



Australian Government

Australian Maritime Safety Authority



SPREP

Secretariat of the Pacific Regional
Environment Programme

PORT WASTE RECEPTION FACILITIES GAP ANALYSIS

Noumea, NEW CALEDONIA

FINAL REPORT

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Objective

To carry out a gap analysis on the adequacy of waste reception facilities in Noumea for vessels normally calling at the port.

Scope

The gap analysis focused on facilities for ships visiting the commercial cargo and passenger wharves (including the SLN refinery) and the international yacht marina Port Moselle.

MARPOL does not apply to waste generated by land-based operations at the terminal or wharf. This gap analysis considered only **waste generated by vessels** resulting from their compliance with MARPOL.

The criteria for assessing the adequacy of reception facilities are the IMO Guidelines on Ensuring the Adequacy of Port Waste Reception Facilities (MEPC.88(43)).

The report will be directed to Port Autonome in the first instance; however, there will be other agencies with important roles in implementing the recommendations. The Office of Regional Cooperation and External Relations will forward the recommendations to those agencies and/or request their assistance as necessary. It is ultimately up to the Government of New Caledonia to determine the appropriate agencies to carry forward the recommendations, although the recommendations make suggestions in this regard.

Background

The International Convention for the Prevention of Pollution from Ships (MARPOL)

MARPOL includes obligations with regard to the provision of waste reception facilities. These obligations are on government authorities, rather than on ships or private companies. The purpose of these obligations is to ensure that ships are able to legally dispose of their waste as an alternative to illegal discharge to the marine environment and/or inappropriate land disposal. Specific regulations are summarised below.

Annex I Regulations for the Prevention of Pollution by Oil

Regulation 38.1 – The Government of each Party to the present Convention undertakes to ensure the provision at oil loading terminals, repair ports, and in other ports in which ships have **oily residues** to discharge, of facilities for the reception of such **residues and oil mixtures** as remain from oil tankers and other ships adequate to meet the needs of the ships using them without causing undue delay to ships.

Regulation 38.2 and 38.3 expand on this basic requirement. The following points are of particular relevance:

- Reception facilities for oily waste are **required in ports and terminals which handle ships provided with the sludge tank(s)** required by regulation 12 *[this means ports that handle ships of 400gt and above]* (38.2.4).
- Such facilities must be sufficient to receive **all residues and oily mixtures** retained in the sludge tanks **of all ships that may be reasonably expected to call at such ports or terminals** (38.3.4).
- Reception facilities for oily waste are required in **all ports** in respect of oily bilge waters and other residues which cannot be discharged in accordance with regulation 15 *[which requires that effluent is filtered to 15ppm oil, discharged while on route etc., and not containing concentrations of chemicals hazardous to the marine environment]* (38.2.5)
- Such facilities must be sufficient to receive **oily bilge waters and other residues** that cannot be discharged in accordance with regulation 15 from **all ships that may be reasonably expected to call at such ports or terminals** (38.3.5)

Annex II Regulations for the Control of Pollution from Noxious Liquid Substances in Bulk

Regulation 18.1 – The Government of each Party to the Convention undertakes to ensure the provision of reception facilities according to the needs of ships using its ports, terminals or repair ports as follows:

- **ports and terminals involved in ships' [Bulk NLS] cargo handling** shall have adequate facilities for the reception of residues and mixtures containing such residues of **noxious liquid substances resulting from compliance with this Annex**, without undue delay for the ships involved.
- **ship repair ports undertaking repairs to NLS tankers** shall provide facilities adequate for the reception of residues and mixtures containing noxious liquid substances for ships calling at that port.

Regulation 13 sets out requirements for the control of discharges of residues of noxious liquid substances i.e. any residues remaining after the cargo has been unloaded. MARPOL and the related International Bulk Liquids Code (IBC Code) separates bulk liquid chemicals into three categories – X, Y and Z, based on their marine pollution hazard. A tank that has held a Category X (highest marine pollution hazard) substance must be 'prewashed', and the residues must be discharged to shore before the ship departs. In some circumstances where Category Y or Z cargo has not been unloaded in accordance with appropriate procedures or for high-viscosity or solidifying Category Y substances, prewashes and discharge of residues to shore may also be required. In these cases, discharge to shore may be at the unloading port or another port provided that it is confirmed in writing that an adequate reception facility is available.

Annex IV Regulations for the Prevention of Pollution by Sewage from Ships

Regulation 12.1 - The Government of each party to the Convention, which requires ships operating in waters under its jurisdiction and visiting ships while in its waters to comply with the requirements of regulation 11.1 undertakes to ensure the provision of facilities at **ports and terminals** for the reception of **sewage**, without causing undue delay to ships, adequate to meet the needs of the ships using them.

Annex V Regulations for the Prevention of Pollution by Garbage from Ships

Regulation 7.1 – The Government of each Party to the Convention undertakes to ensure the provision of facilities at **ports and terminals** for the reception of **garbage, without causing undue delay** to ships, and **according to the needs of the ships** using them.

Annex VI Regulations for the Prevention of Air Pollution from Ships

Regulation 17.1 - The Government of each Party to the Protocol of 1997 undertakes to ensure the provision of facilities adequate to meet the:

- needs of ships using its **repair ports** for the reception of **ozone depleting substances** and equipment containing such substances when removed from ships.
- needs of ships using its **ports, terminals or repair ports** for the reception of **exhaust gas cleaning residues** from an approved exhaust gas cleaning system when discharge into the marine environment is not permitted under regulation 14 [*i.e. in enclosed ports, harbours and estuaries unless documented that there is no adverse impact*]

Regulation 17.2 recognises that reception facilities for exhaust gas cleaning system residues and ozone depleting substances may be impossible in some ports. If a particular port or terminal of a Party is remotely located from, or lacking in, the industrial infrastructure necessary to manage and process those substances referred to in Regulation 17.1 and therefore cannot accept such substances, then the Party shall inform the Organization of any such port or terminal so that this information may be circulated to all Parties and Member States of the Organization for their information and any appropriate action. Each Party that has provided the Organization with such information shall also notify the Organization of its ports and terminals where reception facilities are available to manage and process such substances.

Refer to resolution MEPC.199(62), 2011 Guidelines for reception facilities under MARPOL Annex VI.

Special provisions in MARPOL for Small Island Developing States (SIDS)

IMO has recognised the unique challenges that SIDS experience in providing adequate reception facilities for ships waste. This was first recognised in 2000 in IMO Resolution MEPC.83(44) *Guidelines for ensuring the adequacy of port waste reception facilities*, then given a firm legal basis through MARPOL amendments in 2011.

SIDS may satisfy waste reception facilities regulations through regional arrangements when, because of those States' unique circumstances, such arrangements are the only practical means to satisfy these requirements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization. The relevant guidelines are found in IMO Resolution MEPC.221(63). SPREP is currently in the process of reviewing the Pacific regional arrangements that existed since 2002¹ to update the data and ensure the new IMO guidelines are met.²

New Caledonia is not a SIDS, being a territory of France. MEPC.221(63) allows that non-SIDS may participate in a Regional Reception Facilities Plan but they should do so only so far as their ports may be Regional Waste Reception Centres where reception facilities are adequate.

