

United Nations Environment Programme

Montreal Protocol

- MEA to phase out the use of ozone depleting substances (ODS) with specific time deadlines and quantities
- UNEP is an implementing agency, works towards the phase out of ODS, one of which is a fumigant **methyl bromide**, used in soil and in storage of durables
- Phase out of MeBr is scheduled for 2015 for developing countries, 2005 for developed countries

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What is Methyl Bromide?

- Powerful Ozone Depletor
- Used as a fumigant
- Increased UV radiation & skin cancer
- Colourless, Odourless and Deadly
- Emissions through films: 40 - 92% (Highest emissions using cannisters - 95%)
- Residues in soil and water
- Bromides absorbed through skin

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MeBr Uses Controlled under the Protocol

- MB used in soil fumigation
- MB used in fumigation of commodities and structures
- MB used for quarantine and pre-shipment (QPS) are **NOT** controlled under the Protocol
- The Protocol has its definition of QPS following IPPC standards

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Methyl bromide use

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How is MB use monitored?

- Countries are required to submit consumption data on methyl bromide under Article 7 of the Montreal Protocol each year
- Each country identifies a **baseline** (calculated based on average consumption from 1995-1998)
- The baseline is used as a benchmark by which a party reduces its MB use

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“Phase-out of the ozone-depleting chemical, methyl bromide, may lead to increased use and numbers of other pesticides which may lead to additional health risks”

Methyl bromide phase out is based on the assumption that there are alternatives to replace it. UNEP encourages developing countries to use these alternatives, one of which is IPM.

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UNEP Compliance Assistance Programme (CAP)

- Regional programme for the implementation of the Montreal Protocol
- Support for NOU (backstopping, training)
- Political awareness raising & support through the RD
- Direct assistance to countries
 - Policy development & enforcement
 - Technical support (refrigeration, methyl bromide, halons)
 - Awareness, information and communication
 - Regional exchange of experience
 - “South-South” assistance
 - Data reporting
 - Customs training

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UNEP DTIE OzonAction Programme

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UNEP's strategy to phase out MeBr

- Assist developing countries in creating policies and national action plans for methyl bromide phase out
- Raise awareness about the methyl bromide phase out, and its alternatives
- Implement farmer training and education programmes to promote adoption of alternatives
- Disseminate the results of demonstration projects on methyl bromide alternatives in close cooperation with Implementing Agencies, particularly UNIDO

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Case Studies on Alternatives to Methyl Bromide

- *Technologies with low environmental impact*

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Purpose of the Case Studies

- To increase awareness about biological, non-chemical alternatives to methyl bromide that are in commercial use around the world.
- To encourage farmers, extension agencies, researchers, policy-makers and others involved in the methyl bromide phase-out process to explore environmentally sustainable techniques when replacing methyl bromide.

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Focus of the Case Studies

- Economic significance of crop
- Climate
- Target pest
- Use of methyl bromide
- Description of alternative technique
- Comparison of yields and performance
- Comparison of costs
- Acceptability to regulators and consumers
- Applicability to other region and uses
- Sources of further information

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Information Provided for Each Case Study

- Alternatives which are safer for human health and the environment and meet the increasing demand by consumers and retailers for food without pesticides
- Alternatives to methyl bromide for major crops/commodities using it: peppers, tomatoes, melons, strawberries, tobacco, cut flowers, stored and export grains, storage structures for grains and food products and quarantine treatment for fresh fruit

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Examples of Case Studies

- Peppers and eggplant in Israel: solarisation
- Tomatoes in Brazil: substrates in seedtrays
- Tomatoes and cucurbits in Egypt: certified organic methods
- Strawberries in Uruguay: IPM
- Grains exported from Australia: IPM and hermetic storage
- Food warehouses in Hawaii: IPM

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Lessons learned from methyl bromide phase out case studies

- IPM can not only replace methyl bromide but can prevent or manage pest problems in a more environmentally sound and cost-effective manner
- Most of the alternatives described in the case studies are as effective and in some cases more effective than methyl bromide - yields are equal or higher
- Several techniques used as part of an IPM system will effectively replace methyl bromide

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Lessons learned from methyl bromide phase out case studies

- Alternatives usually require an initial investment in training, technical advice and materials or capital equipment but are cost-effective for their users
- Export producers find that the alternatives allow them to be competitive in international markets

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