

Plan of Action

for ships of which the cargo has been fumigated with phosphine in a foreign port

Forming part of the
Rotterdam Port Bye Laws 2020,
Vlaardingen Port Bye Laws 2019,
Schiedam Port Bye Laws 2020,
Dordrecht Port Bye Laws,
Port Bye Laws Zwijndrecht and
Papendrecht Port Bye Laws 2020

Introductory letter

This Plan of Action is required on the basis of article 4.7, under c, of the Rotterdam Port Bye Laws 2020,

Vlaardingen Port Bye Laws 2019, Schiedam Port Bye Laws 2020, Dordrecht Port Bye Laws, Port Bye Laws Zwijndrecht and Papendrecht Port Bye Laws 2020 (hereinafter 'PBL2020'). The interests protected by the PBL2020 are order, safety and the environment in the port. The Harbour Master of Rotterdam is responsible for safeguarding these interests in the port in so far as they are located within the municipal boundary. To safeguard these interests, the Harbour Master of Rotterdam has adopted a procedure for all parties involved in transshipment operations in the port and in further transport by means of sea-going ships carrying cargo that has been treated with fumigants in a foreign port. This procedure regulates the following interests:

- Order: Ships carrying cargo that has been treated with fumigants in a foreign port must be moored in a safe place in the port at all times.
- Safety in the port and its environment: Cargo handling operations of seagoing ships (such as loading, unloading, mixing, and ventilating) the cargo of which has been treated with fumigants in a foreign port, as well as other operations (such as bunkering), must be carried out in the safest possible manner. The regulations set out in the Plan of Action complement regulations already in force on the basis of the Working Conditions Act, the Plant Protection Products and Biocides Act, the International Maritime Solid Bulk Cargoes (IMSBC) Code, and private law obligations between the parties.
- The environment: The cargo handling operations in seagoing ships, the cargo of which has been treated with fumigants in a foreign port, must be carried out in such a way as to cause as little harm as possible to the environment.

Within the adopted procedure laid down in the Plan of Action, substantive considerations must be made about the concentration of the fumigant in the cargo and the safety of the cargo. The responsibility for substantive advice on these considerations lies with the relevant expert, namely the fumigator. The Plan of Action enables the fumigator to use his expertise to create the safest possible situation and safeguard the other interests of the Port Bye-laws.

The PBL2020 contain regulations for the handling of seagoing ships the cargo of which has been fumigated in a foreign port for reasons that there are no other binding (inter)national regulations that provide for this. The regulations in the PBL2020 include a notification requirement for seagoing ships the cargo of which has been treated with fumigants in a foreign port calling at a Dutch port.

The PBL2020 have been adopted by the respective municipal councils and is therefore a statutory regulation valid only within the municipality concerned. This also applies to the Plan of Action adopted on the basis of the PBL2020. The aspects relating to the transport and storage of cargo treated with fumigants in a foreign port outside the municipality, as well as interests other than those mentioned above, such as the construction of the ship transporting the cargo, are not covered by the PBL2020.

Inland ships of which the cargo has been treated with fumigants in a foreign port are not covered by this Plan of Action, as this seldom happens.

The following articles of the PBL2020 are relevant to this Plan of Action:

Article 4.7 Cargo that has been fumigated or disinfected abroad

A ship carrying a solid bulk cargo, that has been fumigated, may only berth or be moored at a berth, if:

- a. *no operational actions are carried out during and after mooring;*
- b. *the holds and ventilation openings in the holds are closed, and;*
- c. *nautical and operational handling of the ship takes place in accordance with a plan of action approved by the municipal executive.*

Article 1.3 To whom do these Port Bye-laws apply?

1. *The captain or skipper is responsible for compliance with the provisions of or pursuant to these Bye-Laws, unless otherwise stipulated in these Bye-Laws.*
2. *If a captain or skipper is not present on the ship, the operator is responsible for compliance with the provisions of or pursuant to these Bye-Laws.*

The person directly responsible - the captain, the ship's master, and/or the operator – require that the fumigator carries out his responsibilities in accordance with the Plan of Action.

