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**Reviewing Regulation (EC) No 2037/2000 on substances that deplete the
ozone layer**

"Better regulation building on 20 years of success"

**Summary of the impact assessment accompanying the proposal for a
Regulation of the European Parliament and of the Council on substances
that deplete the ozone layer (recast)**

[COM(2008) 505 final]
[SEC(2008) 2366]

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1. INTRODUCTION

This document provides an executive summary of the impact assessment accompanying the recast of Regulation (EC) No 2037/2000 on substances that deplete the ozone layer (hereinafter referred to as “the Regulation”)¹.

2. BACKGROUND

The stratospheric ozone layer shields life on earth from harmful ultraviolet radiation from the sun. In the early 1980s, scientists observed a significant decrease in the concentration of ozone in the stratosphere over the Antarctic, which became widely known as the “ozone hole”. At its peak – during spring in the late 1990s – the ozone hole was most severe around the poles, although concentrations were significantly reduced in other places as well. Increased UV radiation has an adverse impact on humans (skin cancers and cataracts) and ecosystems.

As early as 1987, governments agreed on the Montreal Protocol on Substances that Deplete the Ozone Layer, thereby starting the phase-out of ozone-depleting substances (ODS) in all signatories following a set timetable. In 2007, as the Parties (including the European Community) celebrated its twentieth anniversary, the Montreal Protocol was widely hailed as one of the most successful of all international environmental agreements. By then, all 191 Parties had achieved a 95% reduction in consumption of ODS compared with the baselines set.² Reductions were highest (99.2%) in industrialised countries and somewhat lower (80%) in developing countries. Reductions were achieved on the basis of agreed consumption and production freezes and subsequent time-bound step-by-step reductions.³

In its latest report, released in 2007, the Scientific Assessment Panel (SAP) established under the Montreal Protocol confirmed that the ozone layer is slowly recovering thanks to the control measures introduced by the Protocol – albeit 10 to 15 years behind the projections in its earlier 2002 report. Average and Arctic ozone levels are expected to recover by 2050 and the Antarctic ozone hole by between 2060 and 2075.

According to UNEP, controls introduced under the Montreal Protocol will avoid millions of fatal skin cancers and tens of millions of non-fatal skin cancers and cataracts worldwide. The US authorities estimate that more than 6.3 million skin cancers will be avoided in the USA alone. Furthermore, the controls introduced by the Montreal Protocol will help to avoid greenhouse gas emissions equivalent to more than 100 billion tonnes of CO₂ between 1990 and 2010. By 2010, GWP-

¹ See SEC(2008) xxx and COM(2008) xxx

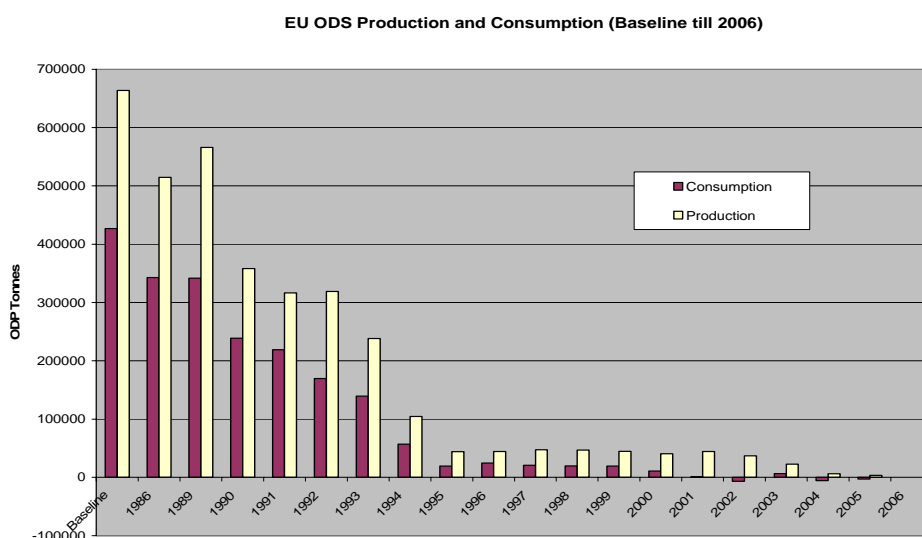
² Article 1 of the Montreal Protocol defines “Consumption” as production plus imports minus exports of controlled substances.

