



Methyl Bromide and the Montreal Protocol

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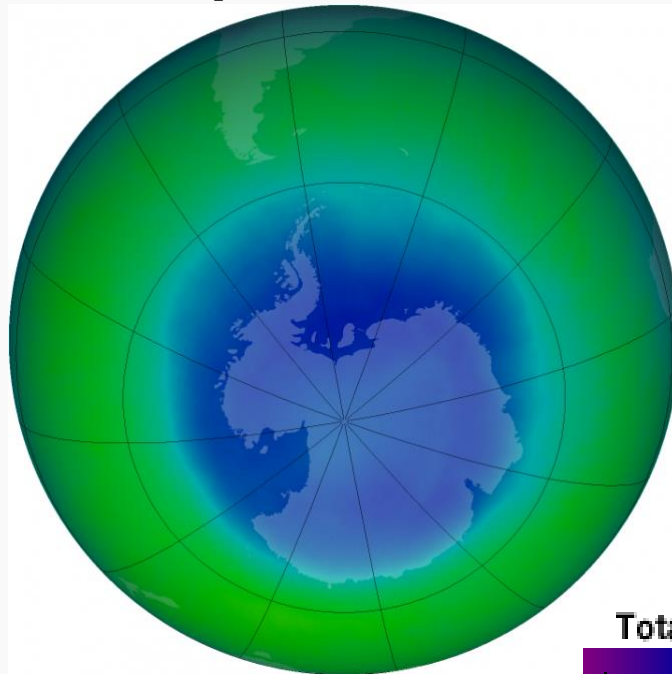
Methyl Bromide Alternatives Outreach Conference

November 4, 2013

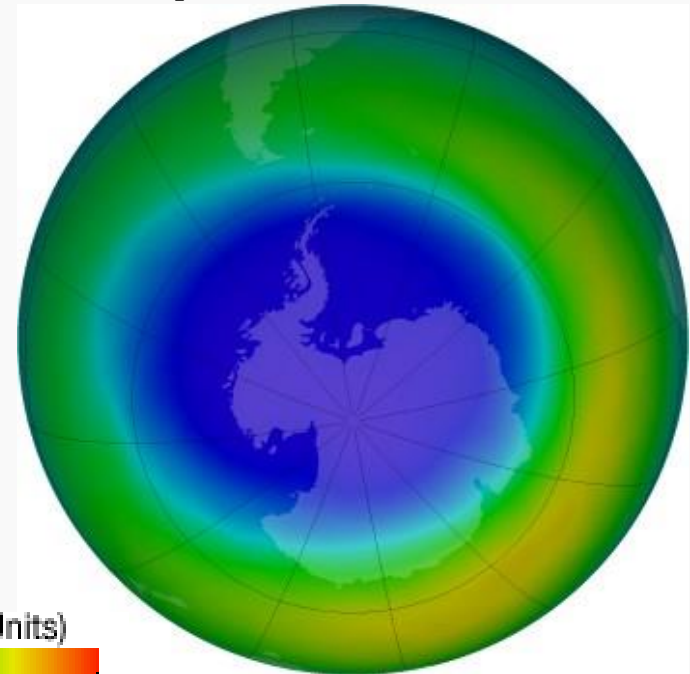
Ozone Layer



Ozone hole over Antarctica in
September 1987



Ozone hole over Antarctica in
September 2013



Figures: NASA

- Ozone layer is Earth's "sunscreen" – protects people, plants and animals from ultraviolet radiation
- Because ozone depleting chemicals persist for long periods in the ozone layer, damage cannot be reversed rapidly – but scientists predict ozone layer recovery by about 2065

Public Health Effects



Skin cancer is the most common U.S. cancer

- Over 3.5 million new skin cancer cases diagnosed annually
- More common than breast, prostate, colon, and lung cancer ***combined***