Once the Plan of Action has been adopted, a proposal to amend Article 4.7 of the PBL2020 will be presented to the municipal council.

The proposal is as follows:

1. A ship loaded with a solid bulk cargo that has been fumigated is only permitted to berth or be moored if the following applies:
 - a. no operational actions are to be carried out during and after mooring;
 - b. the holds and ventilation openings in the holds must be closed, and;
 - c. the nautical and operational handling of the seagoing ship must take place in accordance with a Plan of Action adopted by the municipal executive.
2. The Plan of Action is adopted by the municipal executive. Everyone has to adhere to the adopted Plan of Action.

After the Municipal Council has adopted the amendment to Article 4.7, the Harbour Master of Rotterdam can require anyone involved in the Plan of Action, including the fumigator, to comply with the obligations laid down therein. This imposes a direct responsibility on everyone. Any amendments to the Plan of Action will therefore be unnecessary.

Article 14.1 Obligation to comply with rules

The rules laid down in or pursuant to these Bye-Laws, and the regulations and restrictions attaching thereto, must be observed. Violation of these rules and regulations constitutes a criminal offence.

General terms, abbreviations

Agent	Representative of a shipping company in relation to the cargo. In some cases, the Agent may also be the representative of a private ship's master.
ENI number	European Vessel Identification Number, the European Number of Identification.
Environment	The direct and indirect environment of the ships involved, including the location of the cargo operations within the port area, namely the area that falls under the responsibility of the Harbour Master and in which possible risks may occur as a result of the stowage of the cargo in the ship and the transshipment of it.
Equipment of the seagoing ship	Equipment of the seagoing ship in accordance with the safety requirements of MSC.1/Circular IMO 1264, or as subsequently amended.
Fumigant	The fumigant used for treating the cargo with the aim to eliminate insects in the cargo.
Fumigator	Recognised expert under the Wet Gewasbeschermingsmiddelen en Biociden (the Dutch law on Plant Protection Products and Biocides) who is in the possession of a Certificate with endorsement 'Phosphine'.
Inland ship	Ship, not being a seagoing ship.
Instruction	Concerns the advice given by the fumigator to the captain or the skipper of the ship into which the cargo from the seagoing ship (the cargo that has been fumigated) has been transhipped. Minimum information requirements are described in Appendix 2 of this Plan of Action.
IMO number	The IMO number is a unique ship identification number consisting of the three letters "IMO" followed by a seven-digit number. The IMO number is issued by Lloyd's Register when a seagoing ship is being built.
Limit value (NL: Grenswaarde) as used by the Sociaal Economische Raad (SER) (the Dutch Social and Economic Council)	The limit value (NL: Grenswaarde) is the maximum permitted concentration of a (hazardous) substance in the individual respiratory zone of an employee. The substance may occur as a gas, vapour, particle, aerosol or fibre. The limit value (grenswaarde) applies for a defined reference period (usually a 15-minute and an 8-hour period). The guiding principle for determining the value is that the health of employees and their descendants is not harmed. Not even in the event of repeated exposure to this concentration, over a longer period of time, or even a working life time.
Measurement report	Report of the fumigator with information about the measurements made by him. The minimum items that must be included in the measurement report have been specified in Appendix 1 of this Plan of Action.
Measurement results	The measured concentration of the fumigant applied in PPM (Parts Per Million).
Mixing	Mixing of the cargo by means of a grab crane to allow the fumigant to escape from the cargo to effect a more rapid decrease of the fumigant concentration. NB: The cargo is not being transhipped during the mixing.
Port by Laws	Havenverordening Rotterdam 2020, Havenverordening Schiedam 2020, Havenverordening Vlaardingen 2019, Havenverordening Dordrecht, Havenverordening gemeente Zwijndrecht en Havenverordening Papendrecht 2020

