

**TECHNOLOGY AND ECONOMIC ASSESSMENT PANEL  
ADDENDUM (OCTOBER 2010)**

**RESPONSES TO QUESTIONS FROM AUSTRALIA ON QPS USES OF METHYL  
BROMIDE  
ON THE QPSTF FINAL REPORT AND THE TEAP PROGRESS REPORT  
OF MAY 2010**

**Prepared by**

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## 1. INTRODUCTION

In response to tasks set out in Decision XX/6 and XXI/10, TEAP's QPS Task Force (QPSTF) and MBTOC respectively, prepared two comprehensive reports. Summaries of these reports were presented during the 21<sup>st</sup> MOP in Port Ghalib, Egypt (November 2009) and the 30<sup>th</sup> OEWG in Geneva, Switzerland (June 2010).

Paragraph 153 of the Report of the 30<sup>th</sup> OEWG meeting states:

*“In response to the presentation by TEAP of its 2010 Report to the Parties on QPS<sup>1</sup>, one representative acknowledged the need to investigate the use of methyl bromide for QPS as that chemical was instrumental in protecting biodiversity and facilitating trade and other interests<sup>2</sup>. He had several questions on the report that would require detailed responses and suggested that those questions be put to the Panel in writing. Another representative agreed with that proposal, but suggested that in the interests of transparency all questions and answers should be made available to all Parties. The Panel agreed to accept questions in writing and to respond to all Parties”.*

TEAP thanks the government of Australia for providing questions that offered TEAP the opportunity to provide clarification on its last two reports related to the QPS uses of methyl bromide. The questions relate to assumptions, data and methodologies employed in the preparation of the QPSTF Report of October 2009, and to issues arising from consideration of QPS issues in the TEAP Progress Report of 2009.

TEAP/ MBTOC (QPS sub-committee) discussed answers to these questions during the recent MBTOC meeting held in San Jose, California. Responses to these questions are shown below.

## 2. BACKGROUND

### Australia

MBTOC's reliance upon estimations made of methyl bromide use in the TEAP Quarantine and Pre-Shipment Taskforce Final Report ('the 2009 QPSTF report') of October 2009, and the report's reference to the risk these emissions pose, indicate a need for:

- a sound scientific understanding of the risk of such use, and subsequent emissions, to the ozone layer; and
- a better understanding of the uncertainties in the data reported by the QPS Taskforce.

### TEAP:

The QPS Task Force Report<sup>3</sup> did not discuss in any detail emissions of methyl bromide

<sup>1</sup> TEAP. 2010. QPS Report in response to Decision XXI/10. TEAP, Volume 2, May 2010: pp 89-157.

<sup>2</sup> UNEP. 2010. Report of the Thirtieth Meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer. Geneva, 15-18 June 2010. Paragraph 153. UNEP/OzL.Pro.WG.1/30/7.

<sup>3</sup> TEAP. 2009. Quarantine and Pre-Shipment Task Force – Final Report. October 2009. UNEP. 332pp.

used for QPS and damage to the ozone layer. This topic was not included in the Task Force's report because it was not requested in Decision XX/6 which was used as the basis for the Task Force's work. The Task Force's report stated that "...on average, about 80% of the methyl bromide applied in QPS uses is estimated to be emitted (see Chapter 8) and thus presents a risk to the ozone layer". This statement is consistent with TEAP/MBTOC Assessment Reports (1998, 2002, 2006) and the Scientific Assessment Reports that have found that anthropogenic methyl bromide emissions contribute to stratospheric ozone depletion.

Australia may have had in mind the slide presentation by Dr Steve Montzka from the Scientific Assessment Panel. He presented information on emissions of QPS-MB and their impact on the ozone layer in the QPS Workshop held by the Parties on 3 November 2009 in Port Ghalib, Egypt. In his presentation, Dr Montzka stated that the "*Scientific Assessment report scenarios had calculated that the integrated total chlorine and bromine in the atmosphere from 2007 to 2050 (equivalent effective stratospheric chlorine loading, EESC) would be reduced by 3.2% if all quarantine and pre-shipment emissions were eliminated by 2015*".