Melanoma is the 5th most common fatal cancer

- Accounts for 3% of all cancer deaths

Lifetime risk of developing melanoma is increasing

- 1960: 1 in 800 chance
- 1986: 1 in 150 chance
- 2010: 1 in 50 chance

Cataracts is the leading cause of blindness worldwide

Methyl Bromide and the Montreal Protocol



- 1992: Methyl Bromide added to Montreal Protocol
- 1995: Clean Air Act required U.S. phaseout by 2001
- 1997: U.S. and international schedule harmonized to 2005 phaseout with exemptions:

Developed countries (non-A5 countries)

- 1999-2000: 25% reduction from baseline
- 2001-2002: 50% reduction from baseline
- 2003-2004: 70% reduction from baseline
- 2005: 100% phaseout, with limited exemptions

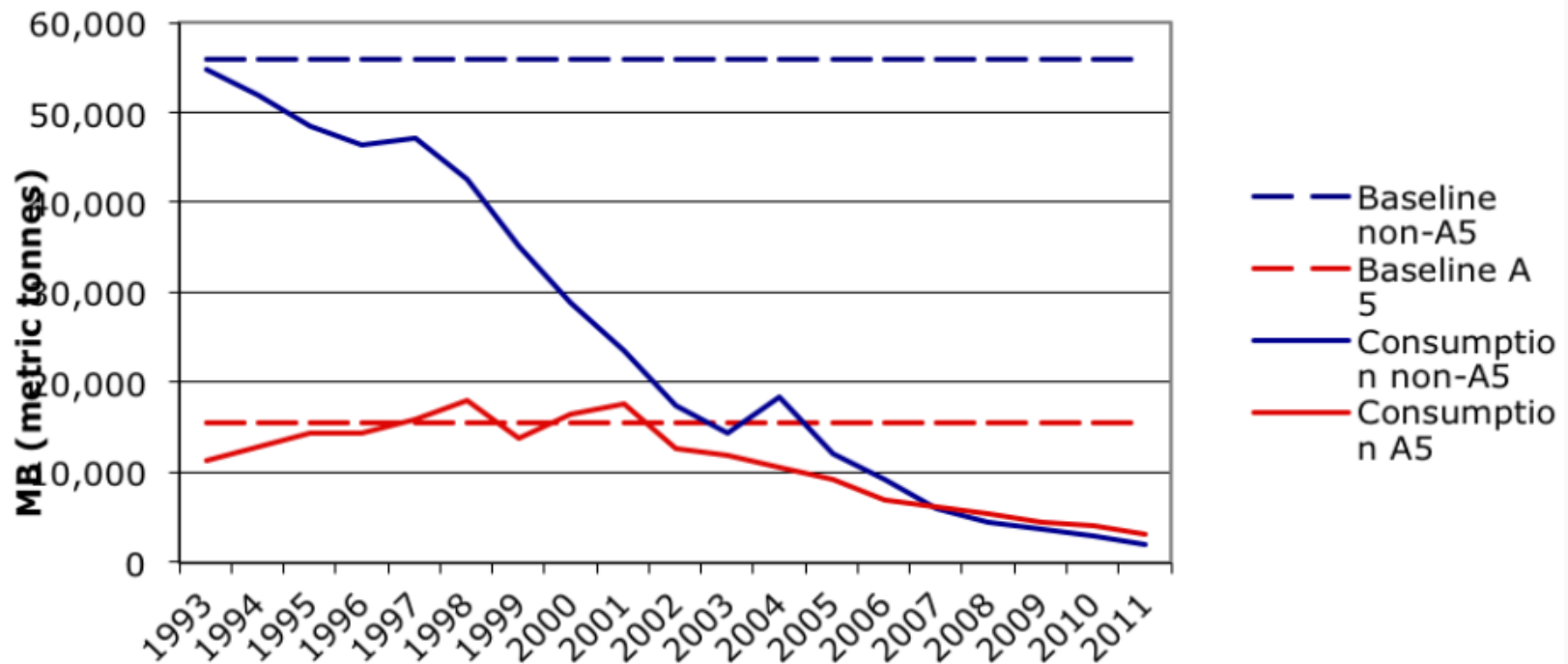
Developing countries (A5 countries)

- 2003-2014: 20% reduction from baseline
- 2015: 100% phaseout, with limited exemptions

