Submission to the Environmental Protection Authority on Application APP203660 reassessment of methyl bromide

Submitted by Dr Melanie Miller and Dr Tom Batchelor, Montreal Protocol specialists

27 July 2020

This document supplements our submission made in August 2019 (submission 127590).

Please refer to that submission for information and comments on other topics related to the reassessment

Contents

1. INTERNATIONAL OBLIGATIONS

When the DMC determined in 2018 that grounds existed for a reassessment, their Decision also noted that international obligations will be considered:

> '5.1. The Committee has considered New Zealand's international obligations, including the Montreal Protocol on Substances that Deplete the Ozone Layer…
>
> 5.2. The Committee notes that these international obligations will be considered if a subsequent reassessment application is received.' [1]

1.1 Montreal Protocol on Substances that Deplete the Ozone Layer

197 countries (Parties) have signed/ratified the Montreal Protocol and the relevant legal texts relating to methyl bromide.

Some commentators have stated that QPS methyl bromide is not controlled by the Montreal Protocol. That is not correct. Methyl bromide (whether for QPS or any other use) is a *controlled substance* under the Protocol.[2]

QPS uses of MB were exempted from the Protocol's phase-out schedule because, when the decision was made in 1992, decision-makers believed that there were no alternatives for QPS uses.

Although an exemption for QPS exists under the Protocol, many counties have chosen not to make use of the exemption and have eliminated their QPS uses and adopted alternative treatments/procedures.

In 2009, a Montreal Protocol Decision noted that 72 countries (Parties) had ceased or would cease using methyl bromide for QPS by the year 2010 (Decision XXI/10).[3]

Since 2014, MB has been consumed for QPS treatments by 29% of countries (57 of the total 197 countries).[4]

Of the countries reporting data for 2018, the breakdown of QPS MB consumption was as follows:

- 8 countries used less than 10 tonnes per year
- 18 countries used 10 – 100 tonnes per year
- 5 countries used 101 – 400 tonnes per year
- 9 countries (including New Zealand) used more than 400 tonnes per year

The highest decision-making body of the Montreal Protocol (the Meeting of the Parties, comprising 197 member countries) has adopted Decisions which highlight the importance of alternatives for QPS. The Decisions have urged all Parties (countries) to use alternatives wherever possible.

The Protocol Decisions have made it clear that the primary aim is to refrain from using methyl bromide and use alternatives wherever possible, and in cases where this is not possible, to reduce emissions through containment, recovery, etc. For example –

- Decision VI/11: In relation to QPS, countries are 'urged to refrain from use of methyl bromide and to use non-ozone-depleting technologies wherever possible. Where methyl bromide is used,

[1] EPA Decision (2018), p.4, https://www.epa.govt.nz/assets/FileAPI/hsno-ar/APP203465/b546360f5b/APP203465-GroundsDecision.pdf

[2] Article 1 of the Montreal Protocol.

[3] https://ozone.unep.org/treaties/montreal-protocol/meetings/sixth-meeting-parties-montreal-protocol/decisions/decision-vi11

[4] Article 7 data reported by Parties to the Ozone Secretariat.

Parties are urged to minimize emissions and use of methyl bromide through containment and recovery and recycling methodologies to the extent possible.' (para.3)[5]

- Decision XXI/10: 'Parties have succeeded in reducing quarantine and pre-shipment consumption by adopting policy measures such as promoting the adoption of alternatives, reviewing regulatory requirements, allowing alternative options, adopting 'polluter pays' taxes on methyl bromide imports, and/or limiting quarantine and pre-shipment consumption.'

Other relevant excerpts from Montreal Protocol Decisions are reproduced in Box 1 below, highlighting parts that encourage the development and use of alternatives.

