



Tracking methyl bromide consumption for QPS



Wood pallets carrying exported goods need to be treated in compliance with ISPM-15. Presently approved treatments (IPPC) are methyl bromide and heat

Although Parties to the Montreal Protocol are obliged to officially report production and consumption of methyl bromide (MB) for Quarantine and Pre-shipment (QPS) purposes under Article 7 of the Protocol, such production and use is exempted from controls¹. This is particularly important now that the deadline for final phase-out of controlled uses (i.e. pre-plant soil fumigation, stored foodstuffs, structures and others) has passed: 2005 for non-A5 Parties and 2015 for A5 Parties². This QPS exemption for MB has the potential to provide a continuous and unlimited source of MB. Since consumption for QPS shows an upward trend in A5 Parties over the last 10 years, various A5 Parties are expressing concern over illegal trade and/or use,

in particular the possible diversion of MB imported for QPS uses to controlled (non-QPS) applications. Presently, controlled uses can only be permitted under the 'Critical Use Exemption' a complex process whereby the Parties may allow continued use of MB for controlled uses in particular circumstances where it is demonstrated that no alternatives are available for a specific use.

Correctly identifying and tracking use of MB produced by and/or imported into a country has thus become of paramount importance. The following measures may contribute to identifying QPS uses correctly and tracking such uses efficiently.

REPORTING REQUIREMENTS (APPLICABLE TO ALL PARTIES)

Decision IX/28 (1997) approved official forms for ODS data reporting including on MB production, import and export for QPS applications. These forms are readily available for Parties at the Ozone Secretariat website www.ozone.unep.org.

The Beijing Amendment (1999) required Parties to report, under Article 7, annual data on the total quantity of methyl bromide produced, imported and exported for all purposes and, separately, *the quantity produced or imported for use as QPS*, and feedstock.

Decision XI/13 (1999) further urged Parties to implement procedures to monitor the uses of MB by commodity and quantity for QPS (a form developed by TEAP³ was suggested as guidance), with the aim of identifying feasible alternatives and undertake research to develop and implement them.

QPS production and consumption data remained confidential until 2008, when it was made publicly available through Decision XX/6, which further encourages Parties to submit a national strategy for QPS.

At present, Parties report the total amount of MB consumed for QPS purposes (i.e., import plus production minus export) and not actual "use". TEAP, through its Methyl Bromide Technical Options Committee (MBTOC)⁴ has nevertheless estimated the main categories of use through surveys and information submitted voluntarily by Parties in response to some Decisions (e.g. XXI/10 of 2009) and when preparing its quadrennial Assessment Reports.

Box 1. QPS or not QPS? (Please also refer to flow chart in Box 5)

Quarantine treatment or not?

First, identify the target pest species to be controlled with MB fumigation

- a. Exports: Is pest officially controlled in the destination country?
- b. Imports: Is pest officially controlled in the importing country?

If the pest in question is not under official control by Government authorities this is not a quarantine treatment but a controlled use.

Pre-shipment or not?

Treatment with MB must be applied 21 days or less prior to export

- a. Exports: MB treatment must be officially required by Government authorities in destination country
- b. Imports: MB treatment must be officially required by importing country authorities
- c. "The requirement for treatment must have been in place since before 7 December 1995"

Treatments required by companies, banks (letter of credit) or other commercial entities are not considered QPS and count as controlled MB consumption.



Applying MB under sheets to imported logs as a quarantine treatment in Japan

MOP DECISIONS XXIII/5

Decision XXIII/5 requested MBTOC to summarise QPS production and consumption data as reported by the Parties under Article 7 and provide guidance on how to collect data on QPS use for Parties wishing to implement such methods or to improve existing ones. This Decision further requested Parties to voluntarily submit information on QPS uses and methods in place to keep track of them. Useful information was submitted from various Parties – both non-A5 and A5, and it became clear that some Parties, regardless of their classification, do not have a system in place for recording and reporting the specific uses of MB for QPS. Some Parties are therefore not able to specifically record and report for example, QPS treatments with MB upon arrival of commodities (import quarantine), internal treatments (i.e. within a country to avoid dispersion of a quarantine pest) and/or MB used for treatments conducted before export (export quarantine).