Global Context



Methyl Bromide Consumption



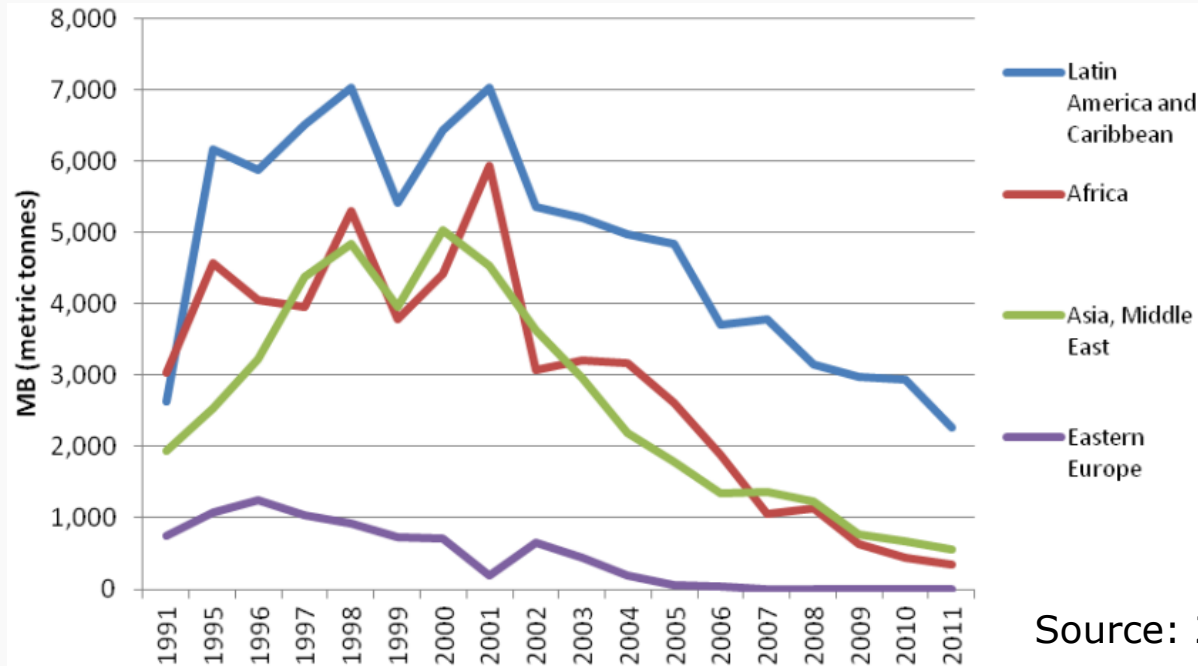
Source: 2013 TEAP Report

(Does not include QPS material)