Good Practice

IMO has developed a *Guide to Good Practice on Port Reception Facilities* intended to be a practical users' guide for ships' crews who seek to deliver MARPOL residues and wastes ashore, and for port reception facility providers who seek to provide timely and efficient port reception services to ships (MEPC.1/Circ.834 15 April 2014).

Although this Guide has no legal force, it provides a useful starting point outlining how those on both ends of the gang-plank can work together to facilitate the transfer of ships waste to shore.

The Guide contains advice on good practice to ship masters, owners and operators including the incorporation of logistical and commercial arrangements to allow for waste delivery to shore, the minimization and management of waste on board, and the provision of advance notification of the need to discharge waste prior to arrival in port.

Advice provided to port reception facility operators is that good practice includes communication of relevant information about available services and costs, and implementing procedures that facilitate integration with shipboard and landside waste management practices. It is also recommended that arrangements are in place to receive segregated garbage (consistent with ISO 21070) and to comply with relevant quarantine and hazardous substances requirements.

The Guide also advises that waste reception should be provided at a reasonable cost. In addition, the Comprehensive Manual on Port Reception Facilities (1999) provides useful information on developing a waste management strategy, operation of reception facilities (including funding mechanisms), coordination of port and ship requirement, and options for enforcement and control.

Meaning of 'Adequate'

The International Maritime Organization provides guidance on what constitutes 'adequate' waste reception facilities in Resolution MEPC.83(44) Guidelines for Ensuring the Adequacy of Port Waste Reception Facilities. Adequate facilities are defined as those which:

- mariners use;
- fully meet the needs of the ships regularly using them;
- do not provide mariners with a disincentive to use them; and
- contribute to the improvement of the marine environment.

1 Nawadra et al. (2002) *Improving ships waste management in Pacific Islands ports*. SPREP, Apia.
2 SPREP Circular 13/79

The facilities provided by the port must:

- meet the needs of the ships normally using the port; and
- allow for the ultimate disposal of ships' wastes to take place in an environmentally appropriate way.

Where facilities are provided, it is important to remember that adequacy can be compromised by poor location, complicated procedures, restricted availability and unreasonably high costs for the service provided. These are all factors which may provide a disincentive for the use of reception facilities.

The Guidelines also provide a sample assessment template that can be used to assess adequacy. The gap analysis undertaken in Noumea uses this template as a basis.

Adequacy according to "the needs of ships normally using the port" is an important concept to recall when using the Guidelines and assessment template. It will not be necessary in all ports to fully meet every item in the assessment template for all types of waste. The Guidelines are intended to be applied as is practical for a particular port, and there is no need to cater for wastes that are unlikely to be produced by ships arriving in that port.

IMO has implemented an international reporting mechanism for allegations of inadequate waste reception facilities whereby ships' Masters submit a standard form (MEPC.1/Circ.469/Rev.2) containing details of the allegation to the flag State and port State. AMSA investigates reports relating to Australian ports, and provides information on the outcome of the investigation to IMO and the flag State.

National implementation of MARPOL waste reception facilities requirements

The following is a brief review of French and New Caledonian law relevant to ships' waste in Noumea.

The role of government in New Caledonia is shared between the Government of the French Republic, and the Government of New Caledonia:

- The Government of the French Republic has responsibility for justice, public order, defence, monetary and foreign affairs.
- The Government of New Caledonia has responsibility for taxation; labour and trade unions law; insurance law; access to work for foreigners; native title; mining regulation; and civil and commercial law.
- As of 1 January 2011, New Caledonia assumed the responsibility for policing and security of maritime traffic, hydrography and aids to navigation, safety of life at sea and inspection of ships within New Caledonian territorial waters.³ A maritime affairs agency (*Direction des Affaires Maritimes de la Nouvelle Calédonie*) was established which includes a navigation and maritime security department (*Le Service Navigation et sécurité maritimes*).

³ Direction des Affaires Maritimes de la Nouvelle Calédonie www.affmar.gouv.nc/portal/page/portal/affmar/reglementation/Secu_nav_Circul_maritime Accessed 12/06/2014

MARPOL implementation

- France is a Party to MARPOL Annexes I, II, III, IV, V and VI
- France has not made a formal declaration that MARPOL applies in New Caledonia; however, neither has it made a declaration otherwise. It is inferred that French law gives effect to MARPOL in New Caledonia.

Environment protection and regulation of waste

The Basel Convention on the Transboundary Movement of Hazardous Wastes applies in New Caledonia, and is given effect by a decree by the New Caledonian Government made in 2003.

New Caledonia is a party to the Noumea Convention and Protocols.⁴

The Southern Province has a general regime designed to protect the environment and to promote recycling. The general regime provides that any person producing or holding hazardous waste likely to damage the environment must avoid any hazardous effects on the environment. There are also stewardship requirements requiring that producers of hazardous products such as used oil and batteries are responsible for their management in order to ensure the protection of the environment. The Provinces are responsible for managing the disposal of waste within their territory. Funding is sourced from additional taxes charged on certain imported products including batteries and lubricating oils.⁵

Quarantine

New Caledonia legislation *Arrêté no 2014-333/GNC du 13 février 2014 relatif aux conditions d'importation des produits à risque sanitaire* requires that waste on board foreign ships must be transported by an approved transport service provider in a sealed vehicle to an approved centre for destruction. Sorting and destruction must take place in the shortest possible time and allow for the destruction of any harmful organism. Sewage must be transported in a sealed vehicle to a water treatment centre in the shortest possible time. Commercial ships staying in port for less than 14 hours or private vessels staying in port for less than 7 days may store waste aboard in watertight, vermin-proof containers. Galley grinders must be sealed.

The Master must sign a declaration that waste will be retained on board unless an approval has been given, and landing is supervised, by a DAVAR official.

New Caledonian legislation *Délibération no 238 du 15/12/06 relative à la biosécurité aux frontières internationales de la Nouvelle Calédonie* sets out obligations related to quarantine for international ports. International ports must be declared and have an accreditation agreement with the government. The agreement specifies the port zones, infrastructure and equipment related to biosecurity, inspection schedules and eradication methods. Information on biosecurity requirements must be provided to ships personnel, and any businesses operating in the port zone. The port must be configured so as to prevent the introduction and spread of harmful biological agents.

There is also an obligation for a port director to facilitate the work of the biosecurity agency by ensuring that infrastructure and equipment are in place.⁶

4 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific region (the Noumea Convention), Protocol for the Prevention of Pollution of the South Pacific Region by Dumping; and the Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region, signed in Noumea on 25 November 1986.

5 Baker & McKenzie and ADECAL, 2013. *New Caledonia Investment Guide*. www.bakermckenzie.com/files/Uploads/Documents/Locations/Australia/bk_australia_newcaledoniaguide_feb13.pdf Accessed 12/06/2014

6 Summary of Deliberation number 238 provided in French by Direction des Affaires Veterinaires, Alimentaires et Rurales.

Ozone Depleting substances

France is a party to the Montreal Protocol on Substances that Deplete the Ozone Layer, and has not made any declarations in respect to application to New Caledonia. It is unclear whether French law extends to apply the obligations under the Montreal Protocol to New Caledonia. It is possible that it does not – Scal Air claims that “the Montreal Protocol does not apply in New Caledonia”.⁷

Port authority

New Caledonian legislation *Délibération Modifiée N° 121/CP DU 16 MAI 1991 portant refonte des statuts du Port Autonome (mise à jour par la délibération n° 279/CP du 18 décembre 2001)* establishes the port authority *Port Autonome de la Nouvelle Calédonie* (Port Autonome) which is responsible for the administration, maintenance, improvement and operation of the port of Nouméa. The limits of the port of Noumea are also set out in this legislation. Article 18 of this Deliberation gives the Port Captain responsibility for regulating ships within the port in accordance with MARPOL.