MBTOC prepared a list of elements considered important in monitoring MB used for QPS including the type of article or product treated (commodities, soils), its origin (domestic or imported), the target pest, the reason for treatment, treatment conditions (enclosure type, open field etc.), dosage, formulation

and quantity of MB applied. Separate records for post-entry (import) treatments and export fumigations and the specific reasons for them should be kept. Recommended policies and measures from the International Plant Protection Convention (IPPC)⁵ on the use of MB as a phytosanitary measure were also considered. These include, among others, tracking progress in the use of MB by encouraging officers in National Plant Protection Organisations (NPPOs) to accurately record and collate data on current usage and to share these data with their country's National Ozone Unit (NOU); reviewing and considering phytosanitary policies to replace MB where feasible; and ensuring that MB fumigation is used only for QPS and is authorised or performed by NPPOs.

Examples of reporting forms used by selected Parties to collect QPS use information as well as guidance from MBTOC in this respect can be found in the Ozone Secretariat website at [http://ozone.unep.org/Data_Reporting/Data_Reporting_Tools/dec24-15\(4\)-example_data_reporting_forms.pdf](http://ozone.unep.org/Data_Reporting/Data_Reporting_Tools/dec24-15(4)-example_data_reporting_forms.pdf).

These recommendations are equally useful for Article 5 and non-Article 5 Parties.



The giant African snail *Achatina fulica* is a quarantine pest for many countries. Very high dosages of MB are needed for its control (Source, UNEP/IPPC, 2008)

Box 2. IPPC categories of use*

- Commodities
- Bulbs, corms tubers and rhizomes (intended for planting)
- Cut flowers and branches (including foliage)
- Grain, cereals and oil seeds for consumption, including rice (not intended for planting)
- Dried foodstuffs (including herbs, dried, fruit, coffee, cocoa)
- Nursery stock (plants intended for planting other than seed), and associated soil and other growing media
- Seeds (intended for planting)
- Wood packaging materials
- Wood (including round wood, sawn wood, wood chips)
- Whole logs
- Hay, straw, thatch grass, dried animal fodder (other than grains and cereals listed above)
- Cotton and other fibre crops and products
- Tree nuts (almonds, hazelnuts, etc.)
- Structures and equipment
- Buildings with quarantine pests (including elevators, dwellings, factories, storage facilities)
- Equipment (including used agricultural machinery and vehicles), empty shipping containers and reused packaging
- Personal effects. Furniture, crafts, artefacts, hides, fur and skins

Source:

IPPC. 2008. Recommendation for the implementation of the IPPC: Replacement of methyl bromide as a phytosanitary measure. CPM-3/Report: Appendix 6.

* The IPPC list does not include treatment of soils in situ as a QPS use (One Party has determined some of its preplant soils uses of MB fall under the QPS exemption)

TRACKING MB USE

Efficient tracking of MB use requires close monitoring and a full understanding of both controlled and exempted (QPS) uses (see box 1). The IPPC has developed a list of articles typically fumigated with MB for QPS purposes, which facilitates collection and reporting of MB usage data (Box 2). Modifications may be made in accordance to each Party's circumstances and may vary when the intended use of for quarantine or for pre-shipment. There are many examples of successful tracking and control systems around the world (See Boxes 3 and 4).

Most Parties now have in place import licensing systems for ODS, but these often do not refer specifically to MB or its particular uses. In this respect, licensing systems may be strengthened in various ways for example:

- Allocating quotas for QPS and non-QPS (where the latter should now be either zero or exclusively for Critical Use Exemptions if these have been requested and granted).
- Establishing special permits for importers of MB and for each treatment application. Such permits should include a request for information on specific uses for which the MB is imported and how and where it will be stored. This will help tracking categories of use and quantities applied and also avoiding stockpiling, reducing risks of diversion into unauthorised uses.
- Participating in *iPIC* (informal prior informed consent system) a voluntary agreement between countries to exchange information on import and export licenses prior to export. UNEP DTIE OzonAction has established an *iPIC* on line mechanism in which more than 100 countries presently participate. Many potential cases of illegal and unwanted trade in MB has been prevented through cross-checking by importing and exporting countries prior to shipment.
- Ensuring coordination and joint work between the NOU and Customs authorities (as well as other relevant government agencies such as NPPO, environmental authorities, and industry representatives where appropriate). This should include information on customs codes and chemical names under which MB – or mixtures containing MB- may be traded, which could be classified as pesticides rather than fumigants.
- Establishing penalties (fines) that are significant enough to deter potential smugglers from breaking the law.
- Adopt incentives to encourage use of alternatives.
- Authorising only specific presentations/ formulations of MB, which are intended for QPS use (ie formulations containing 100% MB only).



Wooden pallets from China showing the required IPPC stamp for heat treatment, in compliance with ISPM-15

Box 3. Turkey: Ensuring MB imported for QPS purposes is not diverted to controlled uses

Turkey phased out controlled uses of MB completely in 2006 and the Government of Turkey banned all such uses since that time. To ensure that remaining MB usage is exclusively for QPS purposes the following measures have been put in place:

- Through a tender system, the General Directorate for Food and Control (GDFC) authorises one single company to import MB each year. The selected company then imports MB (as 100% formulation) and sells the entire amount of MB to the Izmir Agriculture Quarantine Directorate (IAQD).
- Imports are strictly limited by the Government to 40-50 tonnes maximum.
- The IAQD shares this amount with the Agriculture Quarantine Directorates (AQDs) in Mersin and İstanbul based on their specific needs.
- Companies that require MB for QPS uses must officially apply to one of these directorates, which will then supervise fumigations. All fumigators must also be certified by the GDFC.
- Inspectors must fill specific forms for each MB application, recording company name, address, treated items and reason, MB application method and amount and other pertinent information. This information is kept by the three AQDs and is used each year in their annual report to the Ministry of Food, Agriculture and Livestock.

Sources:

UNEP 2013. Enforcement strategies to combat illegal trade in HCFCs and Methyl Bromide. UNEP, Paris, 74 pp.
Yilmaz, S. 2015 Personal communication. MBTOC member, Turkey.



Stored cocoa beans in Cameroon need pre-shipment treatment. This should be done, at maximum, 21 days before export.

Box 4. Tracking Pre-shipment uses of MB for rice in Thailand

Thailand phased-out controlled uses of MB in 2013, which used to be almost exclusively for controlling post-harvest pests of grain and other stored foodstuffs.

QPS use in Thailand is reported to be almost entirely for pre-shipment fumigation of grain, particularly rice, which is to be exported around the world. Pre-shipment fumigation is normally conducted with the aim of cleaning grain consignments and rendering them “practically free” of pests and do not generally target quarantine pests. This similarity in use makes it challenging to distinguish controlled from exempted uses, and the Government of Thailand has devised a clear strategy to ensure that remaining fumigations with MB clearly fall within the “Pre-shipment” definition (see Box 1).

Under the Rice Trade Act B.E. 2489 No. 137 B.E. 2535, rice exporters need to register with the Ministry of Commerce (MOC) and the Department of Foreign Trade (DFT), submitting the appropriate harmonised codes according to rice type.

Inspectors at the DFT are in charge of quality controls on rice exports, to ensure that these meet the required standards, and can also perform fumigations if required from the importer, to conform with the Plant Quarantine Act B.E. 2507 and Amendments from the Department of Agriculture (DOA). A Phytosanitary Certificate may be required, involving direct inspection of the export consignment by visual or, if needed, laboratory means.

Methyl bromide fumigation is conducted under commercial contract, and supported by official regulations outlined in the Thai Rice Quality Standard providing legal authorisation for MB treatment as a pre-shipment.

The treatment of choice is agreed bilaterally between the exporter and the importing partner (quarantine authorities) and in various instances phosphine fumigation is accepted, but pre-shipment fumigation with MB is a requirement from some rice importing countries.

The DOA further set up a Management Information System (MIS), to ensure that MB fumigations fall within the Montreal Protocol’s definition of QPS. Information on users, importers, quantities of MB used for QPS, destination country and reason for use is recorded by fumigators and kept by quarantine authorities.