**Australia:**

The information provided in the 2009 QPSTF report draws on references that are dated. This information should only be used if it accurately reflects the present situation or can reliably predict current availability of technically and economically feasible alternatives, regulatory drivers and market penetration rate of QPS alternatives e.g. section 8.3.1 refers to MBTOC 1995, 1998, 2002 and TEAP 1999 and 2006. Any use of this data as a surrogate for actual data should provide an understanding of their precision and accuracy. The minimum requirement is that they should specify the associated errors, including potential error range, in the use of this information.

**TEAP:**

The QPS Task Force used the latest available and most comprehensive data reported by the Parties to show trends in methyl bromide used for QPS. Trends in current use were compared with earlier reports from MBTOC reports cited above by Australia. TEAP did not use these data in a predictive manner, but rather to reflect current trends in relation to past consumption and use. Further comments on the sources of data and how they were used in the report are provided in the response to Question 1 (below in the section on Consumption). MBTOC and TEAP reiterate that it is important that all Parties report data on time and promptly respond to questions regarding data consistency and quality.

**Australia:**

In the TEAP April 2010 report (the '2010 TEAP report'), MBTOC has adopted a working definition of an alternative to methyl bromide for QPS which underpins the analysis in the report. This definition, as well as other definitions used in the report (i.e. 'market penetration'), would benefit from further discussion by Parties prior to detailed consideration of the other findings in the TEAP April 2010 report.

**TEAP:**

MBTOC adopted the following working definition of an alternative to methyl bromide for QPS:

*“An officially-required treatment that has been authorised by, a national plant, animal or environmental protection or health authority which achieves an appropriate level of phytosanitary protection”.*

This was developed as a working definition for the purpose of addressing the request by the Parties. TEAP welcomes discussion by the Parties on the suitability of this definition and welcomes submission of alternative definitions for consideration by MBTOC and TEAP.

‘Market penetration’ has been used in different contexts many times by the Parties in the past. Previous Decisions by the Parties that have used the concept of market penetration include VIII/12, Ex1/4 and its Annex 1, XVII/12, XX/8 and an Annex to MOP16 within different contexts that include MDIs and methyl bromide alternatives. This term appears to be sufficiently well understood by the Parties in multiple contexts, which is the main reason that it was considered useful by TEAP for the latest report on QPS. In using this term, TEAP did not intend to preclude further discussions by Parties on ‘market penetration’ in the context of QPS.

**Australia:**

The 2010 TEAP report also relies on working definitions set out in the draft methodology, and presents conclusions for alternatives based on a methodology not yet agreed by Parties. It also draws on conclusions, including estimates of methyl bromide used, made in the 2009 QPSTF report. As indicated above, these estimates are given without an understanding of their precision and accuracy.

**TEAP:**

The 2010 TEAP Report provided working definitions in order to provide clarity to the terms and concepts discussed in the report. The TEAP is very willing to accept any guidance provided by the Parties on these terms and concepts.

TEAP regards the work on the methodology as being very much a “*work in progress*”. This was highlighted by the final statement in the QPS section of the TEAP 2010 Report: “*This chapter has therefore highlighted in the methodology description a range of activities that would be important for data accumulation, analysis and reporting. TEAP would therefore be pleased to receive any comments from the Parties that may wish to contribute to the further development of this methodology.*”

The QPS Task Force used the latest available and most comprehensive data reported by the Parties. Further comments on the sources of data and how they were used in the report are provided in the response to Question 1 (below under Question 7, in the section on Consumption).

**Australia:**

In the 2010 TEAP report, MBTOC has taken paragraph 3(4) of decision XXI/10 to mean that three methodologies were required. However, other options may exist. For instance,

the following matrix provides an alternative view:

**Assessment matrix based on paragraph 3(4)**

Alternative X					
	Assumptions	Limitations	Objective parameters	Variations between countries	Variations within countries
Technical feasibility					
Economic feasibility					
Potential impact					
How phased in					

**TEAP:**

TEAP was aware that more than three methodologies existed, and Australia shows that combinations of other methodologies are possible. The report by TEAP focused on three of these methodologies, according to the limited time and resources available for analysis of the data and reporting to the Parties. With further guidance from the Parties, TEAP would be willing to examine other aspects of the matrix that the Parties may also consider important.

