

EUROPEAN UNION
STRATEGY TO REDUCE THE USE AND EMISSIONS OF METHYL BROMIDE
FOR QUARANTINE AND PRE-SHIPMENT PURPOSES

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1. Summary of EU activities on QPS

Although the Montreal Protocol has not placed legally binding restrictions on the use of methyl bromide (MB) for quarantine and pre-shipment (QPS) treatments, a number of Protocol Decisions have urged or encouraged Parties to reduce their QPS use. In 2000, the EU Regulation on ozone depleting substances (ODS) adopted control measures on MB for QPS in EU countries¹. This legislation restricted the quantity of MB consumed for QPS from the year 2001 onwards, required EU countries to monitor and report annually on the quantity and uses of MB authorised for QPS, and on progress in evaluating and using alternatives (section 5.3 below). Subsequently, the consumption annual of MB for QPS in 27 EU countries was reduced from more than 2 900 tonnes to 195 tonnes in the period from 2000 to 2008. Following a review of the safety of pesticides, MB has been de-registered as a pesticide and its use was scheduled to cease by 18 March 2010 in the EU. From this date, also the revised EU Regulation on ozone depleting substances² bans the use of MB for QPS and other emissive uses, except for limited emergency uses.

Table 1 summarises the activities carried out to date in EU countries that have led to reductions in the quantity of MB used for QPS. Details and references are provided in subsequent sections of this paper.

Table 1: Summary of activities carried out to reduce QPS uses of MB in countries of the EU

Type of activity	Activities undertaken to date in the EU
Limit on quantity of MB allowed for QPS	EU legislation on ODS limited the quantity of MB for QPS applied from 2001 onwards
Phase-out of QPS uses of MB	The use of MB for QPS is phased out by 18 March 2010 following the revision of EU legislation on ODS.
De-registration of MB as pesticide	As of 18 March 2010 the use of MB as pesticide is prohibited following its de-registration and expiry of possible grace periods for the use of stocks
Prohibitions on MB use	Several EU countries (Denmark, Finland, Sweden) prohibited the use of MB for QPS in the 1990s
Prior authorisation of QPS fumigations	The Netherlands required prior approval of each MB fumigation which included including an assessment of the availability of alternatives
Review of regulatory requirements	EU countries reviewed requirements to use MB for QPS. EU quarantine legislation does not specifically require MB and has approved alternative options
MB recovery requirements	Belgium requires the recovery of 80% of MB gas present in containers after fumigation, and the Netherlands requires recovery of MB gas before shipping containers are opened. From 1 January 2010 until 18 March 2010, EU legislation requires the recovery of at least 80% of MB released from a consignment if economically feasible

¹ Regulation (EC) No 2037/2000 of the European Parliament and of the Council on substances that deplete the ozone layer. Official Journal of the European Communities, L 244. 29.9.2000, p. 1.

² Regulation (EC) No 1005/2009 of the European Parliament and of the Council on substances that deplete the ozone layer. Official Journal of the European Union, L 286. 31.10.2009, p. 1.

Type of activity	Activities undertaken to date in the EU
'Polluter-pays'	Several countries placed taxes or fees on imports of MB and other ODS, to discourage the use of ODS and encourage the use of alternatives
Annual reports on progress in alternatives	EC legislation required annual reports on the progress made in evaluating and using alternatives in EU countries
Research and development	Government-funded institutes and private companies have carried out research on QPS alternatives, leading to the adoption of a number of alternatives in commercial practice
Seed funding for alternatives	The Netherlands provided seed funding for the installation of a heat and controlled atmosphere facility at a major port. This led to further commercial adoption without subsidies
Removing barriers to alternatives	Some EU countries and the European Commission increased the availability of alternatives for end-users by actively encouraging the installation of alternative facilities by companies. Help was enlisted from trade associations
Information dissemination	Since the 1990s, EU countries and the European Commission disseminated information about QPS alternatives at conferences, workshops and stakeholder meetings
Company policies	Since the 1990s a number of individual companies and supermarkets adopted voluntary measures and policies to adopt the use of alternatives and avoid the use of MB for QPS
International surveys	EU countries compiled information on QPS uses and alternatives in response to international surveys organised by the Ozone Secretariat and TEAP

2. Introduction

MB is a potent ozone depleting substance and is classified as a controlled substance under the Montreal Protocol. The Protocol established phase-out timetables for most uses of MB. However, QPS uses of MB were exempted from the baseline and phase-out³ because experts at the time had not identified alternatives. Quarantine (phytosanitary) measures, such as fumigation with MB, are important for preventing the introduction and spread of quarantine pests to new areas, and reducing the risk of pest damage to forests and agriculture.

The reported global consumption of MB for QPS has been in the range of 10 743 to 12 286 tonnes in recent years⁴. Global production of MB for QPS has varied from 10 246 to 13 815 tonnes in the same period. The Scientific Assessment report of 2006⁵ estimated the impact of MB for QPS and other remaining ODS. It estimated that, if MB production for QPS continued at a level around 10 700⁶ tonnes/year (for example), the chlorine/bromine burden

³ Article 2H of the Montreal Protocol sets out the reduction and phase-out schedule for MB. Under Article 2H(6) the amount of MB used for QPS is not included in a Party's calculated level of MB consumption and production.

⁴ Data for the period 2002-2007, Data Access Centre, Ozone Secretariat website, accessed September 2009. Available at http://ozone.unep.org/Data_Reporting/Data_Access/

⁵ WMO (2007) Scientific Assessment of Ozone Depletion: 2006, World Meteorological Organization, Geneva. p.xxxvi-xxxvii.

⁶ WMO (2007) cited above: p.8.20 states that this scenarios used the level of 10.7 kilotons for QPS.

in the atmosphere in mid-latitudes⁷ would be 3.2% higher than if this production were to cease in 2015.

In 2008 the international body responsible for plant quarantine security, the International Plant Protection Convention (IPPC), adopted a Recommendation on the *Replacement or Reduction of the Use of Methyl Bromide as a Phytosanitary Measure*⁸. The IPPC Recommendation issued guidelines (reproduced in Annex 4 below), noted that contracting parties would continue to need MB for quarantine until feasible alternatives are available, and reported that ‘*some countries have already successfully reduced or eliminated the use of methyl bromide*’ (page 4). The Recommendation encouraged parties to put in place a strategy that will help to reduce the use of MB for phytosanitary measures and/or reduce MB emissions, and noted that it may include the following areas for action (page 5-6):

- 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.

Following this, Decision XX/6⁹ of the Montreal Protocol encouraged Parties, in accordance with the above IPPC Recommendation, to put in place a national strategy that describes actions that will help to reduce their use of MB for phytosanitary measures and/or reduce MB emissions. Parties were encouraged to make their strategies available to other Parties through the Ozone Secretariat. Decision XX/6 noted that the strategy may include the action areas a) to d), listed above.

Since 18 March 2010, the use of MB is prohibited in the EU, including for QPS applications. The aim of this strategy is to document the steps leading to this phase out. As it is intended for an international audience, it uses common international terms and descriptions rather than EU-specific terminology. For example, in the context of discussing pesticide authorisation status it uses the common term ‘de-registration’ rather than the EU term ‘non-inclusion in Annex I of Directive 91/414/EEC’.