Gap Analysis Procedure

Preparation

The following preparatory work was carried out:

- Email liaison between SPREP and SRCER and Port Autonome to confirm participation and agree on dates.
- Email survey of agents facilitated by the Port Autonome Harbourmaster.
- Arrangements for opening meeting were made with relevant stakeholders.

Port Visit

The gap analysis team conducted on-site work in Noumea from 6-7 March 2014. The team held the following meetings:

- Opening meeting with range of stakeholders to explain aims and methods of the gap analysis and gain an initial understanding of any arrangements in place for ships' waste.
- Province Sud waste policy area
- Biosecurity agency
- Port Moselle management

In addition to the meetings, the wharf area of the commercial port and the marina at Port Moselle were visited to assess issues such as access, signage and waste receptacles. The gap analysis team also visited the landfill and municipal waste transfer station (the transfer station includes small scale sewage disposal & treatment), both operated by CSP.

⁷ Scal-Air website www.scalair.nc/la-qualite-de-l-air/effets/sur-la-planete accessed 25/06/2014

Follow-up

The following work was carried out post-visit:

- Email enquiry to SLN Nickel refinery regarding arrangements for ships using their berth and use of ships oily waste in furnace.
- Review of Port Autonome website
- Review of various New Caledonian government and environmental NGO websites and legislation
- Review of Trecodec website

Reporting

A draft report was provided to SPREP, for further coordination with New Caledonian authorities, on 15/7/2014.

Gap Analysis Outcomes

Numbering and wording of questions throughout this section reflects that used in IMO Resolution MEPC.83(44).

A. Contact Details and Port Description

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Port and surrounds

New Caledonia (Figure 1) comprises the island of Grande Terre, the four Loyalty Islands (Ouvea, Lifou, Tiga and Maré), the Belep archipelago, the Isle of Pines and some remote islands. Noumea is located near the south-eastern end of Grande Terre in the Southern province. New Caledonia is divided administratively into a Northern and Southern province on Grande Terre and an Islands province covering the rest of its territory. Some 258 000 people live in New Caledonia.⁸

New Caledonian exports are primarily minerals and metallurgy products (especially those derived from Nickel). New Caledonia's major export markets are France, Japan, Taiwan, EU (excluding France), South Korea and Australia. New Caledonia is also developing further export markets such as China.⁹

Major product categories of New Caledonian imports are: machines, appliances and electrical equipment; transport equipment; mineral products (including coal); and food. Major import partners are France, the European Union (excluding France), Singapore, Australia, New Zealand, the United States and Japan. Other Asian countries are emerging as import partners.¹⁰



Figure 1: New Caledonia. Source: Google Maps

The commercial wharf, located in the Grande Rade (“big harbour”), is composed of four berths reserved for international traffic. It is 750m in length with a draft of 10 to 10.30 m. There is an extension of 250m under construction which will provide an additional berth with 12.5m draft.

8 Australian Government Department of Foreign Affairs and Trade, *New Caledonia Country Brief*. dfat.gov.au/geo/new_caledonia/new_caledonia_brief.html Accessed 12/06/2014

9 Baker & McKenzie and ADECAL, 2013. *New Caledonia Investment Guide*. www.bakermckenzie.com/files/Uploads/Documents/Locations/Australia/bk_australia_newcaledoniaguide_feb13.pdf Accessed 12/06/2014

10 Ibid.

There is a land area of 45ha which accommodates freight storage, shipping companies and a dangerous goods area.

The Long Wharf is located in Petit Rade (“little harbour”) has a draft of 9.50 m maximum water, it can accommodate vessels with a maximum length of 250m. This dock is close to the city center. The reception of cruise passengers is carried out at the ferry terminal.

There is a scientific dock catering to research vessels, located north of the bay of Moselle, measuring 120m long.

Quai de l’Europe (or EDF), located in the Petit Rade consists of a 75m wharf and two mooring dolphins. The maximum draft of 8.90 m and it can accommodate vessels with a length of 185 m maximum.

The slipway port is equipped with two ramps accommodating vessels up to 1000 and 200 tonnes respectively.

The nickel refinery SLN and cement manufacturer Holcim operate private wharves. SLN receives heavy fuel oil by pipeline from oil tankers at a mooring buoy.

At the Mobil-Total terminal, tankers up to 200m long with 10.4m draft are moored between 6 mooring buoys. There is a gas terminal nearby with a wharf which can accommodate 90m long 5m draft gas tankers.

The fishing wharf is located in Grande Rade Nouvelle. The wharf is 270m long and can accommodate approximately 20 fishing vessels. In addition, 7 berths in spikes provide space for 14 vessels. Behind the fishing wharf, there are various facilities including cold storage and fish processing and packaging facilities. There is a resident fishing fleet of around 15 tuna longliners of >20m and around 10 smaller vessels.

For recreational yachts, there are five marinas located in Anglers Bay, Moselle and Orphanage, accommodating approximately 1800 vessels at berths and moorings.



Figure 2 provides a map overview of the port, and Figure 3 includes a series of images illustrating the diversity of port operations.



3a: Main commercial wharf



3b: Fishing wharf



3c: SLN refinery berth



3d: Port Moselle marina



3e: Urban context



3f: Cruise ship arriving into Noumea

B. Summary of Waste Reception Facilities Provided

Table 1 – Summary of waste reception facilities in Noumea

Type of Waste	Can Waste be Received? Yes or No	Type of Reception Facility (Fixed, Road Tanker or Barge)	Service Provider
Oil Tankers: Oily tank washings or oily ballast water	Limited (laboratory analysis required)	Road tanker for transport to SLN	SLN
All ships: oily bilge water, sludges, used lube oils	Limited (laboratory analysis required by SLN)	Road tanker for transport to SLN Various reception points in marina and urban area for small quantities of used lube oils	SLN Trecodec (used lube oils)
Chemical tankers: NLS	No		
Sewage	Limited	Road tanker for transport to septic treatment system at CSP transfer station	Approximately 5 companies collect waste
Garbage - Domestic vessels	Yes	Truck to CSP landfill	Approximately 5 companies collect waste
Garbage -recyclables	Limited types	Drop-off points (marina) or by direct arrangement with recycler	Trecodec (batteries) Shred-X (paper) Recycal (metal) EMC (metal)
Quarantine Waste – all garbage from international vessels	Yes	Sealed truck to PROMED incinerator (approved by DAVAR)	Service d'inspection veterinaire, alimentaire et phytosanitaire (DAVAR Biosecurity Division)
Ozone Depleting Substances	No		
Exhaust gas cleaning system residues	No		

C. Demand for Waste Reception facilities

This section examines various aspects of demand for waste reception facilities.

The data in Tables x and x provide an overview of the type of cargo handled in the commercial port. A total of 983 ships were handled in 2013, but this number excludes oil tankers and SLN ships.

Port Autonome provided the data on frequency of ship visits by ship type during 2013 (Table 2).