**Australia:**

MBTOC has stated that *"It was acknowledged that the draft or similar methodologies described in this report might be used in the future by TEAP to provide information on QPS for the consideration of the Parties, if such information were to be requested by the Parties."*

Presupposing TEAP's future use of draft or similar methodologies, as suggested in the report (p 129, section 8.5.1), until such time as methodologies are agreed and can be demonstrably applied in a consistent and reliable manner, may result in difficulties. The report would benefit from revision after Parties more fully discuss the proposed draft methodology and how different elements of the methodology should be addressed (e.g. economic feasibility, impact of the alternative, etc).

**TEAP:**

TEAP respects decisions by Parties to discuss the draft methodology proposed by TEAP, and looks forward to any guidance that may be provided by them to TEAP as a result of these discussions.

**3. CONSUMPTION**

**Australia:**

The report provides various estimates of consumption or use, e.g. Table 3-4 gives the estimated QPS global MB consumption for 2007 by overall category of use, while Table 4-6 gives volumes and percentage of MB used for QPS by category of use.

Clarification of how the figures in Tables 3-4 and 4-6 have been estimated and what the error associated with derivation of the estimates is needed. A query emailed to the Co-chair of the QPSTF on 12 October 2009 has not yet resulted in a response.

**Q 1: Have any of the estimates (of global QPS-MB consumption/use) been able to be verified?**

The potential error associated with these estimates should be stated, as the report bases considerable weight on what is known and therefore what might be achieved (eg with alternatives) or what might eventuate (e.g. trends). Nonetheless, the report still records a disclaimer at page vi, *inter alia* "the Quarantine and Pre-shipment Task Force Co-chairs and members, and the companies and organisations that employ them do not endorse the performance, worker safety, or environmental acceptability of any of the technical options discussed."

**TEAP:**

The disclaimer used in this report is the standard disclaimer used by TEAP in all reports.

**Australia:**

Similarly, when estimating emissions from various commodities fumigated with methyl bromide (Table 7-2, p 91) the Taskforce based its estimates on the information in Table 9.1 of MBTOC (1998). For timber, the assumption is that 88% of the MB will be emitted under standard industrial practice. However, p 96 of the report noted that during a recent New Zealand trial for under-tarp QPS fumigations against the wood pest, *Arhopalus tristis*, the total volume of under-tarpaulin fumigation over four months was approximately 15,000 m<sup>3</sup> with an input of around 780 kg of MB. The report then states that "with an expected 5% leakage and high sorption into timber frequently only 40% of the gas input is available for capture".

If 40% is used as the lower estimate for timber in Table 7-2, then totals and weighted estimates would give a range of 50% to 86% as compared to the stated 71 - 86%. That is, the estimated emitted MB would be 4202 to 7341 tonnes rather than 6057 to 7341 tonnes. If soils were excluded, the range would be 52% to 85% or 3590 to 5932 tonnes.

**TEAP:**

Data used for global consumption/use are official data as submitted to the Ozone Secretariat by the Parties. The data from Parties may be in response to Article 7 of the Montreal Protocol "*Reporting of data*", or other official data such as a response by Parties to Decision XVI/10(4). There were data gaps in the reports by Parties, but the available data were sufficient to obtain a good estimate of overall quantities of methyl bromide used in various categories. A quantity of methyl bromide was not assigned by the Parties to a particular use category, and this was taken into consideration in the reports by TEAP.

With regard to the comment on the percentage of gas potentially available for recapture from timber, MBTOC estimated that up to 88% of the methyl bromide dosage could potentially be available from fumigated logs. It refers to the quantity emitted and therefore not converted to residues that remain in the logs. This figure is derived from data in MBTOC 1994 Assessment. In general, timber constituents react quite weakly

with methyl bromide, so little residues are produced that remain in the logs. At the end of a fumigation some of the residual methyl bromide will be present in the free air space in the fumigation enclosure, while the remainder is held within the logs.