This strategy is based on contributions from the Member States, based on a template included in Annex 1.

⁷ The integrated equivalent effective stratospheric chlorine in mid-latitudes.

⁸ IPPC (2008) *IPPC Recommendation: Replacement or Reduction of the Use of Methyl Bromide as a Phytosanitary Measure*. adopted by the Commission on Phytosanitary Measures, 3rd session, April 2008, International Plant Protection Convention, FAO, Rome. Available at <https://www.ippc.int/servlet/CDSServlet?status=ND0xMzM5MyY2PWVuJjMzPSomMzc9a29z>

⁹ UNEP (2008) Report of the Twentieth Meeting of the Parties to the Montreal Protocol, UNEP/OzL.Pro.20/9, pages 37-39, Decision XX/6, paragraph 10.

Table 2: Trend in MB consumption for QPS in 27 EU countries, 2000-2009 (tonnes)

Year	QPS consumption limit in EU legislation	MB consumption for QPS (tonnes)		
		Countries that were members of the EU at the time EU-15 (until 2003) EU-25 (2004 - 2006) EU-27 (since 2007)	Countries that joined the EU at a later stage	Total 27 countries
2000	No limit	2,855	48	2,903
2001	1011.6	790	62	852
2002	1011.6	800	53	853
2003	1011.6	758	60	818
2004	1011.6	880	5	885
2005	1011.6	474	5	479
2006	1011.6	342	-	342
2007	1011.6	194	-	194
2008	1011.6	195	-	195
2009	1011.6 (a)	53	-	53
2010	75 (b)	Not yet available	-	Not yet available

Source: Data reported to the Ozone Secretariat under Article 7, Data Access Centre, Ozone Secretariat website.

(a) EU pesticides legislation also introduced a limiting measure: after 18 March 2009 only MB stocks can be used.

(b) The calculated level of MB which companies place on the market or use for their own account is limited to 75 tonnes in the period 1 January - 18 March 2010.

3. Trend in MB consumption for QPS

MB has been used for QPS in the majority of the 27 countries that are members of the EU¹⁰. The EU was the 2nd highest global consumer of MB for QPS in the year 2000. At that time MB consumption was 2 855 tonnes in 15 countries that were members of the EU. The total reported consumption of the 27 countries that are now members of the EU totalled about 2 903 tonnes in 2000¹¹.

Table 2 above shows the trend in MB consumption for QPS in 27 EU countries. MB consumption was reduced from 2 903 to 195 tonnes in the period from 2000 to 2008. By 2004, 10 EU countries reported zero consumption of MB for QPS¹². By 2007, 12 EU countries reported zero consumption for QPS.

¹⁰ Historical consumption of MB for QPS has been reported by the EU-15, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovenia according to the Data Access Centre of the Ozone Secretariat.

¹¹ Data Access Centre, Ozone Secretariat.

¹² EC (2006) Workshop on quarantine and pre-shipment uses of methyl bromide, 6 March 2006, Brussels. p.6

4. Montreal Protocol requirements and decisions relating to QPS

The Montreal Protocol has adopted a large number of Decisions on QPS, indicating concerns about this area for many years:

- Beginning in 1994, Decision VI/11 urged countries to refrain from the use of MB for QPS and to use non-ozone-depleting technologies wherever possible. In 1995 Parties reiterated their concerns, using the same phrase in Decision VII/5.
- In 1998, Parties agreed Decision X/11 asking TEAP among other activities to report on the existing and potential availability of alternative substances and technologies, and to identify applications where alternative technologies do not exist. A detailed report on QPS was published in the TEAP Progress Report of April 1999.
- Decisions VI/11 and VII/5 urged Parties to minimize emissions and use of methyl bromide through containment and recovery and recycling technologies to the extent possible, where MB is used for QPS. Decision XI/13 again asked Parties to encourage the use of MB recovery and recycling technology (where technically and economically feasible) to reduce emissions until alternatives for QPS are available.
- Decision XI/13 in 2001 requested Parties to review their national regulations with a view to removing the requirement to use MB for QPS where technically and economically feasible alternatives exist. Parties were also urged to implement procedures to monitor the uses of MB for QPS by commodity and quantity, in order to target resources for implementing feasible alternatives.
- In 2004, Decision XVI/10 requested Parties to submit data to the task force before 31 March 2005, identifying all known uses of MB for QPS, by commodity and application, and provide information on availability and technical and economic feasibility of applying the alternatives identified. Decision XVI/11 referred to ISPM-15 and urged Parties to consider the use of alternatives such as heat treatment or alternative packaging materials instead of MB fumigation.
- In 2008, Decision XX/6, *inter alia*, encouraged Parties to put in place a national strategy describing actions to reduce MB use and/or emissions.
- In 2009, Decision XXI/10 asked TEAP to further review the availability of alternatives, focussing in particular four major categories of QPS uses, and to develop a methodology for such assessments. The Decision, furthermore, encourages Parties to provide additional information on technical options for emission reduction and replacement and their economic impact.

The EU has implemented these decisions, as summarised in Table 3 below.

5. Developments in European legislation relating to MB for QPS

This section provides a chronological overview of the developments in legislation that have affected the use of MB for QPS in the EU and individual Member States. In addition to ODS legislation, there are two major areas of legislation that have had impacts: quarantine legislation and pesticides legislation.

Table 3: Montreal Protocol Articles and Decisions relating to MB for QPS

Protocol Article or Decision	Activity to be undertaken by Parties	EU implementation
Decision VI/11(1) adopted in 1994, and VII/5(c) adopted in 1995	Countries were urged to refrain from use of MB for QPS and to use non-ODS technologies wherever possible.	EU limited the quantity of MB for QPS from 2001, reviewed developments in alternatives
Decision IX/28(6) adopted in 1997 ¹³	Parties shall report QPS consumption data (non-binding decision)	EU started to report QPS data from 1996 on a voluntary basis
Article 7(2) and (3) adopted in 1999	Beijing Amendment introduced obligatory reporting on QPS use	EU has continued to report QPS data annually
Decision X/11(3) adopted in 1998	Parties to submit to the Secretariat by 31 December 1999 a list of regulations that mandate the use of MB for QPS	EU experts contributed information to TEAP reports
Decision XI/13(5) adopted in 2001	Requested Parties to review their national regulations with a view to removing the requirement for the use of MB for QPS where technically and economically feasible alternatives exist	The current EU quarantine legislation does not require the use of MB ¹⁴ and provides users with alternative options
Decision XI/13(6) adopted in 2001	Urged Parties to implement procedures to monitor the uses of MB by commodity and quantity for QPS uses in order: (a) To target the efficient use of resources for undertaking research to develop and implement alternatives; (b) To encourage early identification of technically and economically feasible alternatives ...	From 2001 the EU required monitoring and annual reporting on specific QPS uses and quantities, also annual reports on progress in evaluating & using alternatives
Decision XVI/10 adopted in 2004	Requested Parties that had not already done so to submit data to TEAP before 31 March 2005, identifying all known uses of MB for QPS, by commodity and application, and provide information on availability and technical and economic feasibility of applying alternatives	The EU submitted data to the Secretariat in 2002, and EU countries provided data to the UNEP/TEAP survey of 2004
Decision XVI/11(3) adopted in 2004	For ISPM-15, urged Parties to consider the use, to the greatest extent, when economically feasible and when the country concerned has the required facilities for alternatives, such as heat treatment or alternative packaging materials.	Several EU countries and the European Commission in 2005 encouraged the wood pallet industry to promote and use alternatives
Decision VI/11(1), VII/5(c), and XI/13(7)	Where MB is used, Parties are urged to minimize emissions and use of MB through containment and recovery and recycling methodologies [...] until alternatives are available	EU legislation on ODS revised in 2009 requires MB recovery following QPS fumigations if economically feasible
Decision XX/6(10) adopted in 2008	Encouraged Parties in accordance with the recommendations of the IPPC to put in place a national strategy, and make such strategies available to other Parties where possible before MoP-21	The EU presented its strategy on QPS at MoP-21 and banned all MB uses as of March 2010
Decision XXI/10	To encourage Parties or regions to use the October 2009	Submission of additional