Box 1: Montreal Protocol Decisions relating to methyl bromide QPS alternatives

Decision XI/13 requested countries to review their national QPS regulations 'with a view to removing the requirement for the use of methyl bromide for quarantine and pre-shipment where technically and economically feasible alternatives exist' (para.5)

Decision XI/13 urged countries to implement procedures 'to monitor the uses of methyl bromide by commodity and quantity for quarantine and pre-shipment uses in order:

a) To target the efficient use of resources for undertaking research to develop and implement technically and economically feasible alternatives;

b) To encourage early identification of technically and economically feasible alternatives to methyl bromide for quarantine and pre-shipment where such alternatives exist.' (para.6)

'To encourage the use of methyl bromide recovery and recycling technology (where technically and economically feasible) to reduce emissions of methyl bromide, until alternatives to methyl bromide for quarantine and pre-shipment uses are available.' (para.7)

Decision XVI/11 regarding increasing use of methyl bromide on solid wood packaging material in industrialised and developing countries:

'stressing the commitment by Parties to the Montreal Protocol to the reduction of methyl bromide with specific reference to standard 15 of the International Standard for Phytosanitary Measures, and to exchange information with a view to encouraging alternatives to methyl bromide treatment of wood packaging material stipulated by [the IPPC] as a phytosanitary measure; …

'To urge the Parties to consider, in the context of standard 15 of the International Standards for Phytosanitary Measures, the use, as a priority and to the greatest possible extent, when economically feasible and when the country concerned has the required facilities of alternatives such as heat treatment or alternative packaging materials, instead of methyl bromide fumigation' (para. 3)

'To encourage the importing Parties to consider accepting wood packaging treated with alternative methods to methyl bromide, in accordance with standard 15' (para.4)

Decision XVII/15 regarding use of methyl bromide on solid wood packaging material:

'*Stressing* the importance of managing and, when economically and technically feasible, replacing quarantine and pre-shipment applications of methyl bromide,

Taking into account the risk to the ozone layer of increasing methyl bromide emissions through quarantine and pre-shipment applications…'

Decision XX/6 urged actions by parties to reduce MB QPS use and related emissions:

[5] https://ozone.unep.org/treaties/montreal-protocol/meetings/sixth-meeting-parties-montreal-protocol/decisions/decision-vi11

'*Recalling …* decision VII/5 urging Parties to refrain from using methyl bromide and to use non-ozone depleting technologies wherever possible and decision XI/13 encouraging Parties to use recovery and recycling technologies where technically and economically feasible until alternatives are available,

Reaffirming the importance of managing and, when economically and technically feasible, replacing quarantine and pre-shipment applications of methyl bromide, as stated in the preamble to decision XVII/15'

Decision XX/6, para. 4 requested 'the Technology and Economic Assessment Panel, in consultation with the International Plant Protection Convention secretariat, to review all relevant, currently available information on the use of methyl bromide for quarantine and pre-shipment applications and related emissions, to assess trends in the major uses, available alternatives and other mitigation options, and barriers to the adoption of alternatives or determine what additional information or action may be required to meet those objectives; the assessment should consider:

a. A description of the majority of the volumes of methyl bromide used for quarantine and pre-shipment applications, by the major uses and target pests;
b. The technical and economic availability of alternative substances and technologies for the main methyl bromide uses, by volume, and of technologies for methyl bromide recovery, containment and recycling;
c. Quarantine and pre-shipment applications for which no alternatives are available to date and an assessment of why alternatives are not technically or economically feasible or cannot be adopted;
d. Illustrative examples of regulations or other relevant measures that directly affect the use of methyl bromide for quarantine and pre-shipment treatment (including information requested in decision X/11);
e. Other barriers preventing the adoption of alternatives to methyl bromide;
f. Projects demonstrating technically and economically feasible alternatives, including technologies for recapture and destruction of methyl bromide for quarantine and pre-shipment applications' (para.4)

Decision XX/6 encouraged countries, in accordance with the recommendations of the International Plant Protection Convention, to put in place a national strategy that describes actions that will help them to reduce the use of methyl bromide for phytosanitary measures and reduce emissions of methyl bromide and make such strategies available to other Parties through the Ozone Secretariat. The strategy may include the following areas for action:

a. Replacing methyl bromide use;
b. Reducing methyl bromide use;
c. Physically reducing methyl bromide emissions;
d. Accurately recording methyl bromide use for phytosanitary measures.' (para.10).