The New Zealand statement quoted of 40% refers to the gas present in the air space after fumigation, compared to the initial dosage of methyl bromide. Typically, some methyl bromide will continue to be released from the timber over a period of days after fumigation during the normal airing process, which increases the emissions overall to more than 40%. A 40% release may be amount of gas available to recapture immediately, but it may not be economical to wait several more days or weeks to capture any later emissions that are additional to the initial 40% and which could be as high as 88%. Furthermore, the recovery rate for any gas is dependent on the sophistication of the recovery equipment, the temperature of the saturated materials, the duration of the recovery period, and other factors.

The loss rate of 5% per day from leakage given in the New Zealand study is typical from a well sealed rigid storage. Losses can be much higher in outdoor sheeted stacks which are often used in timber fumigations. Despite this, the figure quoted of 88% provides a reasonable estimate of quantity emitted in practice from sheeted stacks containing timber or logs.

While it is reasonable to have a range of possible emissions from log fumigations to represent the limits in practice, there were insufficient data available to QPSTF to make a well based estimate of this range and, hence, a single point estimate was used.

Assuming that recapture from soil fumigation is not technically and commercially feasible at this time, the estimated total methyl bromide available for recapture using data from 2007 of QPS commodity fumigations was estimated by the TEAP Task Force to be 5,445 – 5,932 tonnes. This is about 67% of the total estimated 2007 annual QPS consumption of 8,486 tonnes and a mean of 82% of QPS methyl bromide applied to commodities<sup>4</sup>.

## 4. INFORMATION GAPS

### Australia:

In relation to Table 3-4, section 3.3.4, p 29, the Taskforce report indicates that the figures were "Based on data supplied by the Parties relating to QPS consumption for individual uses, with QPSTF input" so that "it is possible to give an approximate breakdown of QPS consumption into various overall categories of use".

**Q 2: Could the Taskforce explain what this QPSTF input was and, if it is an approximate breakdown, what errors might be incurred in their approximation?**

An understanding of the potential variation in these figures might explain the "Unidentified or surplus of consumption over quantity used" given in Table 3-4. This volume of 2128 tonnes is 20% of the total volume reported as consumed by Parties (i.e.

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<sup>4</sup> TEAP. 2009. Quarantine and Pre-Shipment Task Force Final Report. UNEP OzSec website.. Table 7-2, page 91.

10,614 tonnes).

**TEAP:**

The QPSTF made an informed judgment on the quantity of methyl bromide used globally, according to data supplied by Parties for a particular QPS use. A discrepancy of about 2000 tonnes in a particular year between total-reported-global-consumption and the sum of individual uses identified by the Parties may have a number of causes. These include inventory changes in one or more Parties as a result of accumulation or draw down of stocks in a particular year, and/or insufficient or incomplete reporting of uses by one or more Parties.

MBTOC was clear in the report on the size of the discrepancy, and looked to the Parties for further information that might reduce it. The discrepancy was not assigned to any particular use in subsequent analyses by MBTOC. Instead, MBTOC used the reported data and uses which accounted for about 80% of the production.

**Australia:**

The Taskforce report uses the terms "good practice" (pp 4, 95, 103), "standard industrial practice" (p 90- 91) and "best practice" (p 3, 91-93).

**Q 3: In estimating use and providing input, did the QPSTF use an estimation of a number of fumigations performed per category, for which they then assumed that best practice was employed?**

What differences would be expected if standard practice were used? What difference would be expected if poor practice were used?

**TEAP:**

MBTOC did not make an estimate of the number of fumigations performed according to "good practice", "standard industrial practice" or "best practice" and this information is not reported by Parties.

'Standard practice' refers to current use which may not be optimal or 'best practice'. 'Best practice' refers to fumigations undertaken using the best technical and operational knowledge available, i.e. being fully trained and audited to an acceptable standard, such as the [Australian Fumigation Accreditation Scheme](#).