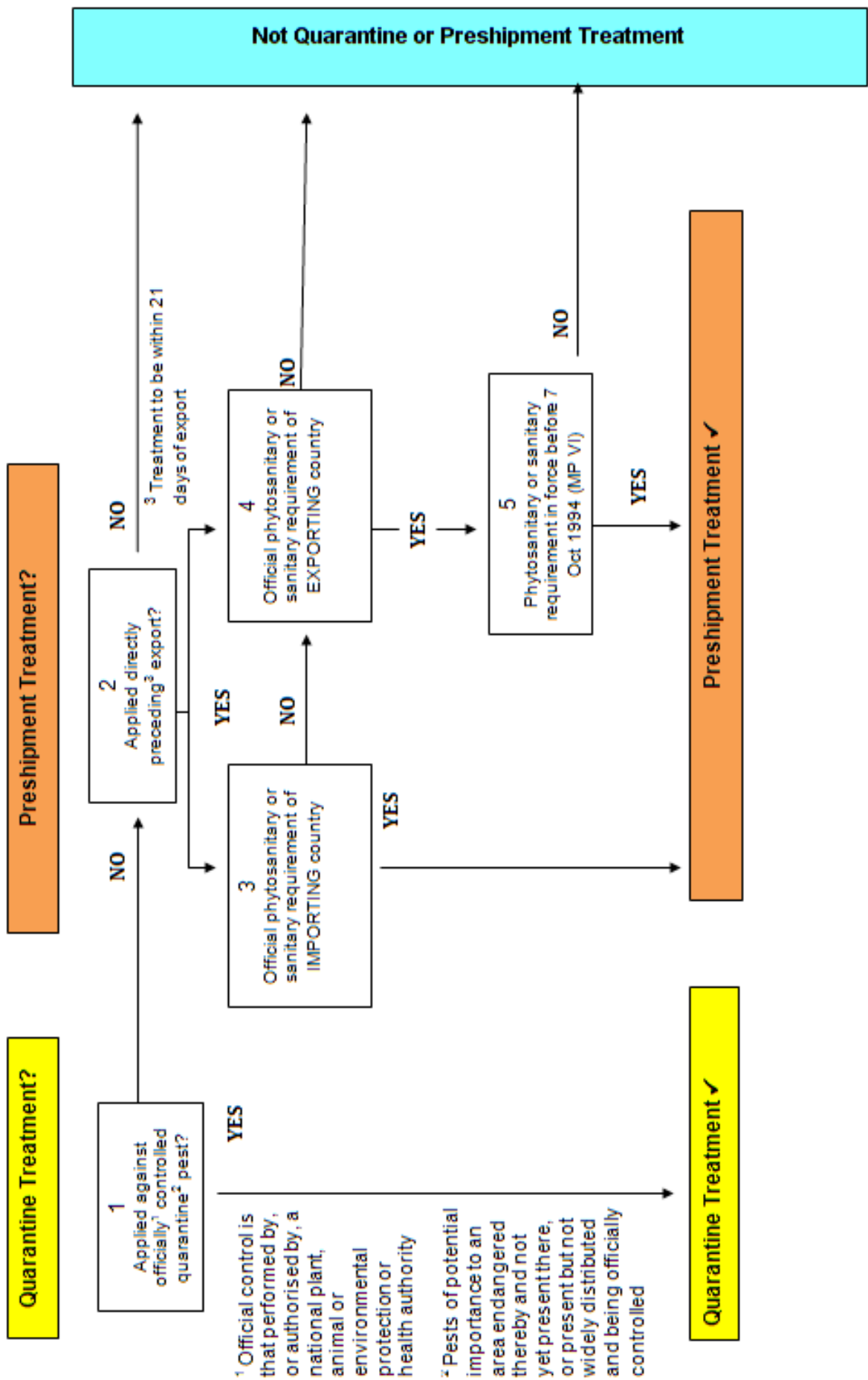
Sources:

TEAP (2009). Report of the Technology and Economic Assessment Panel. QPSTF Report. UNEP, Nairobi. http://ozone.unep.org/Assessment_Panels/TEAP/Reports/TEAP_Reports/teap-qpstf-october2009.pdf