¹³ Parties were also reminded of the need to report QPS data in Decisions X/11(4), XI/13(3) and XX/6(1).

¹⁴ With the exception of two cases described under chapter 8.2.

adopted in 2009	Technology and Economic Assessment Panel quarantine and pre-shipment task force report 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	information in preparation.
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5.1 Member State restrictions on QPS

In the 1990s several EU countries introduced national prohibitions on the use of MB for QPS:

- **Denmark** developed a national plan and prohibited QPS uses of MB from 1998 under National Regulation Statutory Order No. 974 of December 13, 1995. The Ministry of Environment and Energy has the right to waive the ban in very exceptional cases, but there have been no reported cases of waivers.
- **Finland** prohibited QPS uses of MB from 1.1.1999 under Council of State Decision 262/98;
- **Sweden** prohibited QPS uses of MB from 2001 under the *Pesticides Ordinance* (1998:947).

Several other countries placed restrictions on the use of MB for QPS:

- **The Netherlands** for many years required prior approval before each MB fumigation, which included an assessment of the availability of alternatives. Rules also required reporting on the use of MB and the specific purposes. In the 1980s rules restricted when and where MB could be used, including substantial buffer zones to protect the safety of bystanders and local communities. Since the 1990s the environmental inspectorate was also very active in restricting the use of MB in order to protect human health. This led to the situation MB use was reduced to a very low level in one of the largest and busiest ports in the world.
- In 2007, **Estonia** adopted legislation on exceptional MB QPS requesting a permit to be issued by the Ministry of the Environment, subject to the compliance with preconditions, including the identification of the national authority of the importing country requiring imported goods to be treated with MB and a certificate proving that training on the environmental impacts of ODS has been passed. The applicant had furthermore to prove that the use of alternatives is impossible, best available techniques are applied and that the amount of MB for the specific treatment is not too high. After the adoption of this regulation, no company had shown any interest in continuing the use of MB for QPS purposes in Estonia.

5.2 EU legislation on quarantine adopted in 2000

The EU legislation on quarantine measures¹⁵ requires protective procedures or treatments for many imported commodities (such as wood, grain, fruit, vegetables and flowers), with the aim of preventing the introduction and spread of quarantine pests. For each specific commodity and pest combination, the legislation typically provides importers with a choice of several different options for quarantine treatments or procedures (see Section 8.1 below for details). The EU legislation sometimes lists ‘fumigation’ as one option, and does not specify the use of MB nor the type of fumigant¹⁶. The EU quarantine legislation does not require the use of MB, with two exceptions, however in this case alternative options are also described in the legislation. Details are provided in Section 8.2 below.

5.3 EU legislation on ODS adopted in 2000

When the EU ODS legislation was updated in 2000, the revised Regulation (EC) 2037/2000¹⁷ noted in recital 9 that *‘the use of methyl bromide for quarantine and pre-shipment applications should be controlled. Such use should not exceed current levels and ultimately be reduced in the light of technical development...’*. The Regulation (Annex III) introduced a limit on QPS consumption, restricting it to 1011.6 tonnes (607 ODP-tonnes) per year from 2001 onwards as shown in Table 2 above. The quantity of MB for QPS placed on the market or used by each MB producer and importer was also limited to the annual average that the company placed on the market or used in the period 1996-1998 (Article 4(2)(iii)). The regulatory limit acted as a signal to industry that the use of MB was undesirable from an environmental perspective, and encouraged industry to investigate and adopt alternatives. The regulation also required the European Commission, by agreement of the ODS Management Committee, comprising representatives of the EU Member States, to take measures to reduce MB consumption for QPS in the light of the availability of technical and economic alternatives (Article 4(2)(iii)).

When additional countries joined the EU, the limit on QPS was not revised upwards because alternatives were available for a number of uses at that time and an increase was not deemed necessary.

Annual reporting on QPS was also introduced by Regulation (EC) 2037/2000 from 2002 onwards:

- Each MB producer, importer and exporter was required to report annually the quantity of MB placed on the market or used by the company for QPS (Article 19(1)(a)-(c)).

¹⁵ The main EU legislation on plant quarantine is found in Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community, OJ L 169, 10.7.2000, p.1, as updated and amended.

¹⁶ If fumigation is carried out, it must be carried out to the specifications approved by the EU Standing Committee on Plant Health.

¹⁷ Regulation (EC) No 2037/2000 of the European Parliament and of the Council on substances that deplete the ozone layer. Official Journal of the European Communities, L 244, 29.9.2000, p.1-24, and subsequent amendments.

- Each EU country was required to report annually to the European Commission the quantities of MB authorised for QPS used in their territory, and the purposes for which MB was used, and the progress in evaluating and using alternatives (Article 4(2)(iii)).

In order to provide reports on QPS uses, MB fumigations for QPS had to be monitored and recorded. Annex 2 provides a blank copy of the logbooks that are used for recording MB-QPS fumigations in EU countries. Annex 3 provides a copy of the forms that are used for annual reports on the progress in evaluating and using alternatives.

5.4 Changes in EU legislation on pesticides in 2003 and 2008

During the last decade all pesticide substances in the EU have been undergoing a review and re-registration process. A Regulation adopted under the EU Biocides Directive (98/8/EC) de-registered MB as a biocide from 1 September 2006, i.e. MB was no longer permitted as a pesticide for non-plant treatments¹⁸. This de-registration decision prohibited the use of MB for biocidal (non-plant) QPS uses such as cattle hides, fur, leather goods, cheese and dried fish products.

Under the EU Plant Protection Products Directive (91/414/EEC) a dossier of toxicological and ecotoxicological information relating to MB was assessed. The risk assessment noted that MB is highly toxic and mutagenic and identified a number of areas where MB did not meet the requirements and criteria necessary for approval as a pesticide under Directive 91/414/EEC¹⁹. The regulatory committee responsible for pesticides found that MB did not meet the necessary requirements and as a result MB was not re-registered as a pesticide substance (i.e. MB was not included in the list of pesticides authorised in Annex I of Directive 91/414/EEC)²⁰. Decision 2008/753/EC required all authorisations for pesticide products containing MB to be withdrawn by 18 March 2009. Member States are able to grant a grace period for the use of existing stocks of MB for QPS until 18 March 2010 at the latest, provided that those uses are also authorised under the ODS Regulations.