AFAS reported that "...methyl bromide usage [was reduced] by 153 tonnes from 2004 to 2008. This saving was achieved largely through avoiding repeated methyl fumigations after failures in the initial treatments were detected". Based on a standard fumigation dosage of 48g of methyl bromide in a shipping container of 33 m<sup>3</sup>, this was equivalent over a 4 year period to avoiding re-fumigation of about 24,000 containers per year in Australia. MBTOC considers this to be a good example of 'best practice' shipping container fumigation applicable to fumigants.

Based on the experience of MBTOC members, sub-optimal fumigation procedures are widespread in many countries using methyl bromide for QPS fumigation of commodities. This results in proportionally greater emissions than if best practice fumigation procedures were to be used. In extreme cases, almost all the added methyl bromide can be rapidly emitted to the atmosphere.

## **Australia:**

Similarly, under section 4.2.1 (p 39) in which use by category was estimated, the QPSTF used "the most recent year for which detailed information was used as an estimate for 2007, without adjustment" where data was not available for 2007.

### **Q 4: How did they apply this data? For instance:**

- a) Was it on a straight volume basis (*see example below*)? If this was the case it might have under-estimated or over-estimated the volume if data was trending up or down, respectively, and also not allowed for seasonal variation in terms of commodity production or growth of particular commodity sectors; or
- b) Was it on a proportional basis (*see example below*) where estimates were based on the percentage use for each use group from the surrogate year, and then applied to the reported 2007 consumption figure?

### Example

*We have complete data for 2005 but not 2007, although we know that in 2007 the total consumption was 800 tonnes.*

*For 2005, there were four use groups, use groups 1, 2, 3 and 4 which used 250, 125, 75, and 50 tonnes of MB giving a total of 500 tonnes used and which, coincidentally, also matched the reported consumption for 2005.*

*If a straight volume basis were used as a surrogate for 2007, then this would not account for 300 tonnes (ie the difference of the total use of 800 tonnes in 2007 and 500 tonnes in 2005).*

*If a proportional basis were used, then from the 2005 data, it would be known that use groups 1, 2, 3 and 4 were 50%, 25%, 15% and 10% of the total by volume (ie, respectively, 250 tonnes of 500 tonnes, 125 tonnes of 500 tonnes, etc).*

*Applying this to the 2007 reported consumption volume of 800 tonnes would give estimates for use groups 1, 2, 3 and 4 of 400 tonnes (50% of 800 tonnes), 200 tonnes (25% of 800 tonnes), 120 tonnes (15% of 800 tonnes), and 80 tonnes (10% of 800 tonnes), respectively.*

*Both approaches have limitations. For instance, if there were new major use group 5 in 2007, say of 300 tonnes, then on a straight volume basis, it would at least be possible to determine that 300 tonnes needed to be accounted for, but remained unknown. On a proportional basis, the major use group (the new use group) would not be accounted for and the 4 known uses of 2005 would be greatly exaggerated.*

### **TEAP:**

For clarification, the QPSTF used the 2007 data reported by Parties where these data were available. In the event that 2007 data were not reported, MBTOC used the latest reported information by a Party that was earlier than 2007. The raw data were used without any adjustment.

TEAP is aware that this may over- or under-estimate the quantity of methyl bromide used for QPS by a particular Party, the extent of which can only be determined by subsequent evaluations of the same data set where there are fewer missing years. In this regard, TEAP supports repeated requests by the Parties and the Ozone Secretariat for all Parties to report QPS consumption on an annual basis.

**Australia:**

The report states under section 4.2.1 (p 39), "Total consumption reported by A5 Parties to the QPSTF in response to Decision XX/6 and consumption identified from other sources as explained, amounted to approximately 5,262 metric tonnes of methyl bromide."

**Q 5: Were the sources mutually exclusive so that there would be no possibility of double-counting, or did the QPSTF have to "merge" the information and make a judgement on what was consumed under what use category?**

The other sources appear to be those mentioned in the first paragraph under section 4.2.1 which states "A general analysis on categories of use by volume was conducted, on the basis of information received from Parties in response to Decision XX/6 supplemented by data from previous surveys of QPS uses (TEAP 2006, UNEP/ROAP 2008)."