Global Context



A5 Methyl Bromide Consumption by Region



Source: 2013 TEAP Report

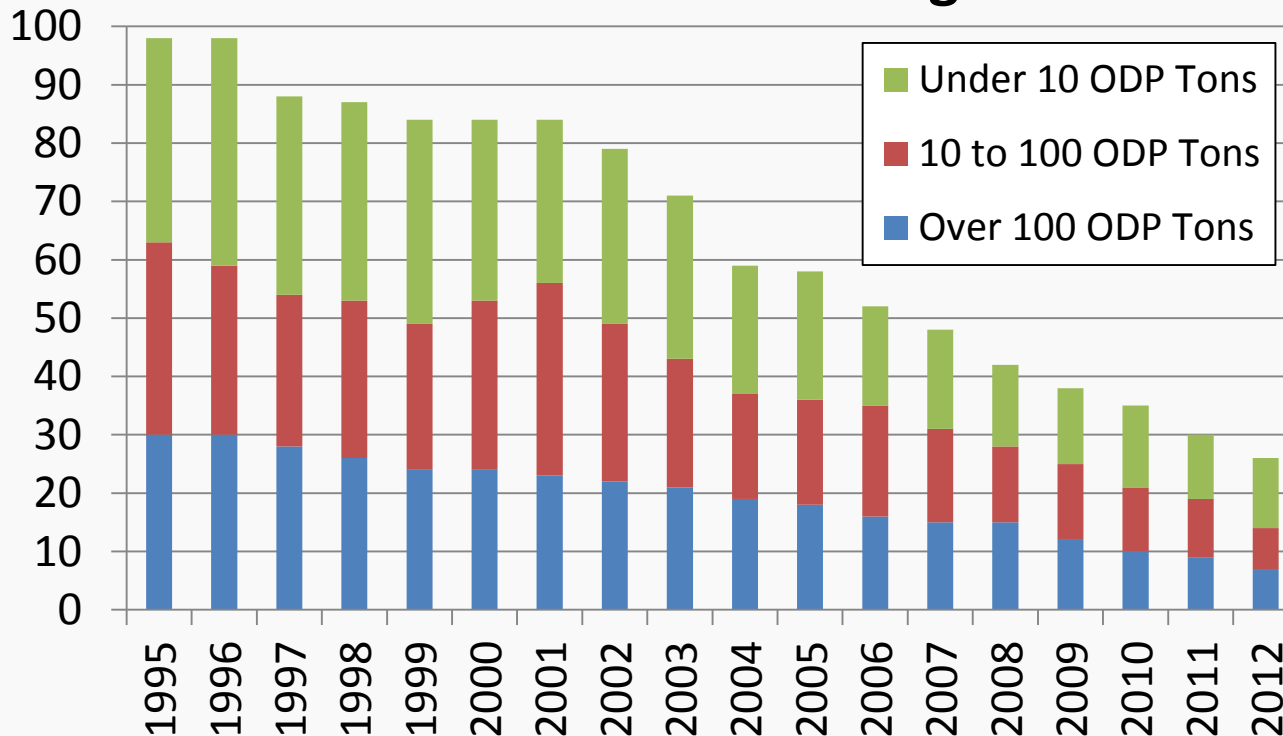
Global Reductions by Region (to 2011):

- Latin America: 65% below baseline
- Asia, Middle East: 86% below baseline
- Africa: 92% below baseline
- Eastern Europe: 100% below baseline