Decision XXI/10 noted that 72 countries (Parties) had ceased or would cease using methyl bromide for QPS by 2010, as follows: 31 Parties 'which used QPS in the past have reduced their quarantine and pre-shipment consumption to zero, and that 14 additional Parties will cease next year and that a further 27 Parties are scheduled to cease consumption by 1 January 2010.'

And noted that 'Parties have succeeded in reducing quarantine and pre-shipment consumption by adopting policy measures such as promoting the adoption of alternatives, reviewing regulatory requirements, allowing alternative options, adopting 'polluter pays' taxes on methyl bromide imports, and/or limiting quarantine and pre-shipment consumption.'

Decision XXI/10 also encouraged countries to take specific steps to reduce QPS:

'*To encourage* Parties to apply best-practice measures to reduce methyl bromide quarantine and pre-shipment use and emissions, that may include the review of required use dosages, gas tightness controls, monitoring during fumigation and other measures to minimize methyl bromide dosages, and, in applications where alternatives are not yet available, the recovery and possible reuse of methyl bromide, and to review the methyl bromide quarantine and pre-shipment requirements for possibilities of introducing alternative mitigation measures whenever possible;' (para.4)

'To encourage Parties to consider adopting, where possible within their national policy framework, incentives to promote the transition to alternatives such as deposit/rebate schemes or other financial measures; (para.5)

'To encourage Parties or regions to … develop documents that summarise information on technical options to reduce emissions, and on adopted technologies that have replaced methyl bromide quarantine and pre-shipment applications, the reductions achieved, the investments needed, the operating costs, and the funding strategies; (para. 6)

'To encourage Parties to implement the recommendations of the third meeting of the Commission of the Phytosanitary Measures under the IPPC, also referred to in Decision XX/6.' (para.7) – refer to details on the IPPC Recommendation below.

Decision XXIII/5 also reiterated the latter point above:

'the recommendation of the Commission on Phytosanitary Measures of the International Plant Protection Convention on the replacement or reduction of the use of methyl bromide as a phytosanitary measure, adopted in 2008, and decisions XX/6 and XXI/10, encouraging parties to the Montreal Protocol to implement that recommendation'

1.2 International Plant Protection Convention (IPPC)

The International Plant Protection Convention (IPPC) is a multilateral treaty for co-operation on plant protection and plant health, to prevent the spread of quarantine pests. It meets under the auspices of the United Nations Food and Agriculture Organisation (FAO).

All Parties to the Montreal Protocol are also Parties to the IPPC, and the two organisations agreed to cooperate together on QPS issues. For example, Decision XVIII/14 addressed joint cooperation on the use of alternatives to methyl bromide for QPS.

In 2008, the IPPC adopted a *Recommendation on: Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (updated from time to time).[6] The *Recommendation* notes that, to reduce the risk of introduction of relevant quarantine pests, the need for methyl bromide remains until equivalent feasible alternatives are available. However, it also notes that some countries have already successfully reduced or eliminated the use of methyl bromide.[7] The IPPC *Recommendation* contains examples of alternative phytosanitary / quarantine treatments that may replace methyl bromide.

The *Recommendation* encourages Parties to the IPPC to put in place a strategy that will help them to reduce the use of methyl bromide for phytosanitary measures and/or reduce emissions of methyl bromide.[8] Strategies may include the following areas for action:

- replacing methyl bromide use
- reducing methyl bromide use
- physically reducing methyl bromide emissions

[6] The latest version of the *IPPC Recommendation* on methyl bromide is available at: https://www.ippc.int/en/core-activities/governance/cpm/cpm-recommendations-1/cpm-recommendations/

[7] IPPC Recommendation, 2017 version, p.2

[8] IPPC Recommendation, 2017 version, p.2

- accurately recording methyl bromide use for phytosanitary measures.

