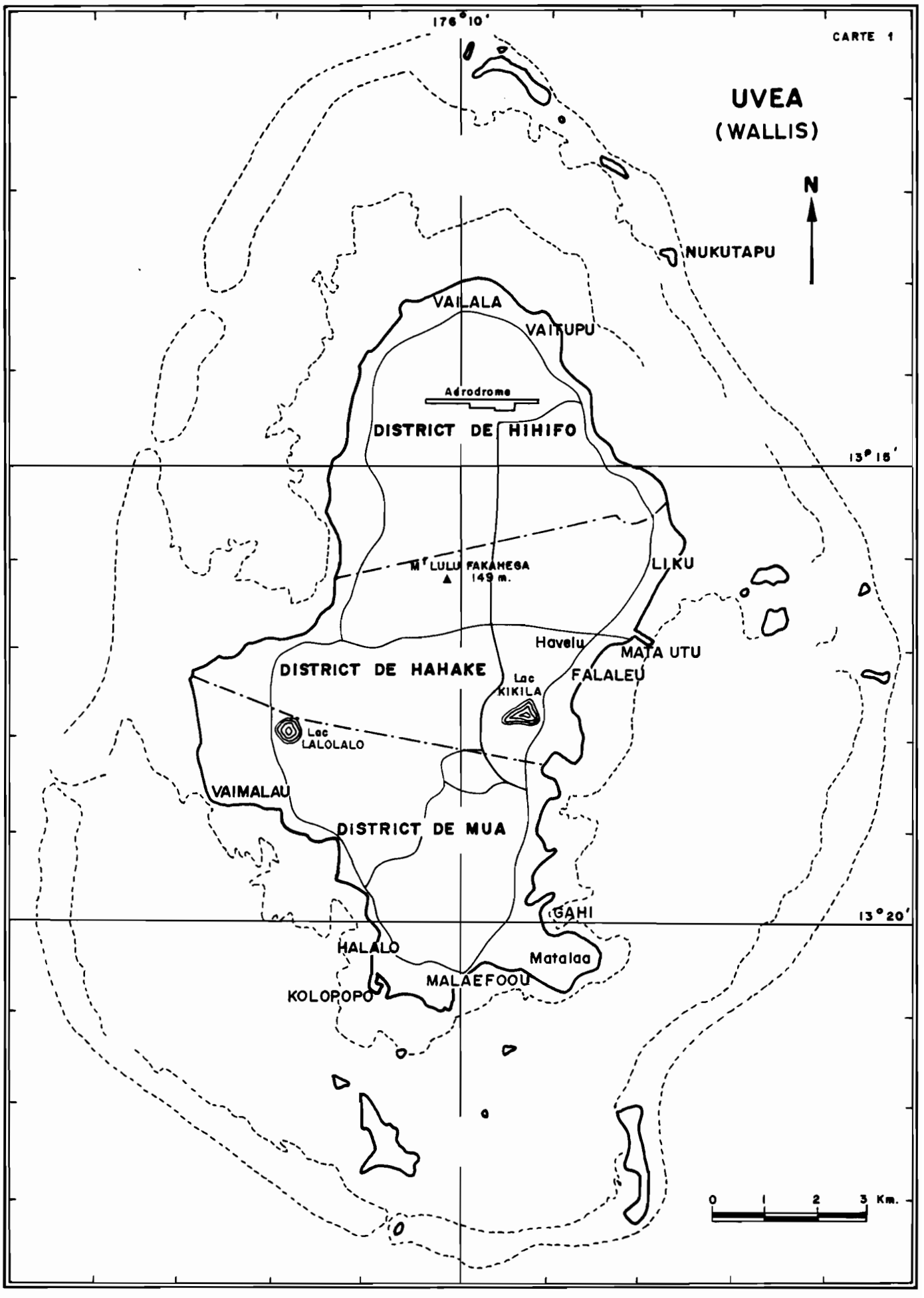
RESEAU ET FLUX ROUTIERS

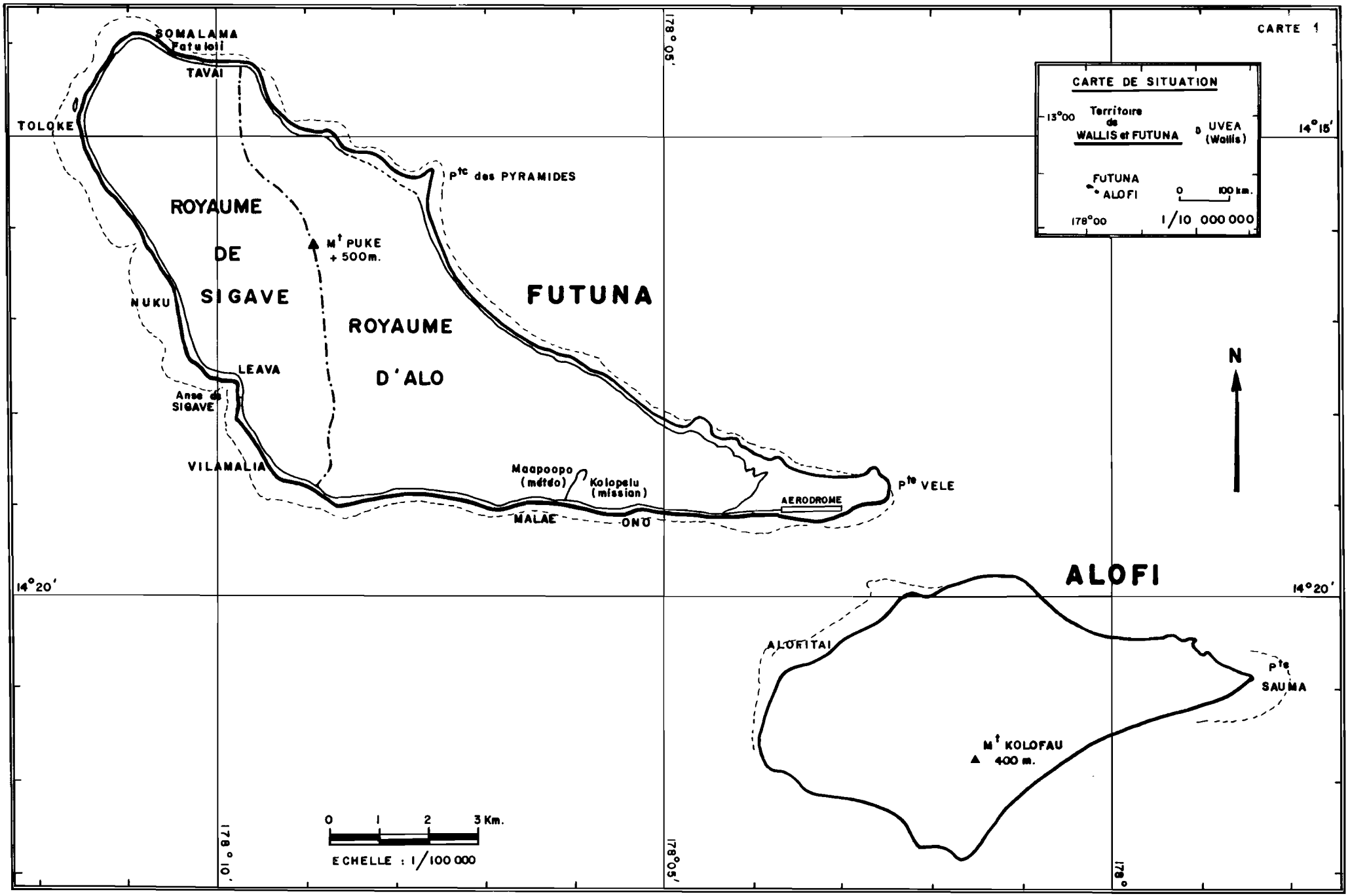
(Source : Direction des Travaux Publics)



LE PORT DE NOUMÉA

(Source : Atlas de Nouvelle Calédonie _ ORSTOM 1981)


CARTE 1
UVEA
(WALLIS)
N
176°10'
13°15'
13°20'
NUKUTAPU
VAILALA
VAITUPU
Aérodrome
DISTRICT DE HIHIFO
M' LULU FAKAHEGA
149 m.
LIKU
Havelu
MATA UTU
FALALEU
DISTRICT DE HAHAKE
Lac
KIKILA
Lac
LALOLALO
VAIMALAU
DISTRICT DE MUA
GAHI
HALALO
Matalaa
MALAEFOOU
KOLOPOPO
0 1 2 3 Km.


CARTE 1
CARTE DE SITUATION
Territoire de WALLIS et FUTUNA
UVEA (Wallis)
FUTUNA
ALOFI
0 100 km.
1/10 000 000
13°00
14°15'
178°00
178°05'
178°10'
TOLOKE
SOMALAMA
Fatuloli
TAVAI
Pte des PYRAMIDES
ROYAUME DE SIGAVE
ROYAUME D'ALO
FUTUNA
Mt PUKE
+ 500m.
NUKU
LEAVA
Anse de SIGAVE
VILAMALIA
Maapoopo (méthodiste)
Kolopelu (mission)
Pte VELE
AERODROME
MALAE
ONU
N
14°20'
ALOFI
ALOFITAI
Pte SAUMA
Mt KOLOFAU
400 m.
0 1 2 3 Km.
ECHELLE : 1/100 000

93