Report to the Harbour Master	By telephone (+31 10 252 1000), by VHF on the designated channel (VHF channel 14), by fax (+31 10 252 1600), or by email (hcc@portofrotterdam.com)
Residues ¹	Remaining packages (sleeves, plates/tablets, bags) in which the applied fumigant, or some of it, may still be present / fumigant tablets that are not yet active.
Residual gas concentration	Concentrations of the applied fumigant in PPM (Parts Per Million).
Provision of written information to the Harbour Master of Rotterdam	By fax or e-mail at hcc@portofrotterdam.com
Safe to work	The condition to be able to work safely and healthily as described in the Arbeidsomstandighedenwet (the Dutch law on Safe Working Conditions).
Seagoing ship	Seagoing ship loaded with a solid bulk cargo that has been fumigated in a foreign port.
Ship	Any ship, including one without displacement, including a seaplane, used or capable of being used as a means of transportation on water.
Supervision	Physical presence of and actions taken by the fumigator in accordance with this Plan of Action.
Stevedore	The person who carries out the task of loading and unloading ships.
Warning sign	The international Fumigation Warning Sign for cargo treated with a fumigant, as referred to in the <i>'Recommendations on the Safe Use of Pesticides in Ships applicable to the Fumigation of Cargo Holds, Appendix 2'</i> (MSC.1/Circ. 1264). This warning sign may be depicted on both a sign and a sticker. The word 'sign' in the above-mentioned text, may also be interpreted as 'sticker'.
Workplace	Any location which, for the purpose of carrying out work, is, or usually is, used.

¹ When loose (phosphine) tablets are used, a powder is left behind after the tablets have lost their activity. This powder will mix with the cargo and is not removed at the port of discharge. These residues, which are no longer active are an inert product and do not fall under the definition of 'residues' as referred to in this Plan of Action.

General Information and communication

1. No later than 24 hours prior to the arrival of the seagoing ship in Rotterdam, Schiedam, Vlaardingen, Dordrecht, Zwijndrecht or Papendrecht, the agent of the seagoing ship must send a written notification, as referred to in article 3.10 of the Port Bye Laws, to the Harbour Master of Rotterdam. Within this period, the agent must report the following information to the Harbour Master of Rotterdam:
 - a. The method of fumigation;
 - b. The name of the company of the fumigator; the contact details of the company appointed to supervise the unloading, mixing, or ventilating operations on board the seagoing ship; and the client of the fumigator;
 - c. How many packages of fumigant have been applied at the port of loading;
 - d. How many residues have been disposed of in previous ports;
 - e. Where applicable, the difference between the number of fumigant packages applied and packages removed.
2. That the ship's equipment is in good condition.
3. The Harbour Master of Rotterdam must provide:
 - a. The seagoing ship's name;
 - b. The fumigant applied and the method used, and;
 - c. The name of the company of the fumigator and the contact details of that company to Inspectie Leefomgeving en Transport (the Dutch Human Environment and Transport Inspectorate), the (seaport) police, DCMR (Environment Agency Rijnmond), Customs, and to any other relevant parties.

General Obligations and responsibilities in relation to the fumigated cargo

4. The securing of the environment by the fumigator takes precedence over all other activities at and on board the ship.
5. If in the opinion of the fumigator a dangerous situation occurs during the period that the Plan of Action is in force and such dangerous situation is not described in the Plan of Action, all other activities at and on board the ship will immediately be stopped and this will immediately be reported to the Harbour Master of Rotterdam.
6. As long as the seagoing ship is at its berth in the port and the residual gas concentrations in the cargo are above the limit value (grenswaarde), this must be indicated by the Fumigation Warning Sign. The Fumigation Warning Sign must be placed at every entrance to the seagoing ship and on the hatch coamings on port and starboard side. The Fumigation Warning Sign must be clearly visible and legible.
7. During the period that a ship and/or the cargo (or parts of it) have not been declared safe to work, the unloading of the cargo (or parts of it) that have not yet been declared safe to work must at all times take place under the supervision of the fumigator, unless stated otherwise in this document.
8. During the period that the cargo of the seagoing ship has not yet been declared safe to work, daily measurements must be carried out by the fumigator during cargo operations, unless the fumigator determines otherwise, for example on account of meteorological conditions.
9. As long as the fumigator has not declared the deck of the seagoing ship safe to work – in connection with the presence of a concentration of the fumigant - persons are only allowed on board, or ships are only allowed to moor alongside the seagoing ship, with the permission from and on the instructions of the fumigator.
10. The fumigator must provide binding instructions to the captain of the seagoing ship regarding the work safety of those present on board the seagoing ship in connection with the presence of (residual) gas concentrations prior to, and during the unloading of the

cargo from the seagoing ship.