'*In recognition of the desire to minimize the use of methyl bromide, contracting parties should, where possible, take actions to replace methyl bromide usage by increasing the application of alternative phytosanitary measures*.'[9]

The IPPC Recommendation includes *Guidelines*[10] which specify actions such as:

- Review and consider how to change quarantine requirements to replace and/or reduce methyl bromide where alternatives exist
- Develop and utilize phytosanitary measures that are equivalent, viable and feasible alternatives to methyl bromide
- Communicate to other NPPOs where there are viable alternatives to methyl bromide use
- Give highest priority to the development of alternative treatments for those commodities for which methyl bromide usage is high
- Identify current treatments where methyl bromide is the only option, and provide sufficient information to the appropriate IPPC body for consideration in the development of potential viable alternatives (e.g. identify the commodity, pests associated with it for which methyl bromide is used, required efficacy)
- Evaluate or re-evaluate pest risk (via pest risk analysis) to determine if the treatment prescription is appropriate and whether less rigorous treatment or alternative measures may be used.
- To implement a strategy to replace and reduce methyl bromide usage
- To exchange information on methyl bromide alternatives for quarantine uses

Montreal Protocol Decisions have encouraged Parties to implement the IPPC Recommendation:

- Decision XXI/10 *encouraged* 'Parties to implement the recommendations of the third meeting of the Commission of the Phytosanitary Measures under the IPPC' (Decision XXI/10, para.7).
- Decision XXIII/5 noted 'the recommendation of the Commission on Phytosanitary Measures of the International Plant Protection Convention on the replacement or reduction of the use of methyl bromide as a phytosanitary measure, adopted in 2008, and decisions XX/6 and XXI/10, encouraging parties to the Montreal Protocol to implement that recommendation'

1.3 National strategies to reduce reliance on QPS MB

Several regional bodies and the United Nations secretariat organisations that support the Montreal Protocol have published strategies and reports and that encourage countries to reduce reliance on QPS MB – for example:

- *Minimising quarantine and pre-shipment (QPS) uses of methyl bromide: Tools for controlling, monitoring and reporting*: https://www.unenvironment.org/ozonaction/resources/publication/minimising-quarantine-and-pre-shipment-qps-uses-methyl-bromide-tools
- *Strategy to reduce the use and emissions of methyl bromide for quarantine and pre-shipment purposes* (2010): http://ozone.unep.org/Exemption_Information/Quarantinne_and_preshipment/Dec_xx-6_Strategy_to_reduce_emmission_of_mbr_for_QPS-European_Commission-07072010.pdf

[9] IPPC Recommendation, 2017 version, section 1, p.2

[10] IPPC Recommendation, 2017 version, section 5, p.4

Countries such as Japan and Thailand have achieved significant reductions in their use of MB for QPS as a result of adopting strategies and action plans. Examples -

- Japan: MB QPS consumption 1277 t in 2004, 483 t in 2018.
- Thailand: 620 t in 2004, 188 t in 2018.
- Singapore: 166 tonnes in 2009, reduced to 43 t in 2018.[11]