5.5 Revised EU legislation on ODS adopted in 2009

The EU legislation on ODS was recently revised, and the new Regulation (EC) 1005/2009 applies since 1 January 2010 and phases out the use of MB for QPS, as any other uses, by 18 March 2010.

Article 12(1) of the revised Regulation states that: *‘until 18 March 2010, methyl bromide may be placed on the market and used for quarantine and for pre-shipment applications for treatment of goods for export provided that the placing on the market and use of methyl*

¹⁸ Commission Regulation (EC) No 2032/2003. Official Journal of the European Union, L 307, 24.11.2003, p.1-96.

¹⁹ EFSA (2006) DAR Assessment Report. Initial Risk Assessment for the Existing Active Substance Methyl Bromide, following quality review by the EFSA Pesticides Risk Assessment Peer Review (PRAPeR). Volumes 1 – 3. European Food Safety Authority.

²⁰ Commission Decision 2008/753/EC concerning the non-inclusion of methyl bromide in Annex I to Council Directive 91/414/EEC and the withdrawal of authorisations for plant protection products containing that substance. Official Journal of the European Union, L 258, 26.9.2008, p.68-69.

bromide are allowed respectively under national legislation in accordance with Directive 91/414/EEC and Directive 98/8/EC.'

From 1 January to 18 March 2010, the calculated level of methyl bromide which companies place on the market or use for their own account is limited to 75 tonnes (45 ODP-tonnes) (Article 12(2)). MB may only be used on sites that are approved by the competent authorities of the relevant countries, and - if economically and technically feasible - subject to the condition that at least 80% of MB released from the consignment is recovered (Article 12(1)).

The Regulation also states that '*In an emergency, where unexpected outbreaks of particular pests or diseases so require, the Commission may, at the request of the competent authority of a Member State, authorise the temporary production, placing on the market and use of methyl bromide, provided that the placing on the market and use of methyl bromide are allowed respectively under Directive 91/414/EEC and Directive 98/8/EC. Such authorisation shall apply for a period not exceeding 120 days and to a quantity not exceeding 20 metric tonnes and shall specify measures to be taken to reduce emissions during use.*' (Article 12(3)).

6. Economic measures in the EU

Several countries of the EU introduced 'polluter pays'-taxes on MB and other ODS imports at an early stage. This made alternatives more attractive and helped to reduce dependence on MB:

- The **Czech Republic's** Ozone Protection Legislation of 1995 placed a tax on producers and importers of ODS. From January 1996 the tax was applied to MB (Act on Protection of the Ozone Layer of the Earth. 86, 20 April 1995). The revenue is used by the State Environmental Fund for ozone protection.
- *Regulations in Slovakia* placed a fee on all imports of MB and other ODS in 1998 as an economic disincentive. As a result, the price of MB became higher and encouraged users to adopt alternatives. The funds were used to generate revenue for the state Environmental Fund for ozone layer protection work²¹.
- **Poland** established a fee on the emission of pollutants to the atmosphere (\$US 0.02 per kg), which was intended to act as a disincentive to the use of pollutants like MB²².

Several countries provided economic support for the adoption and installation of QPS alternatives:

- **The Netherlands** provided an initial subsidy as seed funding for the construction of a facility called the REST terminal for carrying out heat and controlled atmosphere

²¹ EU (2008) European Community Management Strategy for the Phase-out of the Critical Uses of Methyl Bromide. European Community, Brussels. Section 4.4.2. Also MBTOC (2002) Assessment Report, UNEP, section 3.6.4.2.

²² Slusarski, C. 2002. Policy developments in CEIT countries. Methyl Bromide Action in China. 8, State Environmental Protection Administration, Beijing and GTZ, Eschborn.

treatments at a major port. This led to further commercial adoption in other areas without subsidies.

- **Bulgaria, Hungary, Latvia, Lithuania and Poland** received GEF funding for equipment for fumigation with alternatives to MB, which also included post-harvest applications.

7. Other activities that reduced the use of MB for QPS in the EU

7.1 Research leading to the adoption of alternatives

The European Commission funded the ‘EUPHRESCO’ project which aimed to improve the coordination and collaboration between national phytosanitary research programmes in the period 2006-2010²³. A number of government-funded research institutes and private companies have carried out research on QPS alternatives in the EU. As a result, a large number of alternatives have been approved by EU legislation (see examples in Table 5 below) and have been adopted by companies.

7.2 Conferences and information dissemination

The EU has organised a number of international conferences to disseminate information about MB alternatives in the period 1997 to 2006: Canary Islands in 1997, Rome in 1998, Heraklion in 1999, Sevilla in 2002²⁴, and Lisbon in 2004²⁵. Most of these conferences included information and examples of alternatives for QPS. The EU also hosted an international workshop on QPS in 2006, which included a contribution on QPS alternatives in North America²⁶. Conferences for professional pest control companies and fumigators were organised by European companies in Copenhagen in 2003, Bremen in 2007, and Valencia in 2010.

In the 1990s the Nordic Council funded seminars and compiled several publications about MB uses and alternatives, including information about QPS²⁷. This contributed to the early adoption of alternatives by companies in Nordic countries.

In the Netherlands active steps were also taken to inform users and promote the use of alternatives. For example, the Dutch Ministry of the Environment organised a stakeholder analysis to discuss the feasibility of alternatives for ISPM-15²⁸. The Netherlands also shared information about alternatives for ISPM-15 with international organisations such as the FAO and IPPC. CLM (Research and Advice for Agriculture and Environment) produced a report intended for international policy makers, describing the experiences of phasing out MB in the

²³ Funds of €2.63 million were provided by the Commission’s 6th Framework Programme ERA-NET. www.euphresco.org

²⁴ <http://ec.europa.eu/environment/ozone/conference/index.htm>

²⁵ http://ec.europa.eu/environment/ozone/lisbon_conference.htm

²⁶ EC (2006) Workshop on quarantine and pre-shipment uses of methyl bromide, 6 March 2006, Brussels.

²⁷ Hallas et al (1993) Methyl Bromide in the Nordic Countries – Current Use and Alternatives, Nord 1993:34, Nordic Council of Ministers. Econet (1005) Alternatives to Methyl Bromide, TemaNord 1995:574, Nordic Council of Ministers.

²⁸ EC (2006) Workshop on quarantine and pre-shipment uses of methyl bromide, 6 March 2006, Brussels, section 9(a).

Netherlands²⁹. Active cooperation between the relevant ministries, such as social and labour affairs and agriculture/ nature, also helped to reduce the use of MB to a low level in the Netherlands.

In 2005 a GEF funded conference on MB alternatives was organised in Plovdiv, Bulgaria, for the dissemination of information amongst farmers.

7.3 Activities relating to ISPM-15

In 2002/3, TEAP and the USDA highlighted the risk that the adoption of an international standard (ISPM-15) for the treatment of solid wood packaging materials could increase the use of MB significantly. The use of MB for QPS did indeed increase initially in some EU countries, following the adoption of ISPM-15³⁰.