World Bank 2011. Implications of Possible Restrictions on Methyl Bromide Use for Quarantine and Preshipment (QPS) Uses: East Asia Case Study Analysis. Fifteenth Annual Financial Agent Workshop, 1 April 2011, Washington DC, USA. http://siteresources.worldbank.org/EXTTMP/Resources/30_DK_MB_QPS_FutureRestrictionsImpactAnalysis.pdf

World Bank. 2010. Pest management plan. s.l.; s.n.. <http://documents.worldbank.org/curated/en/2010/12/13302798/thailand-methyl-bromide-phase-out-project-environmental-assessment-pest-management-plan>

Box 5. Identifying QPS uses of MB



Source: UNEP/ IPPC, (2008). Methyl Bromide: Quarantine and Preshipment uses. United Nations Environment Programme, Nairobi, Kenya, 16 pp.

ADDITIONAL INFORMATION

The following reports contain detailed information of QPS uses of methyl bromide and their alternatives. They can be downloaded at the Ozone Secretariat website, at the following link:

http://ozone.unep.org/en/assessment_docs.php?committee_id=6&committee=Technology%20and%20Economic%20Assessment%20Panel&committee_acronym=TEAP

MBTOC Assessment Report of the Methyl Bromide Technical Options Committee. 1994, 1998, 2002, 2006, 2010, 2014. UNEP, Nairobi. Available at the Ozone Secretariat website www.ozone.unep.org

TEAP. (1999). Report of the Technology and Economic Assessment Panel April 1999, Volume 2: Essential Use Exemptions, QPS Applications for Methyl Bromide, Progress and Control of Substances and other Reporting Issues. UNEP:Nairobi: 227pp.

TEAP..Progress Reports of the Technology and Economic Assessment Panel 2002, 2003, 2006, 2007, 2009, 2010, 2012. UNEP Nairobi.

TEAP (2009). Report of the Technology and Economic Assessment Panel. Quarantine and Pre-Shipment Task Force Report. UNEP, Nairobi.

In addition, the following publications are useful:

IPPC (2008). CPM Recommendation CPM-3/2008. Replacement or reduction of the use of methyl bromide as a phytosanitary measure. <https://www.ippc.int/en/core-activities/governance/cpm-recommendations/replacement-or-reduction-of-the-use-of-methyl-bromide-as-a-phytosanitary-measure/>

UNEP (2013). Enforcement strategies to combat illegal trade in HCFCs and Methyl Bromide. UNEP, Paris, 74 pp.

UNEP/ IPPC, (2008). Methyl Bromide: Quarantine and Preshipment uses. United Nations Environment Programme, Nairobi, Kenya, 16 pp.

Footnotes

¹ Article 2H of the Protocol specifically excluded Quarantine and Pre-shipment (QPS) uses from control measures as it was considered at that time that there were no alternatives to MB for the diverse range of treatments carried out for QPS.

² Parties to the Montreal Protocol are classified as Article 5 (A5) or Non-Article 5 (Non-A5) in relation to their consumption of ODS. In general, A5 Parties are developing countries whilst non-A5s are industrialised.

³ The Technology and Economic Assessment Panel (TEAP) is the body assisting Parties to the Montreal Protocol with technical and economic issues influencing the phase-out of ozone depleting substances (ODS). The Methyl Bromide Technical Options Committee (MBTOC) is the technical committee of TEAP assisting the Parties to the Montreal Protocol with matters related to MB, including alternatives for controlled and exempted uses, critical use nominations and others.

⁴ The Methyl Bromide Technical Options Committee (MBTOC) is one of the bodies comprising the TEAP, and assists Parties with the phase-out of MB.

⁵ International Plant Protection Convention. See in particular IPPC (2008). CPM Recommendation CPM-3/2008. Replacement or reduction of the use of methyl bromide as a phytosanitary measure. <https://www.ippc.int/en/core-activities/governance/cpm-recommendations/replacement-or-reduction-of-the-use-of-methyl-bromide-as-a-phytosanitary-measure/>

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