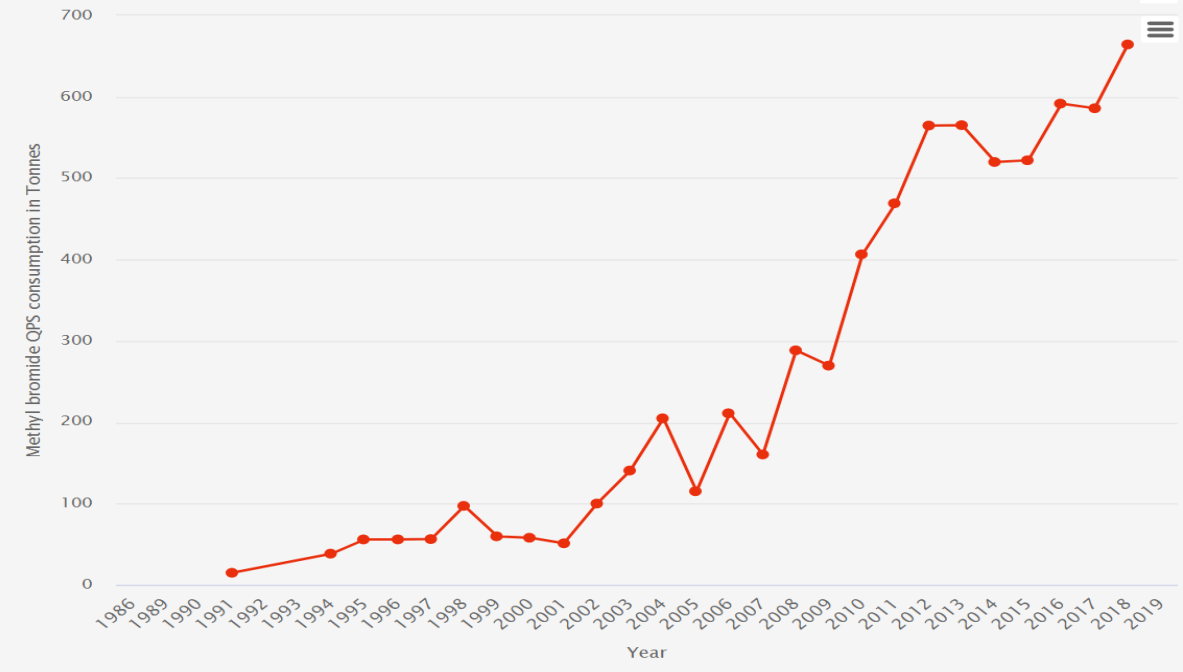
China's consumption of QPS MB was 1202 t in 2004, 1855 t in 2007, and 1228 t in 2018 – despite very large increases in international trade, China held its QPS quantity relatively stable as a result of proactive measures.

2. Increasing use of QPS methyl bromide in New Zealand

New Zealand continues to show a marked upward trend in the consumption of methyl bromide for QPS uses. In this respect, New Zealand is out of step with other industrialised countries.

The challenge for New Zealand is that methyl bromide use has risen 11-fold in the past 18 years, rising from 58 tonnes in the year 2000 to 664 tonnes in 2018.[12]

Fig. 1. Methyl bromide consumption for QPS uses in New Zealand (tonnes)



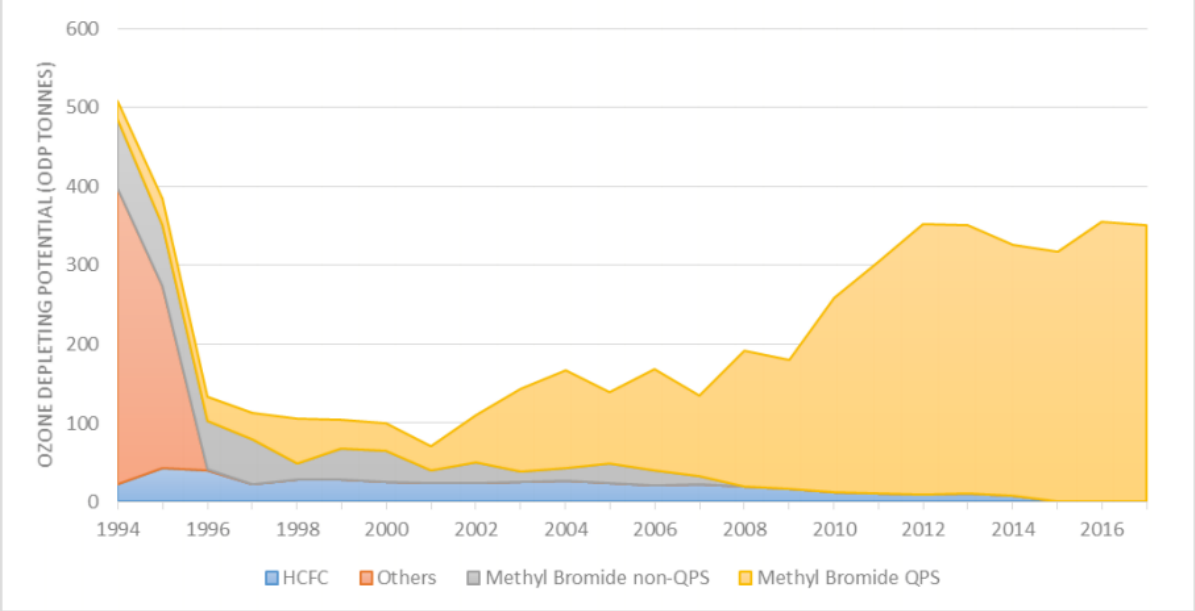
Source: QPS data reported by the Ozone Secretariat, July 2020