In 2003 the value of wood pallets and packaging produced in 15 EU countries was Euro 5 082 million. Around 300 million wooden pallets are produced in Europe every year³¹. The Federation encouraged EU countries to put in place heat treatment facilities. Several actions were undertaken in the EU, as illustrated by the examples below.

At an early stage, several EU companies set up facilities for conducting alternative treatments for ISPM-15. For example, ECO2 in the Netherlands set up facilities in container terminals, allowing full shipping containers, loaded with goods and packaging materials, to receive a heat treatment to ISPM-15 standard. It was also feasible to apply a low-oxygen atmosphere at the same time, to prevent oxidation of products (Bergwerff, 2004 p.213).

The European Commission distributed a paper about alternatives for ISPM-15³². The Commission undertook discussions with the European Federation of Wooden Pallet and Packaging Manufacturers (FEFPEB) which represents manufacturers, repairers, traders and pallet pool organisations. The Federation agreed to encourage companies to abolish the use of MB as soon as possible, and supported a phase-out of the use of MB for wood pallets and packaging where alternatives are available. In 2005 they reported that more than 1 800 companies in France, Germany, the Netherlands, Portugal, Spain, Sweden and UK were registered to use heat treatments for ISPM-15 treatments³³.

Not-in-kind alternatives have also been promoted for ISPM-15. From 2005 onwards the European Commission identified European manufacturers of plastic pallets, cardboard pallets

²⁹ CLM report on Dutch experiences in phasing out MB and options to replace MB for QPS, <http://www.clm.nl/publicaties/data/625.pdf>.

³⁰ Bergwerff, F (2004) The use of controlled atmospheres and heat for the disinfestation of commodities, artefacts and structures. In: Batchelor and Alfarroba (eds) Proceedings of Fifth International Conference on Alternatives to Methyl Bromide, 27-30 September 2004, Lisbon. European Commission, Brussels. page 214.

³¹ European Confederation of Woodworking Industries (2004) European Wood Factsheets 2. The Woodworking Industry. <http://www.cei-bois.org/frameset.html>

³² Müller-Sannmann, I (2004) Overview of the alternatives for the disinfestation of SWPM. Proceedings of Fifth International Conference on Alternatives to Methyl Bromide, 27-30 September 2004, Lisbon. European Commission, Brussels.

³³ EC (2005) Reductions in the use of MB as a result of the implementation of heat treatment technology in the EU. Letter from the European Commission DG Environment to FEFPEB and CEI-Bois, 12 May 2005, Brussels.

and other non-wood materials³⁴. These types of pallets do not require any type of ISPM-15 treatment. Some types of non-wood pallets also have the benefit of being re-usable and recyclable.

In April 2009, the IPPC's Commission on Phytosanitary Measures adopted a revised version of ISPM No 15³⁵ which recognised that MB depletes the ozone layer (p.5 of Appendix 4) and encouraged national plant protection organisations (NPPOs) to promote the use of approved alternatives: '*Use of methyl bromide should be undertaken taking into account the CPM Recommendation Replacement or reduction of the use of methyl bromide as a phytosanitary measure*' (2008). NPPOs are encouraged to promote the use of alternative treatments approved in this standard' (p.11 of Appendix 4 of CPM-4 report). The EU continues to promote the use of alternatives for ISPM-15.

7.4 Voluntary activities by companies

A number of companies in the EU took steps at an early stage to adopt and promote MB alternatives for QPS, as illustrated by the following examples:

- ECO2 based in the Netherlands developed and adopted controlled atmospheres and heat treatments for diverse QPS uses. The company has worked with partners in other countries, setting up similar alternative treatment facilities at or near ports in Belgium, India, Singapore, Turkey and Vietnam³⁶.
- In 2002 Marks & Spencer (M&S), a retail chain located in several EU countries, phased out a number of pesticides from its supply chain. Its environmental policy of 2007 includes eliminating post-harvest use of pesticides on fruit and vegetables and requiring its worldwide suppliers of fruit and vegetables not to use any pesticides that are banned in the EU³⁷.

8. Alternatives authorised and available in the EU

8.1 Alternatives identified by TEAP

The MBTOC Assessment reports of 1994, 1998, 2002 and 2006, and a TEAP report of 1999, identified a large number of technically feasible alternatives for QPS uses, and many treatments approved by quarantine authorities.³⁸ Examples are provided in Table 4 below.

³⁴ Suppliers of plastic and cardboard pallets include www.starpal.fr, www.USplasticpallets.com, www.plasticpallet.eu, www.cabka.com, www.farusa.dk, www.pallettower.com, www.doubleeco.co.nz, www.cellpaksolutions.com, www.ipmholdings.com, www.goplasticpallets.com, www.permapallets.nl, www.rwrpaletten.be, www.tripla.com, www.plastibac.eu, www.craemer.de, www.cardboardpalletcompany.com.au

³⁵ IPPC (2009) Revision of ISPM No. 15 Regulation of wood packaging material in international trade. In: Appendix 4 of report of the 4th Session of the Commission on Phytosanitary Measures, IPPC, Rome.

³⁶ www.eco2.nl

³⁷ Franklin, S (2009) UK retailer steps up action on pesticides. Pesticides News 85, September 2009, p.6-7.

³⁸ MBTOC (1994, 1998, 2003, 2007) Methyl Bromide Technical Options Committee Assessment Reports of 1995, 1998, 2002, 2006. UNEP, Nairobi. TEAP (1999) TEAP Progress Report, April 1999. Part I: The Quarantine and Pre-Shipments Exemption of Methyl Bromide. p. 1-104.

Table 4: Existing alternative QPS treatments identified by Parties and by TEAP

QPS sector	Examples of alternatives identified by Parties and TEAP
Grains, cereals, and dried foodstuffs (for consumption)	Phosphine, aluminium phosphide, magnesium phosphide, hot water treatment, heat treatment, controlled atmosphere, and combination hot water and dry air
Timber and timber products, wooden packaging materials	Heat treatment, heat + low oxygen, phosphine, aluminium phosphide, ethyl formate, sulfuryl fluoride, debarking, insecticides, pest free areas, and inspection, debarking, processing, water immersion
Cotton and fibre	Phosphine
Perishable fresh fruit and vegetables, cut flowers	Systems approach, pyrethroids, cold treatment, hot water treatment, and alternative phytosanitary procedures (pre-clearance programmes, pest free areas, inspection), controlled atmospheres,
Soil treatments	1,3-D/chloropicrin, other fumigant combinations

Sources: MBTOC Assessment Reports of 2002 and 2006, Party responses to 2004 survey, TEAP Progress Report May 2006, TEAP Progress Report 1999 volume I, TEAP QPS Taskforce Report October 2009.

An EU survey submitted to the Ozone Secretariat in 2002 estimated that 62% of the MB used for QPS was replaceable by alternative technologies at that time³⁹. An international survey on QPS in 2004 provided responses from >50 Article 5 and Non-Article 5 countries. Most of the governments indicated that a number of QPS alternatives were commercially available in their countries. Examples are included in Table 4 above. Parties indicated that 89% and 77% of QPS in Non-Article 5 and Article 5 countries (respectively) could be replaced by the implementation of alternative technology that were currently available, but not used, in their countries⁴⁰. 15 Parties indicated that they already had 100% use of alternatives, i.e. zero MB consumption for QPS, by 2004.