**TEAP:**

The QPSTF and MBTOC were aware of the possibility of double counting when multiple data sources were used and took steps to avoid this problem to the best of our ability. Only the most recent information received for each Party for a specific use category was used. This was kept consistent and not aggregated across or within years. The quantities listed under the various categories were the sum of the methyl bromide used for that category of use, according to data supplied by the Parties.

There was a substantial portion of the total reported QPS use that remained unallocated to a particular category of use. A proportion of this unallocated use was categorised as unidentified by the reporting Party, but most of the unidentified consumption resulted from the discrepancy between the reported consumption and sum of individual uses. This quantity of about 20% of total global consumption remained uncategorised in the TEAP report.

**Q 6: Can the risk referred to in the following statement be quantified?**

*"On average, about 80% of the methyl bromide applied in QPS uses is estimated to be emitted and thus presents a risk to the ozone layer"(Chapter 8, QPSTF Report) [This would be particularly relevant if the estimated 80% emissions average is overstated].*

**TEAP:**

According to the most recent information available from the Scientific Assessment Panel, Dr Monzka stated that approximately 84% of the methyl bromide produced for QPS is emitted (Slide 3, QPS Workshop, 3 November 2009, Port Ghalib). The risks to the ozone layer are described in the response to Q 7 below.

**Australia:**

**Q 7: While there might be short-term benefits in chlorine-equivalent**

**concentration in the stratosphere from controlling MB QPS uses, how might the modelling predictions consider the long-term effects, particularly in regard to their significance?**

The QPSTF report states on page 10 "At the time that Article 2H was documented in Copenhagen in 1992, the Parties understood that there were no alternatives to MB for a diverse range of treatments carried out with MB for QPS. The Parties recognised that although QPS consumption was about 10% of global MB consumption at the time, this volume was nevertheless very significant in allowing inter and intra-country trade in commodities treated with MB in the absence of site-specific alternatives. Unless site specific alternatives to MB were available for QPS that were tested and approved in both A 5 and non-A 5 countries, there was a strong likelihood of disruption to international trade if the exemption for QPS were not available."

**TEAP:**

Due to implementation of alternatives for non-QPS uses of methyl bromide and the resultant decline in the consumption of methyl bromide for this purpose, Dr Montzka estimated that in 2007 about half of the methyl bromide fumigation emissions were from QPS treatments.

QPS was estimated to be 2.9% of the total ODP-kt in 2007 and 1% of the EECI in 2007 in the stratosphere. It was further estimated that the benefit to EECI would be 3.2% if QPS uses of methyl bromide were eliminated in 2015, based on consumption remaining constant until that time.

Further information may be found in the Science Panel Assessment Report and in Dr. Montzka's presentation at the workshop.

**Qn 8: Is the reports' claim that "Parties understood that there were no alternatives to MB for a diverse range of treatments carried out with MB for QPS" reflected in a decision or any other documentary record?**

**TEAP:**

The statement is not directly reflected in any decisions or in any contemporary reports of MOPs and OEWGs when control measures were first under discussion for methyl bromide. However, paragraph 55 of the Report of the 7<sup>th</sup> Meeting of the Open-Ended Working Group of the Parties to the Montreal Protocol in 1991, paragraphs 11 and 12 of 8<sup>th</sup> Meeting of the Open-Ended Working Group in 1992 are relevant to discussion that led to the Parties agreement on an exemption for QPS, and the Report of the Workshop on QPS held in Port Ghalib in November 2009<sup>5</sup> are relevant:

Paragraph 55 is:

*55. Many delegations, of both developing and developed countries, considered that methyl bromide was absolutely essential for quarantine fumigation and extremely important for other uses such as soil fumigation and fumigation of grain and fruit in*

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<sup>5</sup> UNEP. 2009. 21<sup>st</sup> Meeting of the Parties, Port Ghalib, Egypt. UNEP/OzL.Pro.21/INF/10.