Arrival - opening of the closed holds

11. The seagoing ship must keep the cargo holds, manholes, and other openings in the holds closed when in port and during mooring.
12. Immediately after mooring at the berth and before the cargo holds are opened, the fumigator must take measurements of the concentration of the fumigant applied in the hold(s). Measurements are taken in the manner determined by the fumigator, such as by means of a *Gas Sampling Point*.
13. After being safely moored, the holds may only be opened after permission from or at the instructions of the fumigator. Holds with cargo in transit for another port must remain closed.
14. If, under point 12, the concentrations of the applied fumigant are found to exceed the limit value (grenswaarde), there must at least be two persons present during the opening of the holds on account of safe working. Of the two persons present, one must be in the position of fumigator.

Prior to unloading - removal of residues

15. Where possible, residues must be removed after the deck has been declared safe to work and before ventilating the holds or the start of the unloading or mixing activities.
16. The fumigator removes the residues either by himself or with the help of an expert colleague. Disposal will be carried out with due observance of the duty of care as referred to in Appendix 3 of this Plan of Action, and as referred to in Article 2a of the Wet Gewasbeschermingsmiddelen en biociden (the Dutch law on Plant Protection Products and Biocides) (see Appendix 3). The access to the cargo hold where the gas carriers or residues are being removed must be marked with clearly identifiable barrier tape and Fumigation Warning Signs.
17. Under the responsibility of the captain and the fumigator of the seagoing ship, the collected residues must be removed from the seagoing ship as soon as possible by a company authorised to do so.
18. If the collected residues cannot be disposed of directly, they shall be placed in UN approved drums with appropriate hazard labels in a safe and clearly marked area on deck or in a well-ventilated space. The fumigator provides written binding instructions in English to the captain on how to deal with the residues and the areas on the ship closed off by barrier tape. The instructions must be signed by the captain as proof that he has taken note of them.

Prior to unloading - measurements

19. If, after the cargo holds have been opened, the deck of the seagoing ship, or parts thereof, have been declared safe to work by the fumigator, the fumigator will take measurements at several places in and above the cargo or cargoes treated with fumigant to determine the concentration of the fumigant applied. These measurements indicate the representative concentration of fumigant for the whole cargo in the hold. Measurements are taken in the manner determined by the fumigator, whereby the cargo is measured at a depth of at least one metre below its surface.
20. After the measurements taken prior to unloading, the fumigator must submit the written measurement report as soon as possible to the Harbour Master of Rotterdam and to the captain of the seagoing ship. The captain must sign the measurement report as proof that he has taken note of it. The fumigator, meanwhile, will indicate the next step. This can be one of the following:
 1. to ventilate because unloading is not possible;
 2. mixing of the cargo followed by a measurement;

3. unloading under supervision;
4. unloading without supervision.

Unloading - without supervision of the fumigator

21. The fumigator will assess whether the following applies:
 - a. the cargo in one or more of the cargo holds can be unloaded in a safe manner; and
 - b. no concentrations above the limit value (grenswaarde) are measured at the workplaces or, in the estimation of the fumigator, are not going to occur; and
 - c. the holds can be safely entered with respect to the concentrations of fumigant.

If the foregoing is the case, the fumigator will determine whether unloading can take place without supervision or, if necessary, with instructions from the fumigator.