8.2 Alternatives permitted by EU quarantine legislation

Activities carried out in EU countries to reduce the use of MB since 1992 has contributed to a wide range of alternative options approved by the EU legislation. EU legislation on quarantine⁴¹ aims to prevent the introduction and spread of harmful quarantine pests and requires protective procedures or treatments for many imported agricultural commodities (such as wood, grain, fruit, vegetables and flowers). For each specific commodity and pest combination, the EU legislation typically provides importers with a choice of several different options for quarantine treatments or procedures, as illustrated by the following examples. Further examples are provided in Table 5 below.

- For species of wood at risk of carrying quarantine pests, the approved procedures or treatments include: heat treatment, kiln drying, chemical impregnation, fumigation, wood processing, removal of round surfaces of timber, official statement certifying

³⁹ Ogden, S (2002) Preliminary results of an international survey on the use of MB for QPS. Proceedings of 4th International Conference on Alternatives to Methyl Bromide, 5-8 March 2002, Sevilla.

⁴⁰ Ogden, S (2004) Preliminary results of an international survey on the use of MB for QPS. Proceedings of 5th International Conference on Alternatives to Methyl Bromide, 27-30 September 2004, Lisbon.

⁴¹ The main legislation is found in Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community, OJ L 169, 10.7.2000, p.1, as updated and amended.

that wood is bark-free, or official statement that symptoms of the relevant quarantine organisms have not been observed in the place of production or the immediate vicinity.

- For nursery plants, the approved procedures or treatments include: official statements that inspection has been carried out, production in areas free from relevant quarantine pests, laboratory culture, testing of genetic lines or samples, production in glasshouse or isolated structure, heat treatment (where relevant), fumigation, or other appropriate treatment.
- For cotton, phosphine was approved by the European Plant Protection Organisation in 1994 as an alternative quarantine treatment to MB for disinfestation of cotton boll weevil (*Anthonomus grandis*) in bulk cotton⁴².

EU legislation mentions the use of MB specifically in only two instances⁴³, however in both cases alternative options are also allowed under the legislation:

a) *Oak logs with bark exported from the USA.* Oak grown in the USA may be infested with oak wilt fungus (a disease caused by *Ceratocystis fagacearum* (Bretz) Hunt). An EU Decision requires oak logs with bark attached to be treated with MB in the USA before export⁴⁴, although several countries of the EU are allowed to import white oak without MB treatment⁴⁵. However, MB treatment is not required if the oak wood meets one of the following conditions: (a) all round surfaces are removed, or (b) bark-free and dried to <20% moisture, or (c) bark-free and treated with hot-air or hot water treatment, or (d) sawn and kiln-dried to <20% moisture⁴⁶.

⁴² TEAP (1999) Progress Report of the Technology and Economic Assessment Panel, April 1999, volume I, p.53.

⁴³ Personal communication, 28 August 2008. Mr Marc Vereecke, Chair of the EU Standing Committee on Plant Health from 1989 to 2007.

⁴⁴ Commission Decision 2005/359/EC providing for a derogation from certain provisions of Directive 2000/29/EC as regards oak (*Quercus* L.) logs with bark attached, originating in the USA. OJ L 114, 4.5.2005, p.14-19.

⁴⁵ Article 8 of Commission Decision 2005/359/EC.

⁴⁶ Council Directive 2000/29/EC as amended, Annex IV, Part A, Section 1, 3.

Table 5: Approved quarantine procedures and treatments in EU quarantine legislation

Required quarantine procedure or treatment	Artificially dwarfed plants	Cut flowers	Fruits	Grains	Plants	Plants for planting	Seeds	Trees and shrubs	Tubers	vegetables	Wood	Wood packaging material
Inspection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
No symptoms of quarantine organisms			✓	✓	✓	✓	✓	✓				
Grown in area or country free from quarantine organisms		✓	✓	✓	✓	✓	✓		✓	✓	✓	
Free from bark											✓	✓
Squared to remove rounded surface											✓	
Heat treatment (hot air or hot water)						✓	✓				✓	✓
Fumigation						✓	✓				✓	✓
Kiln drying to <20% moisture											✓	
Chemical pressure impregnation											✓	
Fungicide treatment			✓									
Cold treatment			✓									
Pesticide pre-harvest treatment					✓							
Acid extraction							✓					
Appropriate treatment	✓	✓				✓	✓	✓				
Monthly or 2-monthly field inspections	✓				✓	✓						
Random sampling	✓								✓			
Laboratory culture and/or testing						✓	✓		✓			
Produced in insect proof greenhouse or isolated structure						✓						
Packed at registered facilities			✓									
Freedom from pests in production cycle			✓			✓						
Soil free from quarantine pests			✓			✓						
Free from flowers, fruit and plant debris								✓				
Grown in plant nursery								✓				
Less than 1 preceding seed harvest before crop							✓					
Natural seed resistance to pests							✓					
Potted on shelves >50cm from ground	✓											
Roots washed, planted in new medium	✓											

Compiled from Council Directive 2000/29/EC as amended.⁴⁷

⁴⁷ Consolidated version of EU phytosanitary legislation available on <http://eur-lex.europa.eu>

b) **ISPM-15 on solid wood packaging materials.** The EU has adopted the IPPC standard ISPM-15 which requires the use of MB or heat for solid wood packaging materials (SWPM) and wooden pallets. More than 1 800 heat treatment facilities are authorised to carry out alternative ISPM-15 treatments in EU countries.⁴⁸ In addition, pallets and dunnage made from non-wood materials, such as plastic and cardboard pallets, are permitted as not-in-kind alternatives.

9. Emission reduction practices in the EU

The following examples illustrate activities undertaken to reduce the emissions of MB from QPS applications:

- **EU level:** An EU workshop on QPS in 2006 promoted information about recovery equipment reported by TEAP and the Desclean system available in Belgium⁴⁹. The recently revised EU Regulation on ODS requires that, from 1 January 2010, until the phase-out date of 18 March 2010, MB may only be used for QPS subject to the condition that at least 80% of MB released from the consignment is recovered, if economically and technically feasible (Article 12(1)).
- **Belgium:** in 2007 adopted a requirement to recover at least 80% of methyl bromide present in the container after QPS fumigations. The national Committee on pesticides approved several recovery systems that could be used for this purpose.⁵⁰
- **The Netherlands:** The environmental inspection service, VROM, detected that a number of shipping containers arriving in Dutch ports contained toxic levels of MB when they were opened, and this was found to pose a significant risk to human health and the environment⁵¹. About 800 000 of the 4 million shipping containers arriving in Rotterdam contained MB, and one-quarter of these contained gas levels that were harmful to port employees. In 2004 there were fatal injuries to customs officers due to MB gas⁵². Only a small percentage of these shipping containers carried the required documents or warnings, and about 80% of the fumigated containers appeared to have been fumigated unnecessarily. Following this investigation, the Netherlands introduced a requirement for the MB (and other fumigants) to be recovered from fumigated containers before they are opened.