A report to Parliament by the Minister for the Environment (2018) showed that QPS MB (yellow area in Fig. 2 below) has become a substantial portion of the total ozone-depletion-weighted tonnage of ozone depleting substances imported into New Zealand since 1994, illustrated below.

[11] Data submitted to the Ozone Secretariat by relevant countries.

[12] https://www.epa.govt.nz/assets/RecordsAPI/2adcc0d732/Monitoring-the-effectiveness-of-the-HSNO-Act-2017.pdf

Fig.2. Consumption of ozone depleting substances in New Zealand (ozone-weighted tonnes)



Reproduced from: *Report of the Minister for the Environment on the operation of the Ozone Layer Protection Act 1996 for the period ending 31 December 2017*, p.4.[13]

3. RECOMMENDATIONS

3.1 Proposed controls/conditions in relation to recapture definition

We do not support the proposed change in definition.

The current definition of recapture is technically feasible for fumigations in shipping containers, fumigation chambers and smaller-scale fumigations carried out under tarpaulins. The current definition should continue to apply to all of the above situations.

If the DMC decides to change the definition of recapture technology, any change in definition should apply for a strictly limited short period of time.

If the application is granted, MB fumigations must be required to be carried out in dedicated fumigation facilities at sites located well away from ports and human activities.

3.2 Proposed controls/conditions in relation to alternatives

The following sections offer some proposals for managing and addressing the on-going adverse effects of methyl bromide.

Its desirable to adopt additional control measures that will actively encourage and require the uptake of alternatives wherever they are technically/economically feasible and acceptable to the importing country (including imports into New Zealand), as an on-going activity.

3.3 Strategy for promoting methyl bromide alternatives

We propose that, as a new type of condition/control related to methyl bromide use, the EPA should work with all willing stakeholders (all interested QPS users and submitters) to draw up a strategy and criteria for evaluating existing and potential alternatives to QPS methyl bromide, including specific

[13] https://www.parliament.nz/resource/en-NZ/PAP_85076/d03fb2cc237cd04d9b9d6cf95052ec2910d57ef9

action steps for ensuring implementation in cases where alternatives are found to be feasible and suitable.

The log export industry, STIMBR and their partners have developed a strategy and evaluations of alternatives that were based on rather restricted parameters. As far as we are aware, other QPS user sectors have not produced or have not published strategies for addressing methyl bromide alternatives for their specific uses. Those commodities and situations differ substantially from log fumigations, and need to be addressed separately.

The EPA already holds information on all QPS uses of methyl bromide in the Methyl Bromide Annual Reporting Forms required under the Ozone Layer Protection Act – see box 2. That QPS use information provides an essential database for starting an evaluation of existing and potential alternatives.