Table 2: Ship visits in 2013

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Container	28	26	28	25	27	31	25	33	28	29	29	34	343
Passenger	16	16	10	10	8	9	8	6	10	16	12	15	140
Fishing	3	2	4	1	6	4	5	2	1	-	-	1	29
Liquid Bulk	-	-	-	-	-	-	-	-	-	-	-	-	-
Roro/Lolo	-	-	-	-	-	-	-	-	-	-	-	-	-
Car Carrier	2	1	1	-	1	-	-	1	2	1	2	1	12
Other	1	2	1	1	-	1	1	1	1	3	1		44

Data on the quantity of cargoes imported and exported during 2013 is summarised in Table 3. Quantities have been rounded to the nearest tonne.

Table 3 : Quantities of cargoes imported and exported 2013¹¹

International	Import (tonnes)	Export (tonnes)
General cargo	560 373	238 394
Ferronickel & dross		165 522
Containerised cargo	489 061	223 245
TEU	50 140	44 540
Bulk solids	386 001	16 883
Bulk liquids	659 560	-
Total International	1 605 934	255 277
Domestic		
General cargo estimated	18 000	80 000
Bulk solids (nickel ore)	3 227 257	-
Bulk liquids	-	12 732
Total Domestic	3 245 257	92 732
Grand Total	4 851 191	348 009

The cruise industry is increasingly important in New Caledonia. Cruise ships stop mainly in Noumea, Isle of Pines and Lifou.

113 cruise ships visited New Caledonia in 2010 with a total of 195 456 cruise passengers. Noumea received 86 of these visits with 148 356 cruise passengers.

In 2013 the number of cruise ship visits had increased to 148, with approximately 163 expected to visit in 2014.

¹¹ Data source: Port Autonome website www.noumeaport.nc

Oily waste:

Tankers

Oil tankers generate particular types of oily waste, particularly cargo slops and oily ballast water. Noumea receives 30-40 oil tankers per year (26 in 2013); these ships discharge petroleum products (jet fuel, gasoline and gasoil). The MARPOL requirement for oil cargo slops reception facilities applies to loading ports for crude oil; and loading ports for oils other than crude oil (e.g. petroleum products) where oil is loaded at an average of more than 1000 tonnes per day. Since there is no loading of oil products occurring in Noumea, reception facilities for cargo slops are not a requirement in this port.

All ships

Ships larger than 400GT are required by MARPOL Annex I to have an oil sludge tank, so most large vessels will be able to store a certain quantity of sludge on board prior to incineration or disposal. Any port that handles ships that are required by MARPOL to have a sludge tank must provide reception facilities for oil sludge.

All ships potentially have oily waste on board e.g. used lubricants, oily sludge resulting from bilge water filtering, oily rags and oily bilge water.

Oil sludge generation depends on the quality of fuel. It has been estimated that sludge is generated at approximately 1-2% of daily Heavy Fuel Oil consumption^{12,13} and 0.5% of Marine Diesel Oil consumption¹⁴.

SLN currently accepts 20-30 tonnes of waste oil from ships per year, primarily from domestic nickel ore carriers using the SLN wharves. The refinery also uses approximately 3-4000 tonnes of waste oil generated by land-based sources within New Caledonia.

Noxious Liquid wastes:

There are currently no NLS bulk cargoes handled in Noumea. Previously, fluororic acid was received, but it is now produced locally.

Sewage:

All ships potentially have sewage on board. The amount varies with the number of people on board, so cruise and larger naval ships will have large amounts of sewage, whereas cargo ships with a small crew will have much smaller amounts. Cruising is a significant industry in Noumea, with 148 passenger ship visits in 2013, mostly originating in Australia. In addition, there are inter-island ferries operating to Lifou and the Isle of Pines.

MARPOL provides for different options for onboard storage and treatment of sewage, which affect where the ship will be able to discharge sewage.

Ships with sewage treatment plants will be able to treat their sewage and discharge liquid effluent at sea. There may be a need for these ships to discharge sewage sludge in port, depending on the system.

12 Le Calvez, P. (2006) Oily waste management onboard of vessels. Lecture available at http://www.afcan.org/dossiers_tech-niques/gestion_dech_huileux2_gb.html

13 Palabiyik, H. (2003) "Waste Management Planning for Ship Generated Waste", *Journal of Naval Science and Engineering*, Volume 1, Number 2, July, 151-159.

14 Palabiyik H (above, n2).

Ships without IMO-approved sewage treatment plants may discharge disinfected (e.g. chlorinated) sewage or raw sewage at sea beyond 12nm. The need to discharge sewage to shore will vary depending on the size of holding tanks and the length of a vessel's stay in port.

Garbage:

All ships will have some garbage on board. The amount and type of garbage will vary depending on the number of persons on boards, and depending on the type of ship. Some particular examples:

- Cruise ships – very large amounts of domestic garbage due to the large number of persons on board. Food wastes and food and beverage packaging will feature. Medical wastes and certain small hazardous items (e.g. batteries, aerosol cans, photo processing chemicals) etc. may be present in larger quantities than on a cargo ship.
- General cargo– smaller amounts of domestic garbage, but garbage such as dunnage and other cargo-related waste might be more significant.
- Tankers – similar domestic garbage as for general cargo ships, but dunnage and other cargo packing materials probably not an issue.
- Fishing vessels – Damaged nets, lines and other fishing gear in addition to domestic garbage.

Theoretical estimates of garbage quantities

Estimates were made of the theoretical amount of garbage arriving in Noumea (Table 4) based on an assumption of 2kg per person per day for non-cruise ships and 3kg per person per day for cruise ships¹⁵. It was also assumed that ships would spend an average of 2 days at sea prior to calling at Noumea¹⁶, and the number of ship visits (cargo ships and tankers) was calculated from the estimates provided by participants in the opening meeting (Table 4). It excludes recreational yachts and fishing vessels.

Table 4 Calculation of estimated garbage quantities

	Avg pax onboard	Avg days at sea prior to port call	Ship visits	kg.pax. day generated	kg generated per ship visit	Annual mass generated (kg)
Non-cruise	25	2	400	2	100	40 000
Cruise Liners	2 000	2	140	3	12 000	1 680 000
					Total:	1 720 000

It would be useful to compare these figures with actual figures of garbage being landed as this would indicate the extent to which potential demand was being met. However, Quarantine data is not currently systematically compiled due to a lack of sufficient staff resources. It is also not possible to distinguish ship-sourced garbage arriving at landfill.

15 Delfosse, S., McGarry, J. & Morin, T. (2010) Ship Generated Waste Disposal in the Wider Caribbean Region. www.wpi.edu/Pubs/E-project/Available/E-project-121610-185147/unrestricted/Team5_USCG1_IQP_FINAL.pdf

16 An estimate of 2 days sailing was provided by participants at the opening meeting, assuming an origin in Australia or New Zealand.

Annex VI wastes:

It was not possible to assess demand for reception facilities for Annex VI wastes (ODS and ECGS residues) during the current gap analysis. Future consideration could seek information on frequency of maintenance of refrigeration, fire or air-conditioning systems on ships in port, and information on the number of ships equipped with EGCS visiting port.

Users' perspective:

It is noted that it is difficult to accurately assess demand on the basis of how often particular services are requested. There appears to be the situation where the lack of requests seems to be at least partly due to ships having been told it is not possible or that it is expensive for so long that they no longer ask. This view came out fairly clearly in the initial meeting with a range of stakeholders, including agents. Responses to the agents email survey supported this view, and additionally raised the view that the reason ships choose not to dispose of their waste in Noumea was that it is too expensive.