⁴⁸ EC (2005) Reductions in the use of MB as a result of the implementation of heat treatment technology in the EU. Letter from the European Commission DG Environment to FEFPEB and CEI-Bois, 12 May 2005, Brussels.

⁴⁹ EC (2006) Workshop on QPS, see footnote above.

⁵⁰ Fyto web (2007) Recuperation du Bromure de Methylene, Brussels, Belgium. <http://www.fytoweb.be/indexFr.asp>

⁵¹ VROM Inspectie (2004) Gas Free III. Enforcement of Regulations on gas-free cargoes in 2002 and 2003, Article code 4216. VROM Inspectie, the Netherlands.

⁵¹ T. Knol *et al.* (2005) The release of pesticides from container goods. RIVM Report 609021033/2005, the Netherlands.

⁵¹ T. Knol *et al.* (2005) Application of pesticides to containers: Risks to personnel and consumers. RIVM rapport 609021035/2005. The report also noted that some shipping containers contained bedding materials which continued to release MB after being unloaded, thereby putting at risk children and others who sleep on the mattresses. Other tests showed that medicines such as anaesthetic material had been denatured by MB, leading to concerns that some medicines could be rendered ineffective.

⁵² EC (2006) Workshop on quarantine and pre-shipment uses of methyl bromide, 6 March 2006, Brussels, section 7(c).

Annex 1: Template used for the development of the QPS strategy document

Topics to be covered in QPS strategy document
1. Summary, including table of activities leading to reductions in QPS
2. Introduction and background
3. Trends in MB consumption and uses for QPS
4. Montreal Protocol requirements and Decisions relating to QPS, and implementation by Party
5. Developments in national and regional legislation relating to MB for QPS – legislation on quarantine, pesticides, ozone depleting substances, health and safety, other restrictions on MB
6. Economic measures affecting the use of MB for QPS, e.g. ODS taxes, pesticide taxes, subsidies
7. Other activities that reduce the use of MB for QPS, e.g. research on alternatives, conferences and workshops, information dissemination, activities on specific areas such as ISPM-15, voluntary activities by companies and supermarkets and trade associations
8. Existing alternatives for QPS, alternatives authorised to date, alternatives available
9. Emission reduction practices, recovery of MB after fumigations
10. Further action steps to reduce and phaseout MB for QPS
Annex: Blank copy of logbook forms used for recording each MB-QPS fumigation
Annex: Copy of form used for annual reports on progress in evaluating and using QPS alternatives
Annex: Table of specific MB uses and existing alternatives
Annex: IPPC guidelines and Recommendation on the Replacement or Reduction of the Use of MB

Annex 2: Logbook used by EU countries for annual reports on the quantities and uses of MB for QPS

The form below is used in the EU for annual reports on the quantities of MB authorised for QPS and the purposes for which MB was used, under Regulation (EC) 2037/2000 on substances that deplete the ozone layer, Article 4(2)(iii). The logbook below was used for recording each MB fumigation.

Please carefully read the instructions at the bottom of the logbook table.

Add more rows if needed.

Indication of authorising authority is mandatory, but indication of demanding authority is voluntary.

Date and purpose of the treatment ...											After fumigation, the consignments were ...	Authorising authority in EU Member State	Demanding authority in country of destination		
Date or period of treatment	Number of treatments;	Name and location of fumigation company;	Location of fumigation	Fumigation in ...	Volume of space treated	Identifier of Commodity treated	Quarantine Pest / Disease target (indicate as precise as possible)	Total metric kg of MB used for this commodity – treatment	Total metric kg of MB recaptured (if recapture techniques available)	Shipped within EU to these Member States ...	Exported out of the EU to these countries ...	Placed on the local market in your territory (Y/N)	Name of Authority	Location of Authority	Name / Location
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q

The following explanations shall help to fill in the logbook table above **correctly**:

☒" indicates that information in this column was mandatory under Regulation (EC) No 2037/2000.

Column A: Date or period of treatment

Please indicate the date (e.g. 23/07/2005 for 23 July 2005) or period (e.g. 23-28 July 2005) when the treatment(s) has (have) taken place.

Column B: Number of treatments

If you report on several treatments on the same commodity within the specified period, please indicate the number of individual treatments within this period.

Column C: Name and Location of fumigation company (*Voluntary information*)

Please indicate the name and the location of the office of the fumigation company.

Column D: Location of fumigation (*Voluntary information*)

Please indicate the type of location where the fumigation took place. Only write the corresponding Identifying letter into this column:

P	Port area
A	Airport
O	Fumigation place within the country other than Ports and airports (please specify)

Column E: Fumigation in ... (*Voluntary information*)

Please indicate the type of place where the fumigation took place. Only write the corresponding Identifying letter into this column:

T	Under tarpaulin
S	On board a ship
P	In an aircraft
C	In a shipping container
F	In a fumigation facility
O	Other (please specify)

Column F: Volume of space treated (*Voluntary information*)

Please indicate the volume of the treated space according to the following groups. Not the volume of the commodity is relevant here, but the volume of the fumigation facility in which the commodity is treated. Only write the corresponding identifying letter into this column:

S	Small: 0 – 49 m ³
M	Medium: 50 – 99 m ³
L	Large: 100 – 499 m ³
XL	Extra-large: 500 – 999 m ³

XXL	Extra-extra large: 1000 m ³ and larger
------------	---

Column G: Identifier of Commodity treated

Select the identifier of only one of the following target categories and put this letter into the column “Identifier of Commodity treated”:

A	Bulbs, corms, tubers and rhizomes
B	Cut flowers and branches
C	Fresh fruit and fresh vegetables
D	Grain and cereals for consumption
E	Dried foodstuffs
F	Nursery stock
G	Seeds and seedlings for planting
H	Wooden packaging materials, pallets, dunnage, other packaging
I	Processed wood (furnitures etc.)
K	Whole logs with bark
L	Whole logs without bark
M	Hay, stray, dried animal fodder
N	Cotton and fibre
O	Equipment
P	Personal effects
Q	Other (please specify)

Igrox other uses: Manhole covers, chemicals, yacht, chemicals, cricket bats, slate, detergent, healthcare products, books, glassware, construction materials, cable, scaffolding, steel plates, claywear, plastic, paper, valves, pvc compound, insulation, metal. [Note that the Biocides Directive does not permit the use of MB for biocidal applications after 1 September 2006]

Column H: Pest to be treated

Please indicate the pest as precisely as possible, preferably with its scientific name. This information is legally required to justify any Quarantine treatment. It will allow the Commission to separate the Quarantine-treatments from the Preshipment-treatments. Without a specific pest name, the treatment will be assumed to be against a non-quarantine pest.

Column I: Total kg of MB used for this commodity / treatment

Please indicate the total amount of methyl bromide in metric kg that was used for this commodity / treatment.

Column K: Total kg of MB recaptured (if recapture techniques available) (Voluntary information)

Please indicate the amount of methyl bromide (metric kg) that was recaptured if a recapture technology is installed.

Column L: Shipped within EU to these Member States

Please indicate those Member States within the EU (not third countries) to which the consignments treated with MB have been shipped.