Box 2. EPA information about QPS uses from MB Annual Reporting Forms

In addition to MPI's information on MB fumigations and treated commodities, the EPA receives detailed annual records of QPS fumigations in the Methyl Bromide Annual Reporting Forms required under the Ozone Layer Protection Act.[14] Spreadsheets submitted by fumigators are required to itemise the following information for every MB QPS fumigation:

- Material fumigated
- Category of material fumigated (18 categories: logs; WPM; seeds; cut flowers; fresh fruit & vegetables; etc.)
- Import or export
- Country of import/export
- Treatment for 'quarantine' or 'pre-shipment'
- Amount of MB used (kg)

3.4 Proposed principles of hierarchy

The strategy should include the development of official procedures and steps for implementing the following principles or hierarchy of actions:

1) In principle, the use of methyl bromide should be avoided wherever possible by using alternative treatments or phytosanitary procedures – in cases where alternatives are efficacious and acceptable to the importing country, technically feasible and suitable for the commodity, economically feasible/affordable, and acceptable for the safety of people and the environment.
2) In cases where alternatives are not yet available, recapture should be required as an interim measure until alternatives can be implemented.

The strategy should support the adoption of additional control measures that will actively encourage and require the uptake of alternatives wherever technically/economically feasible and acceptable to the importing country (including imports into New Zealand), while regarding recapture technology as an interim mandatory measure.

[14] EPA *Methyl Bromide Annual Reporting Form* available at https://www.epa.govt.nz/industry-areas/hazardous-substances/ozone-depleting-substances/new-zealreporting-on-ozone-depleting-substances/

3.5 Procedure to develop transparent evaluations of the status of alternatives

To start to build greater awareness about potential alternatives among QPS end-users, and to reassure other groups who wish to see safer alternatives used, there is need to set up a fully transparent and on-going procedure for compiling and evaluating information about the status of alternatives.

The procedure could involve the following:

- An online database for evaluating the status and suitability of alternatives for each QPS use (or very similar groups of uses) in New Zealand, taking account of new developments as they arise, including detailed parameters such as: technical and economic feasibility, efficacy for target quarantine pests, acceptance by the importing country, suitability/feasibility for the commodity, and other criteria to be developed as part of the collaborative process – box 3 provides examples of criteria used in other situations.
- The database could either be open to the public, or it could be accessed by registered users only, i.e. people and organisations who have an interest in the MB issue and are willing to contribute technical information or make other constructive contributions, and those who wish to view information about existing or potential alternatives. (Registered uses could include QPS end-users, fumigators, researchers, technical specialists, people/organisations who made submissions on the MB reassessments, companies who supply alternative products or equipment, others who may be interested in supplying alternatives in future, for example)
- The database should preferably be hosted by EPA HSNO, for administrative efficiency. The HSNO branch appears to be the most suitable government department because they already have a legislative role in assessing alternatives to hazardous substances such as methyl bromide, and already possess the skills and experience necessary for assessing and comparing products and alternatives from a wide range of perspectives.

A transparent evaluation procedure should be linked to the strategy action steps and a requirement for users to implement alternatives in cases where alternatives are found to be technically/economically feasible and acceptable to the recipient country (including imports into New Zealand).

Box 3. Examples of criteria used for evaluating alternatives

General approach applied by the Montreal Protocol for assessing the validity of exemptions (critical uses):

> 'there are no technically and economically feasible alternatives or substitutes available to the user that are acceptable from the standpoint of environment and health and are suitable to the crops and circumstances...' (Decision IX/6)

In practice more detailed criteria were used for assessing alternatives, these varied according to the situation or type of use, but could include the following:

- Efficacy in controlling the target pest species – for QPS uses, this would mean controlling pest species that are in the importing country's official list of quarantine pests,[15] to the standard necessary to satisfy the importing country, e.g. Probit 9.
- Technical feasibility
- Economic feasibility and/or affordability
- Toxicity, ecotoxicity, related parameters

[15] IPPC (2016) *ISPM 19 Guidelines on lists of regulated pests*, https://www.ippc.int/static/media/files/publication/en/2016/01/ISPM_19_2003_En_2015-12-22_PostCPM10_InkAmReformatted.pdf

- Acceptance or approval by the importing country
- Current availability and potential future availability
- Situations and circumstances for which the alternative is suitable and not suitable
- Barriers to adoption/implementation, and potential ways to overcome those barriers
- Drivers for the implementation of alternatives