Global Context



Number of Countries Using MeBr



Source: UNEP Data Access Centre

U.S. is one of only 7 countries using more than 100 ODP tons in 2012

Quarantine and Preshipment

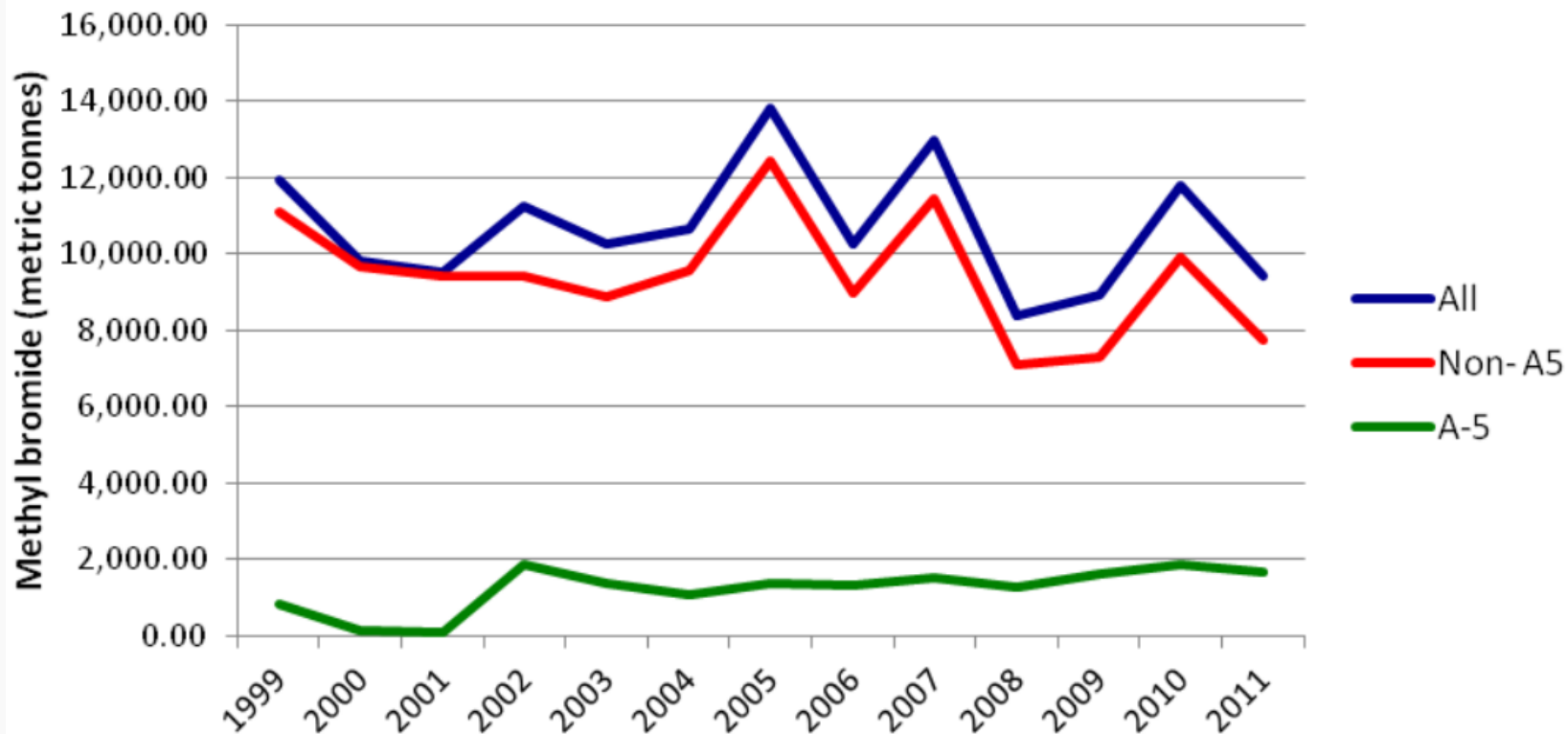


- Exemption established in 2003
- Quarantine
 - Treatments to prevent the introduction, establishment and/or spread of quarantine pests or to ensure their official control
 - Treatments must be either authorized or performed by a governmental authority (e.g. APHIS)
 - Includes interstate and inter-county controls
 - Includes soil treatments for propagative material to meet official quarantine requirements of the importing destination
- Preshipment
 - Applications within 21 days of export out of the United States
 - Treatments must meet the official requirements of either the United States or the importing country