Column M: Exported out of the EU to these Countries

Please indicate those third countries (not Member States of the EU!) to which the consignments treated with MB have been exported.

Please note: Transport of goods between Member States of the EU is not considered to be export, but shipment. Only transport of goods to countries outside the EU is considered export.

Column O and P: Authorising Authority

Please indicate the name and location (city) where the agency that authorised the particular treatment is located.

Note that the authorising agency must be located within the EU.

According to the Montreal Protocol, “authorised” refers to specific instructions only provided by a national plant, animal, environmental protection of health authority. Any other authority is not considered to be entitled to give authorisation to QPS treatments with Methyl bromide.

Column Q: Demanding Authority (*Voluntary information*)

You may wish to provide the name and location (country) of the authority that has demanded this treatment. Note that the demanding authority is usually located in the country of destination, i.e. outside the EU.

Annex 3: Forms used by EU countries for annual reports on progress in QPS alternatives

The forms below are used in the EU for annual reports on the progress in evaluating and using alternatives for QPS under Regulation (EC) 2037/2000 on substances that deplete the ozone layer Article 4(2)(iii) (now: Article 26(1)(a) Regulation (EC) No 1005/2009).

Annex 3A: Form for reporting on progress in using alternatives for QPS

You may wish to attach supplementary information where appropriate, but summarise the key parts of the supplementary information into the relevant part(s) of the Form. Please indicate a future implementation date for an action or event that has yet to be implemented. Where legislation or a programme is mentioned, please state national code for the legislation. List the alternatives to methyl bromide being used for QPS in the reporting calendar year, e.g. 2008.

No.	Name of Alternative	Commodity	Pest target	Disease target	Date when treatment with this alternative commenced	Kg per year of methyl bromide replaced by the alternative (estimates)	Comments: duration of treatments, estimated cost of facility, estimated cost per treatment, estimated amount of fumigant used etc.
1							
2							
3							
4							
5							
6							

QPS uses of methyl bromide for which you have no alternatives yet:

Commodity	Pest target	Disease target	Expected date of research	Comments

Annex 3B: Form for reporting on progress in evaluating specific alternatives for QPS

<p>Please complete the following information for evaluating each alternative. In case you already reported on evaluation of one alternative in a previous year, please refer to that report, but add any new information that is relevant to support ongoing evaluation work.</p> <p>A list of alternatives is available from the MBTOC (2002) report (shown in the Form).</p> <p>You may wish to attach supplementary information where appropriate, but summarise the key parts of the supplementary information into the relevant part(s) of the Form. Please indicate a future implementation date for an action or event that has yet to be implemented.</p>	
Name of alternative:	Date research commenced:
Name of agency undertaking the research:	Date research will finish:
	Expected date for commercialisation of alternative:
Title of Project:	Commodity:
	Target pest or disease:
Name and address of key researcher	
Email address of key researcher:	
Progress to date e.g. number of tests, mortality results, effect on quality, semi-commercial trials	
Reports (author, year, title, citation reference):	
Additional comments:	

Annex 4: IPPC Recommendation on Replacement or Reduction of the Use of MB

In 2008 the International Plant Protection Convention (IPPC), a body of the UN Food and Agriculture Organisation (FAO) which is responsible for phytosanitary (quarantine) issues, adopted a Recommendation on Replacement or Reduction of the Use of MB as a Phytosanitary Measure⁵³. It notes that, to reduce the risk of introduction of some quarantine pests, the need for MB remains until a range of equivalent alternatives has been developed. *Inter alia*, it encourages Parties ‘to put in place a strategy that will help them to reduce the use of MB for phytosanitary measures and/or reduce emissions of MB’. The strategy may include the following areas for action: replacing MB use, reducing use, physically reducing emissions, accurately recording MB use (p.4-5). It also includes guidelines for appropriate use of MB as a phytosanitary measure (p.6-7), reproduced in Box 1 below.

In April 2009, the IPPC’s Commission on Phytosanitary Measures adopted a revised version of ISPM No 15⁵⁴ on wood packaging materials, which recognises that MB depletes the ozone layer (on p.5 of Appendix 4) and encouraged national plant protection organisations (NPPOs) to promote the use of approved alternatives: ‘Use of methyl bromide should be undertaken taking into account the CPM ‘Recommendation Replacement or reduction of the use of methyl bromide as a phytosanitary measure’ (2008). NPPOs are encouraged to promote the use of alternative treatments approved in this standard’ (p.11 of Appendix 4 of CPM-4 report).

Box 1: IPPC Guidelines for Appropriate Use of Methyl Bromide as a Phytosanitary Measure (2008)

The IPPC has issued the following guidelines for National Plant Protection Organisations (NPPOs), the national authorities responsible for quarantine in Section 5 of the IPPC Recommendation on methyl bromide:

‘NPPOs are encouraged to be involved in the coordination of the following actions:

1. Review and consider how to change phytosanitary policies (e.g. phytosanitary import requirements) to replace and/or reduce methyl bromide where it is required and where an equivalent, technically feasible, practical and economically viable alternative exists. This may also require review and revision of bilateral agreements between countries.
2. Ensure that methyl bromide fumigation is used only for quarantine pests and that it is authorized or performed by the NPPO, including fumigation as emergency action for pests not previously assessed (as described in ISPM No. 20: *Guidelines for a phytosanitary import regulatory system*).
3. Provide guidance to those responsible for methyl bromide fumigations for quarantine purposes on the importance of pursuing feasible alternative phytosanitary measures.
4. Develop and utilize phytosanitary measures that are equivalent, viable and feasible alternatives to methyl bromide.
5. Communicate to other NPPOs where there are viable alternatives to methyl bromide use.
6. Submit phytosanitary treatments that are effective, efficacious, documented, feasible and applicable alternatives to the use of methyl bromide to the IPPC Secretariat using the guidelines in ISPM No. 28 (*Phytosanitary treatments for regulated pests*).

⁵³ IPPC (2008) IPPC Recommendation on Replacement or Reduction of the Use of Methyl Bromide as a Phytosanitary Measure. Recommendation for the Implementation of the IPPC.

⁵⁴ IPPC (2009) Revision of ISPM No. 15 Regulation of wood packaging material in international trade. In: Appendix 4 of report of the 4th Session of the Commission on Phytosanitary Measures, IPPC, Rome.

7. Give highest priority to the development of alternative treatments for those commodities for which methyl bromide usage is high.
8. Liaise with research groups and funding bodies to develop alternative treatments as appropriate.
9. Coordinate with the National Ozone Unit, as appropriate, to facilitate the annual collection and reporting of methyl bromide usage data.
10. Post or link details of NPPO-approved alternatives for methyl bromide treatment on the International Phytosanitary Portal (<https://www.ippc.int>) for exchange of information.
11. Cooperate with the National Ozone Unit to implement a strategy to replace and reduce methyl bromide usage.
12. Exchange information on alternatives to methyl bromide usage between the NPPO and the National Ozone Unit.
13. 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).
14. 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.⁷

Source: IPPC (2008) Recommendation on Replacement or Reduction of the Use of Methyl Bromide as a Phytosanitary Measure. Recommendation for the Implementation of the International Plant Protection Convention, FAO, Rome. Section 5.