Unloading - under supervision of the fumigator

22. If, in the opinion of the fumigator, cargo operations require supervision, owing to the concentrations of fumigant present in the cargo of one or more of the seagoing ship's holds to be unloaded, the seagoing ship will start with the unloading or mixing operations under the supervision of a fumigator who will ensure that the unloading and mixing operations are carried out in a safe manner. The fumigator takes risk-control measures to ensure work safety.
23. During ventilation operations, or during unloading and mixing operations, the following applies:
 - a. The fumigator must keep the Harbour Master of Rotterdam informed of the concentration of the fumigant applied on board the seagoing ship and in its cargo by providing a written measurement report at least once a day;
 - b. The places on board the seagoing ship that are not safe to work must be indicated by the fumigator by means of the Fumigation Warning Signs and clearly recognisable areas closed-off by barrier tape;
 - c. The captain is obliged to stop the operations (or have them stopped) if the work safety of those present is endangered by the concentrations of the fumigant applied, or by actions of third parties as a result of which work safety can no longer be guaranteed. The captain must be given binding instructions on this by the fumigator. The fumigator must report that he has given such an instruction as soon as possible to the Harbour Master of Rotterdam by means of a measurement report;
 - d. When the cargo is being unloaded into the cargo holds of other ships, a measurement as referred to in point 19 must be carried out on board the receiving ship by the fumigator. The fumigator must provide a measurement report to the captain or skipper of the receiving ship and will send a copy of the measurement report as soon as possible to the Harbour Master of Rotterdam.
 - e. As long as the concentration of the fumigant in the cargo in the holds of the receiving ship after the transshipment operation, as estimated by the fumigator, poses a risk to the personnel on board or the environment, the fumigator must indicate this by placing Fumigation Warning Signs. The Fumigation Warning Signs must be placed at every entrance to the seagoing ship and on the hatch coamings on port and starboard side. The Fumigation Warning Signs must be clearly visible and legible.
 - f. During unloading operations under supervision, the fumigator must check the work safety on board the ships in question with regard to gas or residual gas concentrations and the environment. If necessary, the fumigator must provide binding instructions to all those involved in the operations.

Unloading - to an unmanned ship / push barge

24. If, after assessment of the situation by the fumigator, it is decided to unload part of the cargo with a too-high concentration of fumigant from the hold of the seagoing ship into an unmanned ship (push barge), which must remain in port, a measurement must be carried out in the cargo of the unmanned ship (push barge) after transshipment;
 - a. after measurement, the hatches of the unmanned ship (push barge) must remain closed until the fumigator indicates that the cargo in the unmanned ship (push barge) can be unloaded in a safe manner.
25. After that, the fumigator must take measurements of the cargo in the hold of the seagoing ship. If the fumigator finds that the cargo can be unloaded in a safe manner and that no concentrations above the limit value (grenswaarde)s are measured at any of the workplaces, the unloading operations can continue without supervision, as described in point 21.
26. The fumigator determines when further operations with the cargo (unloading, mixing, ventilating) of the unmanned ship (push barge) can be carried out in as safe a manner as possible. As long as the fumigator has not determined this, the unmanned ship (push barge), which has received part of the cargo referred to in point 24, must remain in port.
 - a. The names of the unmanned ships, their IMO/ENI numbers, and their final destinations or berths in the port of Rotterdam, Schiedam, Vlaardingen, Dordrecht, Zwijndrecht or Papendrecht must be reported to the Harbour Master of Rotterdam if the measurement referred to in 23d indicates that the concentration of the applied fumigant in the cargo after exceeds 1 ppm.
 - b. The concentration of the fumigant measured above the cargo must be communicated as soon as possible to the Harbour Master of Rotterdam by means of a measurement report.
 - c. With regard to the cargo in the unmanned ship, the fumigator must also determine the following:
 - i. if the cargo must be ventilated because unloading is not possible.
 - ii. if the cargo must be mixed and subsequently measured.
 - iii. if the cargo can be unloaded.
27. As long as the concentration of the fumigant in the cargo of the receiving holds, as estimated by the fumigator, poses a risk to the personnel working on board or to the ship's environment after the transshipment, the fumigator must indicate this by the placing Fumigation Warning Signs. The Fumigation Warning Signs must be placed at every entrance to the seagoing ship and on the hatch coamings on port and starboard side. The Fumigation Warning Signs must be clearly visible and legible.
28. The fumigator must monitor the concentration of the fumigant in the cargo of the unmanned ship (push barge) and will release the unmanned ship (push barge) for unloading as soon as this can be done in a safe manner.
29. The fumigator must subsequently send a copy of the measurement report to the Harbour Master of Rotterdam as soon as possible.