D. Assessment of Waste Reception Facilities

D1. Oily Wastes

D1-1

Where is oily waste disposed of?

- ~~Separation of oil and water then recycling~~
- ~~Land disposal~~
- ~~Recycled~~
- **Incineration** there is limited use of oil sludge as a heat source for power generation at the SLN refinery.
- ~~Ships to a holding tank prior to being pumped out~~
- ~~Directly from the ship to a mobile facility~~
- ~~other~~

D1-2

Are there any restrictions on receipt or collection of oily waste by service providers?

Waste oils come mainly from ore carriers that are chartered by SLN. Oils from foreign ships docking at our dock can be accepted.

For acceptance by the SLN refinery, the following criteria are applied:

Polychlorinated biphenyls < 50 ppm

Polychlorinated terphenyls < 50 ppm

Chlorine < 10% by weight

Testing is required to verify compliance with the criteria; the testing takes approximately 10 days, with the effect that it is really only feasible for regular visitors to the SLN wharves to dispose of oil.

D1-3

Are oily waste reception facilities available:

- 24/7
- ~~24/5~~
- ~~9-5/7~~
- ~~9-5/5~~
- ~~Other~~

D1-4

Is prior notice for receipt of oily waste required:

- **0 hours** – At Port Moselle, access to disposal points is unrestricted.
- ~~12 hours~~
- **24 hours** – one agent noted that 24 hours would generally be sufficient for most waste transport providers.
- ~~48 hours~~
- **Other** – SLN can only accept oily waste following chemical analysis, which generally takes around 10 days.

D1-5

Is the oily waste receipt service available:

- **at no cost** – Port Moselle accepts oily waste from yachts at no extra cost (Figure 4).
- ~~at a cost incorporated into standing port use charge~~
- **at a cost charged in addition to other services** – For oils to be accepted by SLN, the cost of transport and treatment is the responsibility of the ship.

Trecodec noted that benchmarking work they had done indicated that Noumea is reasonably competitive e.g. in Noumea the cost for disposal is CPF 17,000/T, compared to CPF 20,000/T in Sydney¹⁷.

D1-6

Is a waste collection service available:

- **at all berths** –
- ~~at most berths~~
- ~~at only one berth~~
- ~~to vessels anchored within the port~~
- ~~to vessels anchored outside the port~~
- ~~other~~

While it appears that currently waste oil is only collected from the SLN berths by SLN, and from the marinas by Trecodec, in theory there are no obvious obstacles to waste service providers accessing ships to receive oily waste. Normal port security arrangements would apply.

¹⁷ Recent benchmarking work commissioned by AMSA found a similar pricing (on current exchange rate) in Sydney for one service provider, but two other Sydney service providers were significantly more expensive.



Figure 4: Oil disposal points for yachts in Port Moselle
(also note domestic non-quarantine garbage bins in background)

Additional information:

The study published in 2002 by SPREP¹⁸ noted that there were fixed wharf discharge points and waste oil collection tanks within bunded enclosures. However, such points, if they still exist, were not shown to the gap analysis team during the port visit, and no stakeholder mentioned their existence.

Assessment of the provision of waste reception facilities for oily waste:

- 1 – Less than Satisfactory (Main commercial wharves)
- 2 – Satisfactory (SLN and Port Moselle)
- 3 – Fully meets the requirements

Comments:

Reception of oily waste is currently adequately provided for some vessels, namely domestic nickel ships at the SLN berths, and international yachts at Port Moselle. However, the options for most ships using the main commercial wharves are very limited due to the laboratory analysis required prior to acceptance by SLN and the lack of provided collection points or affordable transport for oily waste.

D2. Noxious Liquid Substances

Assessment of the provision of waste reception facilities for noxious liquid wastes:

- 1 – Less than Satisfactory
- 2 – Satisfactory
- 3 – Fully meets the requirements

Comments:

There is currently no chemical tanker traffic in New Caledonia. Reception facilities are therefore assessed as satisfactory in the context of current needs.

¹⁸ Nawadra et al. (2002) *Improving ships' waste management in Pacific Islands ports*. Apia, Samoa : SPREP, 2002.

D3. Sewage

D3-1

Where is sewage disposed of?

- Directly from the ship to a mobile facility
- ~~Ships to a holding tank prior to being pumped out~~
- ~~other~~

Ultimate disposal is at CSP transfer station where there is a small sewage treatment system (Figure 5a & b) which uses flocculation and settling to separate water and sludge. The dried sludge is sent to landfill.



Figure 5a: Truck discharge point to sewage treatment system at CSP transfer station



Figure 5b: Sewage treatment system at CSP transfer station

D3-2

Are there any restrictions on receipt or collection of sewage by service providers?

Normal port security requirements would apply.

D3-3

Are sewage reception facilities available:

- 24/7
- ~~24/5~~
- ~~9-5/7~~
- ~~9-5/5~~
- ~~Other~~

D3-4

Is prior notice for receipt of sewage required:

- 0 hours
- 12 hours
- 24 hours – would be generally sufficient for most ships; however, for cruise or navy ships, one agent noted that 15 days notice was realistically needed.
- 48 hours

D3-5

Is the sewage receipt service available:

- ~~• at no cost~~
- ~~• at a cost incorporated into standing port use charge~~
- at a cost charged in addition to other services

D3-6

Is a waste collection service available

- at all berths –
- ~~• at most berths –~~
- ~~• at only one berth –~~
- ~~• to vessels anchored within the port –~~
- ~~• to vessels anchored outside the port –~~
- ~~• other~~

Additional Information:

International yachts visiting Port Moselle must use shoreside amenities blocks rather than on-board systems unless equipped with a holding tank.

Assessment of the provision of waste reception facilities for sewage:

- 1 – Less than Satisfactory (cruise ships)
- 2 – Satisfactory (most ships)
- ~~3 – Fully meets the requirements~~

Comments:

The main concern with regard to sewage reception facilities relates to cruise ships due to the large quantities of sewage on board these vessels.

Sewage reception is theoretically possible by tanker truck with ultimate disposal at the sewage treatment facility at the CSP transfer station. The facility is small and may not be able to handle additional load if all cruise ships were to use it. The cost of using multiple trucks to transport sewage from a cruise ship is likely to be prohibitive.

Most commercial ships are likely to be able to manage waste at sea either by direct discharge beyond 12nm or via an IMO-approved sewage treatment plant. Tanker trucks are available as mentioned above, and although do incur a cost they present a viable and environmentally acceptable option for smaller quantities of sewage. Toilet facilities are provided for international yachts in Port Moselle.

Although outside the scope of this gap analysis, it is noted that the Naval Base caters for the direct transfer of ships' sewage to the city sewer via discharge points at the dock.

D4. Garbage Disposal – On Shore

D4-1

Where is garbage disposed of?