A concept from the HSNO Act may also be useful as one of the concepts for assessing alternatives: '… with similar or improved beneficial effects and reduced adverse effects' (section 62(2)(b))

3.6 Double-checking that MB uses meet the definition of QPS

Independent evaluations of QPS uses in other countries have sometimes found that several uses did not actually meet the Montreal Protocol's definitions of quarantine and pre-shipment. As part of the evaluation, the uses of MB can be double-checked to ensure that they do meet the definitions – details in Box 4 below.

Box 4. Montreal Protocol definitions of quarantine and pre-shipment

The following definitions describe the types of methyl bromide applications or uses that qualify for a QPS exemption under the Montreal Protocol.

Definition of quarantine applications

Under the Montreal Protocol, *quarantine* refers to the following types of methyl bromide treatments:

> *'Quarantine applications', with respect to methyl bromide, are treatments to prevent the introduction, establishment and/or spread of quarantine pests (including diseases), or to ensure their official control, where:*
>
> *i. Official control is that performed by, or authorized by, a national plant, animal or environmental protection or health authority;*
>
> *ii. Quarantine pests are pests of potential importance to the areas endangered thereby and not yet present there, or present but not widely distributed and being officially controlled.* (Decision VII/5)

This definition covers methyl bromide treatments that are required by a national government authority in order to control officially-listed quarantine pests and diseases. The treatment is officially authorised by the relevant government authority of the importing or exporting country.

The following examples of methyl bromide treatments do not meet the definition of a quarantine treatment:

- A methyl bromide treatment carried out to control pest species that are not officially listed as quarantine pests by government authorities in the recipient country
- A methyl bromide treatment that is required by a commercial company or by a letter of credit (not required by the importing country's government authorities)

Definition of pre-shipment applications

Pre-shipment refers to the following types of methyl bromide treatments:

> *Pre-shipment applications are those non-quarantine applications applied within 21 days prior to export to meet the official requirements of the importing country or existing official requirements of the exporting country. Official requirements are those which are performed*

by, or authorized by, a national plant, animal, environmental, health or stored product authority. (Decision XI/12)

This covers methyl bromide treatments that are carried out before export, to meet official requirements of the importing or exporting country, under the following circumstances only:

- The treatment is required by the official authorities of the importing or exporting country, but the pest species is not an officially-listed quarantine pest (or disease) in that country
- The methyl bromide treatment is carried out within 21 days before export
- In cases where the exporting country requires methyl bromide pre-shipment treatment, the requirement must have been in force prior to 7 December 1995 in the case of Article 5 countries (the date on which Decision VII/5 was adopted)

Official requirements refers to a national governmental authority that controls plant, animal, environmental or health standards. In most countries, these are the plant quarantine or phytosanitary or biosecurity offices within the Ministry of agriculture.

Official requirements are different from commercial or contractual requirements. Contractual requirements are requested by the contracts of importing or exporting companies or banks/creditors, in order to ensure a shipment is relatively free of pests.

Examples of treatments that are <u>not</u> pre-shipment treatments:

- An importing company organises a methyl bromide treatment for an imported product in order to meet the conditions set out in a letter of credit.
- A private fumigation company carries out methyl bromide treatment on imported grain at the request of the importing company, and this treatment is not an official requirement.
- A methyl bromide treatment is carried out in order to meet the official requirements of the importing country, but the treatment is carried out 30 days prior to export (the maximum allowed time is 21 days before export).

Methyl bromide treatments that are not covered by the QPS definitions are classed as non-QPS methyl bromide, and are subject to the Protocol's phase-out requirements.

QPS decision tree

TEAP has provided a decision tree (sometimes called the *QPS Logic Diagram*) shown below, to assist in deciding whether a methyl bromide treatment should be categorized as a 'quarantine' treatment or 'pre-shipment' treatment, or neither.

Fig. 3. QPS decision tree