Procedure in case of (possible) remaining fumigant in the cargo

30. If it has not been possible to remove all residues as described in point 15, or if there is any uncertainty about the presence of damaged packages of the fumigant, the following procedure applies:
 - a. the fumigator must determine which part of the cargo of the seagoing ship is to be transhipped into unmanned ships (push barges). This is the part of the cargo where the fumigator expects to find any residual fumigant;
 - b. this part of the seagoing ship's cargo is transhipped into push barges;
 - c. the unmanned ships (push barges) in question must remain in port;
 - d. the fumigator must monitor the concentration of the fumigant in the transhipped

- cargo on board the unmanned ships (push barges);
- e. if the fumigator determines that the situation is safe for transshipment and further transport, the cargo of the unmanned ship (push barge) will be transhipped to the receiving ship under the supervision of the fumigator, or released for further transport in the unmanned ship (push barge) in question.
31. Before the start of the transshipment operations into the receiving ship (point 30e) that will start or continue its voyage immediately after loading, the fumigator must inform the captain or skipper of the receiving ship that the cargo has contained loose tablets or damaged packages of fumigant. The fumigator must give written instructions to the captain or skipper regarding the safe handling of the residual risk and the dangers of the fumigant applied. The captain or skipper must sign the instruction as proof that he has taken note of it.

The fumigator has completed his activities

32. When the fumigator has completed his activities, he must report this as soon as possible to the Harbour Master of Rotterdam. The report must also include the latest measurement report of the seagoing and/or receiving ship.
33. If, after the completion of the activities of the fumigator, the residual gas concentrations at the workplaces of the seagoing ship or at the workplaces in the holds of the receiving ship are still found to be above the limit value (grenswaarde), or if the situation is not safe to work, the transshipment operations in the relevant cargo hold of the ship in question must be stopped. The captain, ship's master, or stevedore must immediately contact the fumigator who must carry out measurements on board the ship in question as soon as possible, as described in point 19. The fumigator must immediately report the situation to the Harbour Master of Rotterdam and must also provide a written measurement report.
34. As long as any (residual) gas concentrations above the limit value (grenswaarde) are still measured at the workplaces, the fumigator remains responsible for the safe conduct of the discharge. He must issue binding instructions to the captain or skipper as to the work safety of the ship's crew, including the measures to be taken to ensure work safety. The results of these measurements must be provided in writing to the Harbour Master of Rotterdam, and also to the stevedore and the captain or skipper of the unloading seagoing ship and of the receiving ship. The captain or skipper must sign both the binding instruction on work safety and the measurement results as proof that he has taken note of them.

Appendix 1: Information in the measurement report

The measurement report must contain at least the following information:

- The responsible fumigator company with contact details
- Name of the company by which the fumigator company is commissioned
- Ship's name, IMO number/ENI number, and name of the berth
- Names of the holds that were measured and the measurement results
- The name of the fumigant applied and, if phosphine has been used, whether in the form of sleeves, plates, bags or tablets
- Concentration of the fumigant on the deck of the sea-going ship (safe to work / below the limit value (grenswaarde))
- Concentration of the fumigant in the holds above the cargo - if above the limit value (grenswaarde)
- Concentration of the fumigant in the holds in the cargo
- Are the cargo holds safe to unload? (not safe, safe under supervision/safe without supervision)
- Ventilation/mixing instructions given on board
- Safety instructions given on board / any equipment provided
- Actions allowed to be carried out
- Commencement of unloading, if known
- Date/time of the measurement
- Date/time next planned measurement
- Location on the ship (holds) measurements
- Delivery of residues (sleeves), residue collecting organisation, and destination of residues
 - If residues remain on board, location and manner of storage
 - All residues (sleeves) recovered (number of sleeves applied / removed)
- Signatures of the fumigator and the captain