- **Local government dump/landfill** – ultimate disposal for non-hazardous, non-quarantine waste is in European-standard, clay/plastic-lined landfill operated by CSP (Figure 6a, b & c).
- **Transfer station** – waste destined for landfill is initially delivered to the CSP transfer station, where some separation is possible (Fig 6d).
- **Materials recycling facility** – limited products can be recycled through private companies who package and export wastes to Australia or New Zealand. e.g. Shred-X (paper), Recycal (metal) and EMC (metal). At the time of the port visit it was indicated that the CSP landfill would commence plastic recycling in May-June 2014. E-waste is also recycled by CSP. Collection points are provided throughout Noumea by Trecodec (an environmental NGO) for certain types of garbage (e.g. batteries) for delivery to exporters. The exporters can also directly collect waste, and depending on the company and material may charge a fee or pay a bounty.

•—other

D4-2

Where are quarantine wastes disposed of?

•—Incinerator

- **sterilization** – Promed operates an ECODAS autoclave in Noumea for the treatment of quarantine wastes received from international yachts and commercial ships (figure 7a & b). This facility is approved by DAVAR Biosecurity Division. In addition, there is an autoclave at the airport, however currently this is used primarily for airline catering waste and items seized from airline passengers. It is also used for medical waste. The autoclave potentially provides an alternative means of treating ships waste should the Promed facility be temporarily unavailable.

•—deep burial

•—normal landfill



Figure 6a: CSP landfill – active area



Figure 6b: CSP landfill – new area with recycled tyres as drainage



Figure 6c: CSP landfill treatment plant



Figure 6d: CSP transfer station

Are all quarantine waste receptacles

- **secure from interference –**
- **permanently labelled –** yes (biohazard)
- **securely covered –** yes
- **bunded –**
- **stored in a refrigerated facility –**
- **protected from birds or other animals –**

The gap analysis team did not have the opportunity to inspect quarantine waste receptacles during the visit, however SIVAP later provided images of the receptacles being emptied into the ECODAS system (Figure 7a & b).



Fig 7a Quarantine receptacles. Image courtesy Promed/SIVAP



Fig 7b Quarantine receptacles. Image courtesy Promed/SIVAP

D4 continued. Garbage Disposal – Ship to Shore

D4-3

Are there any restrictions on receipt or collection of garbage wastes?

Quarantine restrictions for international vessels (see National Implementation section above).

Any dangerous goods have to be exported as they cannot be accepted to the landfill. There are two companies who export dangerous wastes to New Zealand and France.

D4-4

Are garbage reception facilities available:

- 24/7
- ~~24/5~~
- ~~9-5/7~~
- ~~9-5/5?~~
- ~~Other~~

D4-5

Is prior notice for receipt of garbage required

- ~~0 hours~~
- ~~12 hours~~
- 24 hours – for commercial ships.
- ~~48 hours~~

International yachts – occupants must wait on board for 2 hours on arrival to allow for biosecurity clearance. 100% of international yacht arrivals are inspected by the biosecurity agency.

D4-5

Is the waste receipt service available

- ~~at no cost~~
- ~~at a cost incorporated into standing port use charge~~
- **at a cost charged in addition to other services?** There is no charge for biosecurity inspection and clearance, but waste disposal is charged at CPF725/kg. 25% of international ships are inspected, with a focus on first visits.

D4-6

Is a waste collection service available

- **at all berths** – There is no waste collection service provided by authorities; however, subject to normal port security requirements, there are no obvious obstacles to privately engaged waste collection companies being able to access berths to collect waste.
- ~~at most berths~~
- ~~at only one berth~~
- ~~to vessels anchored within the port~~
- ~~to vessels anchored outside the port~~
- ~~other~~

Assessment of the provision of waste reception facilities for garbage:

~~1 – Less than Satisfactory~~ 2 – Satisfactory ~~3 – Fully meets the requirements~~

Comments:

Garbage from international vessels appears to be adequately regulated and catered for. There are environmentally acceptable means of disposing of most types of garbage in Noumea. Some options involve export to Australia or NZ but this may be appropriate if it does not make reception so expensive for the ship as to provide a deterrent. The challenge in providing adequate reception facilities for garbage is how to facilitate the transfer of waste from ship to disposal point. There are very limited collection networks or services within the port, meaning that convenience and transport cost may be inhibiting the reception of garbage that has been cleared of any quarantine risk, and of recyclable ships' waste.

D4A – Annex VI wastes

Ozone depleting substances

There is no means of disposal of ODS in New Caledonia, so any ODS would need to be stockpiled and exported to Australia or New Zealand. Air conditioning and refrigerant gases will be collected from 1 May 2014; however it was not clear how the arrangements will be made in practice.

Exhaust gas cleaning system residues

It is unlikely that EGCS residues can currently be disposed of in Noumea. Oily waste arrangements currently require laboratory analysis prior to acceptance, which takes 5-10 days. Due to the highly variable nature of EGCS residues they would always need to be tested, and the timeframe is unlikely to be suitable for visiting ships.

Assessment of the provision of waste reception facilities for Annex VI wastes:

~~1 – Less than Satisfactory~~ 2 – Satisfactory ~~3 – Fully meets the requirements~~

Comments:

The difficulties faced by certain ports remotely located from or lacking in the industrial infrastructure necessary to manage and process Annex VI wastes is acknowledged in MARPOL Regulation 17.3. As such, there is an allowance that such ports may be exempt from the requirement to receive these wastes. In that case, they shall inform IMO that facilities are not available.

It appears that there are limited arrangements in place for domestic ODS, and it would be desirable to clarify how these arrangements may be accessed by visiting ships.

D5. Waste Management System

D5-1

Has a waste management plan been developed and implemented for ship wastes?

There is no waste management plan specifically for ships' wastes, but there is a comprehensive plan for waste management in the Southern Province – Province Sud has published the *Schema provincial de gestion des dechets*, October 2012.

D5-2

Is the Waste Management Plan part of an overall Environmental Management System for the port?

N/A – there is no WMP.

D5-3

Are marinas and fishing harbours covered by the port EMS or required to develop their own EMS?

They are required to develop their own EMS.

D5-4

Does the WMP provide a brief summary of the types of wastes received and the collection and disposal facilities/services?

There is no WMP. However, the South Province's waste management scheme does include such a summary at the Province level.

D5-5 to D5-9 (WMP Objectives)

The absence of a WMP makes it difficult to evaluate these items.

D5-10

Are contact details held for all waste service providers?

No.

D5-11

Are the service providers licensed/approved as required by legislation?

Private companies can be engaged directly (e.g. by ships agents) to collect waste. Province Sud issues licenses for the collection of hazardous waste, oils and lead batteries. These approvals are valid for 5 years.

D5-12

Are a copy of the licenses held on file?

Specific information was not obtained on this item; however, Province Sud licenses waste collectors and treatment facilities so could be expected to hold details of these licenses.

D5-13

Are copies of the licenses for the waste disposal facilities used by the service providers held on file?

Specific information was not obtained on this item.

The landfill (l'ISD de Gadgi) is operated by CSP on a 30 year contract to SIGN, a syndicate of municipalities including Noumea.

D5-14

Have receipts for waste disposal been sighted/copies held on file?

No. Since arrangements are made directly between agent and waste service provider, it would be the responsibility of waste service providers and agents or ships to retain any such records.

D5-15

Are alternative waste service providers or disposal facilities available (e.g. spare drums, waste oil recyclers)?

There are a number of alternative waste service providers operating in Noumea.

D5-17

Are the details of back-up facilities on file?

No.

D5-16

Is there a procedure for choosing waste disposal service providers (e.g. list of preferred contractors)?