³ Successful reductions in developing countries have been made possible by the Multilateral Fund which to date has channelled about US\$2.4 billion into technology transfer and related capacity-building projects. Timetables for developing countries typically lag a few years behind those of industrialised countries.

weighted ODS emissions will account for less than 5% of global projected CO₂ emissions compared with nearly 50% in 1990.⁴

3. REGULATION (EC) NO 2037/2000 ON SUBSTANCES THAT DEplete THE OZONE LAYER

The Regulation is the European Communities' main instrument for implementing the Montreal Protocol. The closely matching and mutually reinforcing international and EU policy frameworks have an impressive track record, showing an almost complete phase-out of consumption and production of the controlled ODS (see the figure below).



To date, the EC has phased out more than 99% of its baseline consumption and production of ODS. By 2010, the EC will have fully phased out controlled ODS uses, save for approximately 1 200 ODP tonnes per year . This figure of 1 200 tonnes includes an estimated 1 000 tonnes attributable to recycled or reclaimed HCFCs which will be banned from 2015 on, leaving less than 200 ODP tonnes per year defined as consumption under the Montreal Protocol (compared with baseline consumption levels of 400 000 tonnes). In addition, remaining “emissive uses” of ODS covered by the Regulation (but not yet counted as consumption under the Protocol) will add up to an estimated 1 400 ODP tonnes for the period beyond 2010 (assuming that current levels are maintained in the absence of further measures). ODS production in the EC will be down to less than 4 000 ODP tonnes per year by 2010 (compared with baseline production levels of 700 000 tonnes).

4. THE REVIEW PROCESS

This review is included in the 2008 Commission Legislative and Work Programme (CLWP) under the heading “Simplification”. Preparations started at the end of 2006

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These big contributions to climate change are due to the very high global warming potential (GWP) of ozone-depleting substances (some of which are more than 14 000 times more potent than CO₂).

with the launching of an extensive survey of Member States' authorities and other relevant agencies, companies, industries and non-governmental organisations. The survey showed general satisfaction with the effectiveness of the Regulation. The main comments related to the Regulation's complexity and a desire for simplification and clarification.

Based on the above-mentioned input and other expert sources (e.g. latest analyses and recommendations from the Montreal Protocol's Scientific, Technical and Economic Assessment Panels), policy options and associated impact assessments were identified and analysed from January 2008 onwards.

5. ADDRESSING THE KEY PROBLEMS

In its 2007 report, the Montreal Protocol's Scientific Assessment Panel (SAP) warned the Parties that despite the successes, continued vigilance was required to keep to the newly projected timetable for recovery of the ozone layer, also taking account of the remaining uncertainties, notably about the impact of climate change. Key challenges included the need to significantly reduce current levels of exempted use by 2015 (including use of methyl bromide for quarantine and pre-shipment purposes), to make sure that ODS "banked" in products and equipment would not be released into the atmosphere and to avoid the marketing of new ODS (see section 6.3 below). At EU level, additional problems include regulatory and associated administrative complexity, and the need for full compliance with the Montreal Protocol, whilst avoiding the risk of illegal trade and use of ODS. Following SAP recommendations and stakeholders' suggestions for improvements, added to the Commission's own analysis, the following general and specific objectives for addressing the remaining problems were identified.

The general long-term objective pursued by the review remains timely recovery and subsequent protection of the ozone layer to avoid the adverse impacts, notably on human health and ecosystems. The associated short- and medium-term objective, however, is to simplify the regulatory framework, whilst at the same time reducing any unnecessary administrative burden, in line with the Commission's commitment to develop and implement better regulation .