Supplementary information for measurements of cargo in push barges / inland ships:

- Please state ENI number or IMO number
- Name/phone number of the captain/skipper, or operator (24/7)
- Destination of the push barges / inland ships in the event that Fumigation Warning Signs have been applied

Appendix 2: Instructions to the captain / skipper

Instructions are the advices of the fumigator to the captain/skipper of the receiving ship and must contain at least the following information:

- How to minimise the risks due to unsafe conditions for the ship and its environment for the coming period.
- Taken into account are the history and other aspects of and the circumstances under which the cargo was handled.
- The instructions must also include what circumstances / actions may influence that risk, such as ventilating operations and the weather conditions.

Appendix 3: Legal provisions

Appendix 3 provides a non-exhaustive list of legal provisions concerning the transport of cargo treated with fumigants.

Wet Gewasbeschermingsmiddelen en biociden (the Dutch law on Plant Protection Products and Biocides) (Article 2a):

Everyone is obliged to handle plant protection products, biocides, the associated active substances or additives used, as well as residues or open packages of it with care. Such care must, in any case, include that any person who knows or may reasonably suspect that his actions or omissions cause or may cause danger to a person, to an animal, to plants the conservation of which is desired, to plants belonging to others, or to soil or water quality, is obliged to refrain from such actions, unless this cannot be reasonably requested from him, or to immediately take all measures which may reasonably be requested from him to prevent the aforementioned danger, or to limit and as far as possible undo the adverse effects thereof.

IMSBC Code of the International Maritime Organisation

The IMSBC Code contains guidelines for the fumigation of cargoes and their transport by seagoing ships. The Code is *not* (international) legislation. The Code contains so-called provisions (regulations), recommendations and guidelines. Important are MSC.1/Circ.1264, MSC.1/Circ.1358 and MSC.1/Circ.1396. These Circulars are all about fumigation of *sea-going ships* or their cargo. MSC.1/Circ.1264 lists guidelines to be implemented before arrival (notification to the authorities) (3.3.2.16), the obligation to inform oneself about local regulations, wearing protective clothing when entering a hold, and determining the concentration of the fumigant applied (3.3.2.17). When entering the hold, the hold must be sufficiently free of fumigants (3.3.2.19).

The General Provisions of the IMSBC Code stipulate, in Regulation 4, that appropriate precautions must be taken when pesticides are used in ships, in particular when the purpose is fumigation, and includes the taking of measurements on board ships.

The Code also contains guidelines for working with *'fumigants'* and for ventilating in ports. It states - in 3.1.4.8 - that *gas free certificates* may only be issued if tests show that all remaining fumigant has been removed from empty cargo holds and work areas next to it. Also important is that the Annex to the Code points out that the manufacturer's instructions must strictly be adhered to.

Verdrag van Boedapest inzake de Overeenkomst voor het vervoer van goederen over de binnenwateren (CMNI), Boedapest, 22-06-2001 (the Budapest Convention on the Contract for the Carriage of Goods by Inland Waterways (CMNI), Budapest, 22-06-2001)

The CMNI applies to every contract of carriage where the port of loading or the place of taking over and the port of discharge or the place of delivery are situated in two different States, of which at least one is a State Party to this Convention.

Article 7, paragraph 1, of this Convention provides that if dangerous or polluting goods are to be carried, the shipper shall, before handing over the goods, [...], inform the carrier clearly and in writing of the danger and the risks of pollution inherent in the goods and of the precautions to be taken.

Article 3, paragraph 3, of this Convention provides that the carrier (according to the definition provision of the Convention: 'Any person by whom or in whose name a contract of carriage has been concluded with a shipper') decides which ship is to be used. 'Carrier' means any person by whom or in whose name a contract of carriage has been concluded with a shipper; He is further bound, before and at the beginning of the voyage, to exercise due diligence to ensure that, taking into account the goods to be carried, the ship is in a state to receive the cargo, is seaworthy and is manned and equipped as prescribed by the regulations in force and is furnished with the necessary national and international authorizations for the carriage of the goods in question.