Quarantine and Preshipment



Global QPS Production



Non-A5: United States, Israel, and Japan

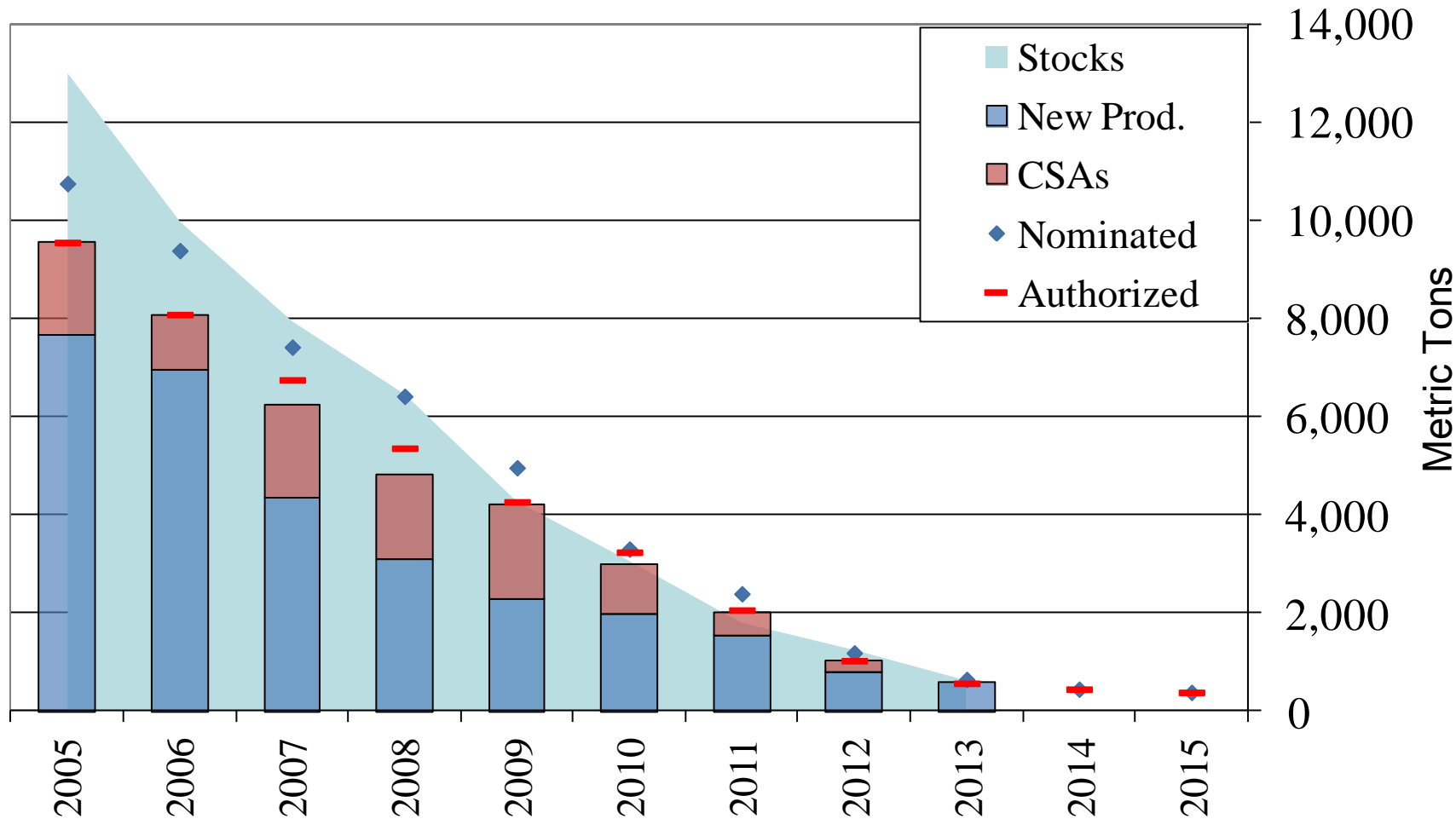
A5: China

Critical Use Exemption



- Exemption established in 2004
- Use must meet the criteria in Decision IX/6:
 - No technically or economically feasible alternatives that are:
 - Acceptable from an environmental and health standpoint
 - Suitable to the crops and circumstances of the nomination
 - And, where a lack of methyl bromide would result in a significant market disruption
- In addition, the Party must show:
 - All technically and economically feasible steps have been taken to minimize the critical use and emissions of methyl bromide
 - Research programs are in place to develop and deploy alternatives, and
 - Methyl bromide is not available in sufficient quantity and quality from existing stocks