No, as this is arranged directly between agents and service provider. One agent indicated that flexibility was important in selecting a provider.

D5-18

Does the WMP include an emergency response plan?

While there is no WMP for ship's waste, Province Sud's waste management scheme includes a section on emergency situations that may cause marine pollution, which recognises that large quantities of potentially hazardous waste can be generated in these situations. The scheme recognises that the POLMAR New Caledonia plan (i.e. national marine oil spill contingency plan) lists the various means for the treatment and recovery of waste.

D5-19

Is the plan adequate in that it addresses at least the following [emergency response] issues?

MEPC.83(44) identifies the following aspects to consider:

Spillage of liquid –

Spillage of solids –

Leakage of gas –

Fire or explosion –

Emergency contacts –

Other –

POLMAR New Caledonia was not reviewed during this assessment.

D5-20

Is information recorded on the quantities of each waste stream which are received, date of receipt, disposal contractor and method of disposal or treatment?.

Such data are not held in a single location for ships' waste; however, given the relatively high level of administration and management of waste generally in New Caledonia, it could be expected that much of this information would exist.

D5-21

Are there variations in the quantities of each waste stream received?

- ~~in any one month (e.g. due to shipping variations)~~
- ~~in any one year (e.g. due to seasonal effects)~~
- ~~over a number of years (e.g. due to industry growth)~~
- don't know

D5-22

Is this information analysed on an on-going basis to detect changes in usage (both short term season variations and long term growth or reductions) and assist in formulating future plans?

No.

D5-23

Is ongoing consideration given to changes in demand for waste reception facilities?

Not specifically for ships' waste.

D5-24

Do plans exist for future upgrades [to waste reception facilities]?

The SLN refinery is expected to convert to coal rather than heavy fuel oil to power their furnace in future. SLN advised that the timeframe for this is unclear at the moment, but is expected to be 2018 or later. Since SLN is currently the main option for disposal of ships' waste oil, this needs to be considered in planning future ships waste reception facilities.

D5-25

Is there an on-going process for reviewing existing facilities and determining changes that may be required to meet adequacy, timing or waste generation demands?

There is no formal process; however, stakeholders such as Province Sud and Trecodec indicated that they were actively seeking to plan ahead for oily waste management if SLN ceases to accept waste oil in future.

D5-26

Are there provisions for audits against the WMP (at least within 2 years of implementation and thereafter every 3 years?)

There is no WMP.

D5-27

Is there provision for periodic review of the WMP?

There is no WMP.

D5-28

Are the relevant requirements of the MARPOL 73/78, UNCLOS and IMO generally adhered to by the users of the port?

Yes. The Harbourmaster has the power to detain ships and obtain security for their release. The Harbourmaster arranges for an inspection by the maritime affairs department if necessary. Managers of Port Moselle noted that there are problems with yachts polluting the harbour.

D5-29

Is there information on the state and local regulations regarding waste management, pollution of water, pollution of air, noise emissions, discharges to sewer, storage of dangerous goods etc (please list legislation if known):

This information is not drawn together into one document. The Province Sud waste management scheme identifies the regulatory framework applicable to waste management (including dangerous waste).

D5-30

Is there information on waste minimisation hierarchy (i.e. avoid/ reduce/ reuse/ recycle/ reprocess)?

D5-31

Is an open and co-operative relationship maintained between the port authority and the relevant authorities and agents?

During the visit it did not appear that there were any problems in this area.

D5-32

Are there channels of communication and consultation with relevant organisations to ensure that particular changes in demand are considered in providing waste reception facilities?

No.

D5-35

Do training programmes for port employees (both of the port authority and users) include a section on waste management and the facilities provided at the port?

No.

D5-34

Is there a section in the WMP or a separate document which is included in agreements with port users and specifies requirements for the usage of port waste reception facilities?

No.

D5-35

Is clear and visible signage for waste reception facilities present and includes:

- **advice at initial vessel contact point of waste reception facilities** – no
- **direction to receptacle or disposal point location** – no
- **labelling of all receptacles and disposal points** – no, except for recycling at Port Moselle.
- **contact numbers** – no
- **emergency procedures** – no
- **translation into other languages as required** – no, except for recycling at Port Moselle (French and English, Figure 8)



Figure 8: Recycling information at Port Moselle

D5-36

Are information sheets/leaflets available for each waste reception facility?

No, with the exception of leaflets on recycling available at Port Moselle.

D5-37

How is information on waste reception facilities conveyed to ships?

Via agents for commercial ships.

Via marina website and office for international yachts.

Assessment of the waste management system:

~~1 – Less than Satisfactory~~ 2 – Satisfactory ~~3 – Fully meets the requirements~~

Comments:

Although not drawn together into one documented ships waste management plan, many elements of an effective waste management system exist. The major area for improvement would be to source and analyse information on the quantities of waste being landed, and estimate any demand that is not being met.

E. Assessment of adequacy of service

The results of the agents survey are summarised below. Four agents responded to the survey.

Use of reception facilities

The agents' survey indicates that reception facilities in Noumea do not meet the criterion listed in the IMO guidelines that adequate facilities are 'those that mariners use'. One agent reported that approximately 10 ships per year would request garbage reception, and there are no requests for any other type of garbage. Another agent reported that their ships 'rarely' request garbage, sewage and oily waste reception, and never request reception of other types of wastes.

Why ships might or might not chose to deliver waste to shore in Noumea

Several reasons were identified by the four agents who responded:

- Discharge of waste other than garbage not permitted in New Caledonia;
- No appropriate facilities;
- Too costly;
- Cost too high, impossible to process oily waste;
- Short rotation between Australia-New Zealand-New Caledonia ports.

Note that these are the views and perceptions of individual agents, and are not necessarily accurate or representative of all shipping agents.

Difficulties making arrangements

No particular difficulties were identified. One agent noted that 48 hours' notice was 'convenient'.

Overall satisfaction

No agents who responded were satisfied with reception facilities in Noumea.

Conclusion - Gaps and Opportunities

Noumea's is positioned as a hub for shipping in the Pacific, both for traffic within New Caledonia and between nearby island nations such as Wallis and Futuna and Vanuatu. It is also a significant exporter of nickel ore, a major cruise liner destination and receives much cargo (e.g. food, consumer items and fuel) by sea. It also supports a fishing fleet, a resident cable-laying ship, and visiting research and naval vessels. Noumea is also a major destination for pleasure craft. It is therefore important that adequate reception facilities are available to serve the needs of ships.

The nickel refinery, SLN, accepts oily waste for use in its power generation plant. Reception facilities for oily waste are in practice only available to domestic commercial ships using SLN wharves. This limitation appears to be caused by a combination of SLN requirements for laboratory testing of oily waste prior to acceptance and a lack of provided transport for oily waste except at SLN wharves. This makes it impractical (testing takes 10 days) and expensive for ships who are not regular visitors with known oily waste profiles.

The future for oily waste reception is uncertain as SLN may cease to accept oils in approximately 5 years' time in favour of coal-fired generation. It also appears that since Noumea's oily waste reception facilities were last reviewed in 2002¹⁹, there has been a reduction in access for ships – the laboratory testing requirements have been introduced. There is also no evidence of disposal points on all wharves that were noted in the 2002 work.

There are currently adequate facilities for oily waste from pleasure craft with disposal points at the head of every quay in the marina in Port Moselle. Use of these disposal points is at no extra cost over berth fees.