*storage. Any ban on the chemical would be a serious blow to the international trade in agricultural commodities....”*

Paras 11 and 12 are:

*“11. His note (UNEP/OzL.Pro.4/10) contained some detailed proposals concerning methyl bromide. They were very modest and could be implemented by all. Quarantine fumigation uses would be exempted and it was proposed that, by the year 2000, production and consumption would be reduced by 25 per cent only, a signal that the substance was a dangerous ozone depleting one and was on the way out.*

*“12. He was aware of the fact that some people considered those proposals very inadequate, since alternatives were available for most uses of methyl bromide. He was also aware that others regarded any control of methyl bromide as a threat to international trade. The approach adopted, as in the past, was to respect the feelings of both groups and to convince them by means of further scientific and technical information. After the proposed detailed study had been carried out, he felt sure that the current sceptics would voluntarily propose further controls in a few years' time”.*

Report of the QPS Workshop in Port Ghalib:

*Fifteen years previously, when the first methyl bromide assessment was conducted under the auspices of the Montreal Protocol, there were few alternatives to methyl bromide for quarantine and pre-shipment and many experts believed that nothing could be done. Thanks to the Parties to the Protocol and the pest control industry, however, the world is well on its way to a phase-out that will protect the stratospheric ozone layer.*

## **Australia**

- Q9. If this was the case then, does the same, if not greater caution exists now for some countries as trade expands with respect to certain commodities from new trading partners (cf the situation in 1992)?**

### **TEAP:**

In general, increased trade is likely to bring with it an increased risk of transfer of pests of quarantine concern. However, the pests are specific to particular commodities, and in many cases mitigation measures have been put in place to protect the biosecurity of the importing country. These measures include a diverse range of methyl bromide and non-MB treatments and procedures. Almost all of these phytosanitary treatments have been in place and operational for particular specified trades since the early 1990s.

Consider also that over time, and despite best efforts, many pests are transferred region to region and become so prevalent that further QPS efforts are futile to reduce risk.

The concern expressed by the Parties in 1992 of there being few technically effective alternatives to methyl bromide for all the various QPS purposes has encouraged further effort by Parties to find alternatives since that time. The latest report by TEAP in 2010 showed that 31% to 47% of global consumption was replaceable with currently available technologies for the four largest QPS-MB consumers: sawn timber and wood packaging material (ISPM-15); grains and similar foodstuffs; pre-plant soils use; and logs. These four categories were reported by Parties to consume in 2007 about 60% of the global QPS methyl bromide consumption.

TEAP recognises that there are some commodities that are traded between countries that would pose too much risk if methyl bromide for QPS for this trade were not allowed to occur and that in these cases methyl bromide itself is not a guarantee that pests will not be transferred. In some of these cases, not-in-kind solutions such as elimination of wood pallets may be a more effective and reliable alternative to chemical fumigation.

As part of the methodology in the 2010 report, TEAP proposed obtaining information on the likely time that would be required to negotiate a bilateral trade agreement for an alternative; the impact of tariffs on trade, the domestic infrastructure (e.g. saw mills) and legislation that enhance or reduce the prospects for the implementation of technically and economically feasible alternatives; and the types of alternatives that might be available that meet customer specifications.

**Qn 9: Has the QPSTF attempted to correlate the increase in consumption with the increase of international trade for A5 countries - to non-A5 countries or other A5 countries, or to seek this data from these countries**

**Australia:**

The QPSTF report also notes in Chapter 3, p 24, that "It may be speculated that the reasons for the increases in QPS consumption in A5 countries with corresponding decrease in non-A5 countries results from a combination of the trend towards increased treatment at country of origin prior to shipment, much increased trade from A5 countries that are at risk of infestation by quarantine pests and requiring QPS fumigation, and concurrent adoption of non-methyl bromide alternatives in non-A5 countries."

**TEAP:**

As stated by the QPSTF, this scenario is feasible but remains speculative until such time that the Parties request TEAP to provide further information on this aspect.

**Qn 10: What data would be needed in order to determine if there were such correlations and would it be feasible to obtain the data?**

**TEAP:**

The quantities of methyl bromide used for fumigation of various commodities to particular destinations, before and after a restriction on the use of methyl bromide for QPS had been implemented.

The data would be difficult to obtain and may not be available even for major trading partner/ treatment provider combinations. Several key countries that monitor such information could be requested to provide information, if any report on these questions were to be requested by the Parties.