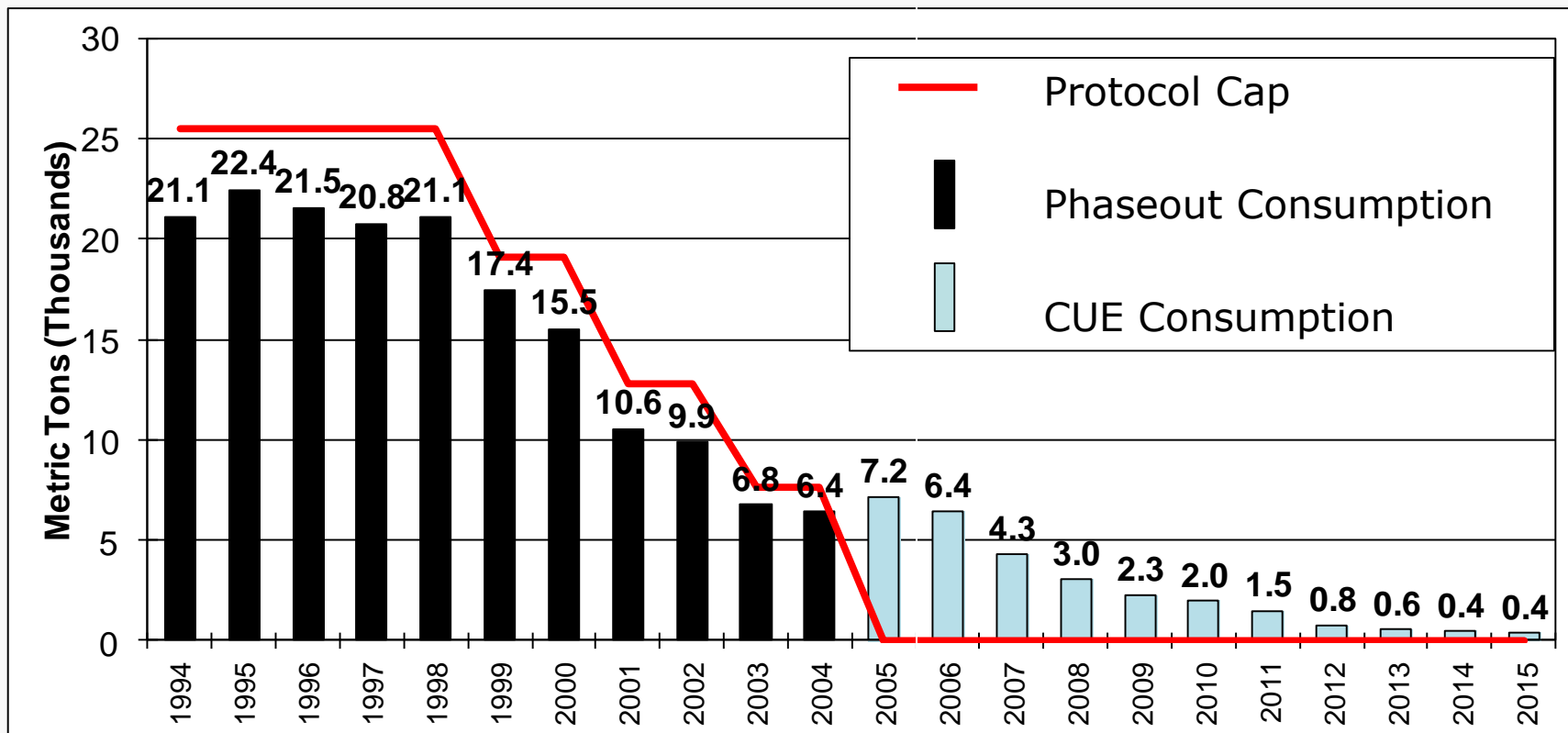
Critical Use Allocation



Critical Use Allocation



Critical Use amounts compared to phaseout



Status of CUEs



- 2013 Control Period
 - EPA allocated 562 MT – the full amount authorized by the Parties
 - EPA ended the system of allocating Critical Stock Allowances
- 2014 and 2015 Control Periods
 - Rules have not yet been proposed
 - Amounts authorized by the Parties:
 - 442 MT for 2014
 - 377 MT for 2015
- 2016 Control Period
 - EPA and USDA currently reviewing applications
 - Nomination due to UNEP January 24, 2014

Additional Information



- EPA websites
 - <http://www.epa.gov/ozone/mbr/>
 - http://www.epa.gov/oppsrrd1/reregistration/methyl_bromide/
- UNEP Data Access Centre
 - http://ozone.unep.org/new_site/en/ozone_data_tools_access.php
- Technology and Economic Assessment Panel
 - 2013 Progress Report:
http://ozone.unep.org/Assessment_Panels/TEAP/Reports/TEAP_Reports/TEAP_Progress_Report_May_2013.pdf
 - 2010 Quadrennial Report:
http://ozone.unep.org/Assessment_Panels/TEAP/Reports/MBTOC/MBTOC-Assesment-Report-2010.pdf
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