Reception facilities for bulk noxious liquid substances have been assessed as adequate (i.e. 'fully meets the requirements' – there is no current need for such facilities. There is currently an absence of bulk noxious liquid cargoes in Noumea. Should this change in future, reception facilities for cargo tank prewash residues may become necessary.

Reception facilities are available for sewage. Tanker trucks can take sewage from vessels to the septic treatment facility at the CSP transfer station. However, this option appears not to be used by ships. There may be an incorrect perception among agents that sewage may not be discharged, and others note cost as a disincentive. It is likely that most ships can manage their sewage onboard through treatment systems while at sea; however, this may become difficult for longer stays in port. More information would assist in making an assessment of the demand for sewage reception facilities. In the longer term, this information may lead to a consideration of whether a direct connection to the urban sewer network would be appropriate, particularly for cruise ships. The existing septic treatment system may not be able to handle the load if there was a large increase in ships waste being deposited there.

For live-aboard yacht owners, there are shore amenities at the marina provided at no extra cost over the berth fees.

¹⁹ Nawadra et al. (2002) *Improving ships' waste management in Pacific Islands ports*. Apia, Samoa : SPREP, 2002.

While there are good facilities available for environmentally responsible disposal of garbage (e.g. the accredited, European standard landfill and quarantine incinerator), use of these facilities by ships is poor. It is possible that a lack of convenient, economical transport is an obstacle, as currently agents have to engage a waste transport provider on an individual basis which can prove more expensive than shared arrangements.

Similarly, there are limited options for recycling (lead acid and rechargeable batteries, paper/ cardboard, e-waste, plastics in future) but it is uncertain how ships can access in practice.

There may be opportunities for Port Autonome to work with waste transport providers and recyclers to provide a mobile collection service and/or install collection points in the wharf areas. Province Sud may be able to assist in the context of the waste management scheme.

Quarantine/biosecurity regulations allowing for licensing of ports and waste service providers are not yet in force, so there are limited legal means to enforce. Once the laws have commenced, it will be important to ensure there are adequate DAVAR resources to monitor and enforce compliance.

For Annex VI wastes, Exhaust gas cleaning residues are not currently able to be accepted in New Caledonia as there is no appropriate means of disposal.

There is no means of destruction of ozone depleting substances in New Caledonia, they would need to be exported. New Caledonia is currently stockpiling extinguishants, and refrigerants soon to be collected (May 2014). It is not desirable to accept additional ODS into a country that must resort to export to deal with ODS. Overall, it is considered that facilities are 'satisfactory' on the basis that there is currently no clear evidence of demand, and Annex VI allows for remote ports or those with limited infrastructure to inform IMO that Annex VI facilities are not available.

While there is no documented ships' waste management plan, there are many existing elements of an effective waste management system. There is comprehensive waste planning at Province level which includes objectives, details of infrastructure and arrangements, monitoring, waste tracking. There is accreditation of waste handlers and disposal sites. It would be desirable to address ships waste as an aspect of industrial waste management under this system of planning.

There is no established system for collecting and analyzing information on the demand for ships waste reception which would be reflected not only by the amount of waste actually being landed in Noumea, but also by the amount of waste that would be landed if it were more efficient to do so. There is evidence that agents are refusing requests or requests are not being made because of previous experience.

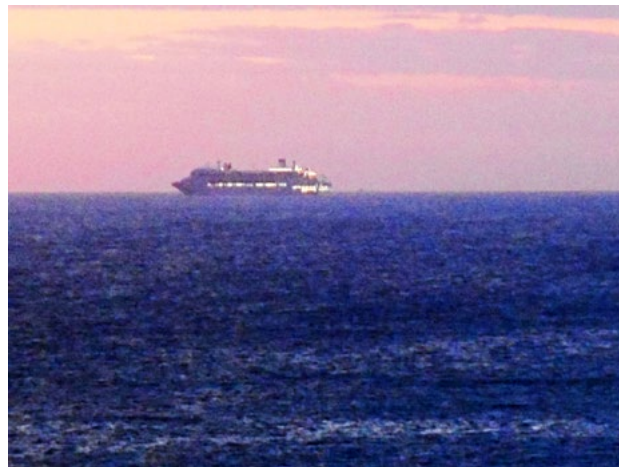
There appears to be a need for clear communication to ships agents and crews regarding arrangements and requirements for waste handling and disposal. There are new requirements and arrangements (e.g. quarantine laws and ozone depleting substances collection) that should be communicated. There also seems to be some inaccurate perceptions among agents, for example that sewage may not be landed in New Caledonia. This is contrary to quarantine legislation where it is provided that sewage can be landed if it is transported in a sealed vehicle to a treatment plant).²⁰

Information on reception facilities should be maintained in the IMO GISIS port reception facilities database. It may also be helpful to maintain information on the Port Autonome website since this is a natural place for crews and agents to seek information on a range of port facilities and services, including waste.

²⁰ Arrêté no 2014-333/GNC du 13 février 2014 relatif aux conditions d'importation des produits à risque sanitaire

Recommendations

1. Incorporate ships' waste into Province Sud's waste management activities (other Provinces as well).
2. A system should be developed to collect and analyse information on waste aboard arriving ships and true demand for reception facilities e.g. consider asking agents for waste information on berthing application, and/or calculate theoretical estimates from shipping data and published waste generation rates.
3. Port Autonome could consider opportunities for disseminating multi-language information (e.g. French, English, Chinese) through website and/or printed information including a summary of waste types accepted, regulatory requirements, contacts for waste service providers and regulators.
4. Port Autonome or Province Sud should consider contracting a garbage collection service for container, cargo, tankers and bulk carriers. ships e.g. a truck that runs daily. Ships could then be charged by volume of waste, but would not be individually responsible for the entire cost of hiring the truck. Preferable if the service could handle domestic ships garbage and international ships garbage separately.
5. Once biosecurity regulations allowing for licensing of ports and waste service providers are commenced, ensure there are adequate DAVAR resources to monitor and enforce compliance.
6. Oily waste Province Sud and Trecodec should continue to work with SLN to determine future of waste oil use in refinery. Keep SPREP informed of outcome.
7. Consider practical ways of including ships batteries and oily waste into Trecodec collection system (e.g. collection points on commercial wharves?). Such a consideration would need to take into account financial implications.
8. In the longer term, consider the feasibility of a direct sewer connection for discharge of sewage from cruise ships.
9. Update IMO GISIS database. Inform IMO that Annex VI reception facilities are not available for the time being. Liaison with IMO may require SPREP and/or French assistance.



Appendix 1

Agents survey Questions

1. What kinds of ships do you manage?
2. Approximately what number and/or proportion of your ships would request
 - a. Garbage
 - b. Oily waste
 - c. Sewage
 - d. Noxious liquid substances prewash
 - e. Solid bulk cargo residues (dry or contained in hold wash water)
 - f. Ozone depleting substances
 - g. Exhaust gas cleaning system residues
 - h. Antifouling systems waste
 - i. Ballast tank sediments
3. Do you have any views on why your ships might or might not choose to deliver waste to shore in Apia Port?
4. How/with whom do you make arrangements for waste reception?
5. Have you had any particular difficulties in making these arrangements?
6. Overall, are you satisfied with waste reception facilities in Apia Port?