In order to deliver these general objectives, the following specific objectives were identified, notably to address the problems outlined above whilst building on the acknowledged strengths of the Regulation.

- (1) Achieving better and simpler regulation by reducing the administrative burden:
 - (a) clarifying and simplifying the Regulation;
 - (b) streamlining reporting and the associated administrative burden;
 - (c) updating the exemption arrangements and the associated administrative processes.
- (2) Ensuring continued compliance by means of full implementation of the Montreal Protocol as amended in 2007 and stronger enforcement:

- (a) implementing Decision XIX/6 to accelerate the phase-out of HCFCs;
 - (b) ensuring EC compliance and preventing illegal and harmful trade.
- (3) Addressing future challenges by tackling ODS not yet controlled under the Montreal Protocol:
 - (a) ODS contained (or “banked”) in products and equipment;
 - (b) new and short-lived ODS;
 - (c) use of methyl bromide for quarantine and pre-shipment purposes.

6. POLICY OPTIONS AND THEIR IMPACT

A wide range of policy options and associated impact assessments were identified and analysed, based on the above-mentioned input and other expert sources (e.g. latest analyses and recommendations from the Montreal Protocol’s Scientific, Technical and Economic Assessment Panels). Due care was taken to explore the widest possible range of simplification options to improve clarity and therefore, ultimately, implementation of the Regulation whilst reducing any unnecessary administrative burden. With the latter in mind, the review also considered non-regulatory measures, e.g. possible streamlining of ODS reporting and monitoring procedures.

The options of leaving the Regulation unchanged (business as usual) or even of withdrawing it were duly considered but rejected, *inter alia* on the grounds that they would put the EC in non-compliance with the Montreal Protocol and would not allow it to pursue its simplification objective.

The analysis covered the three broad categories of policy measures outlined below.

1. The first important category of policy options which emerged related to the simplification objective, building on the progress made on phasing out ODS to date and the opportunities to remove expired provisions. Key options that were chosen include:
 - removing the provisions and associated procedures relating to essential uses of CFCs, critical uses of methyl bromide and other exemptions for CFCs and HCFCs;
 - simplifying the cap on use of methyl bromide for quarantine and pre-shipment (QPS) purposes whilst lowering the quantitative limit from 607 ODP tonnes to the current level of a maximum of 300 tonnes;
 - streamlining reporting (a recurring request from Member States), even though there was little room for manoeuvre since most, if not all, of the reporting obligations stem from the Protocol rather than the Regulation;
 - ending exemptions which impose significant administrative costs on a small number of players in return for small benefits;

- clarifying definitions and other legal drafting improvements, thereby (together with the previous measures) meeting the demand voiced by many stakeholders for a simpler, more structured legal act.

This package of simplification options is expected to yield cumulative savings in administrative costs estimated at nearly €4 million over the period up to 2020. The associated environmental impact is assumed to be positive (albeit small and difficult to quantify), as the revised Regulation is expected to be easier to implement and enforce, including by SMEs. For the same reason, small net direct economic gains for industry and users of ODS could be expected, notably for SMEs which have less access to specialist knowledge for implementing the Regulation.

2. A second category of options emerged in line with the need to ensure continued compliance with the Montreal Protocol. Preferred options included:

- bringing the phase-out date for production of HCFCs forward from 2025 to 2020 to align the Regulation with the recent Decision XIX/6 to accelerate the phase-out of HCFCs;
- simplifying and tightening up enforcement of the Regulation to prevent illegal trade and use of ODS in the EU, with the aid of more effective provisions on Member States' inspection requirements (i.e. moving from "random" to "risk-based" inspection), measured labelling requirements to avoid illegal trade (also within the EU) and selected measures to step up monitoring of imports and exports of ODS.

These policy options will avoid excessive administrative costs and ensure continued compliance with the Montreal Protocol, notably by preventing illegal trade, thereby also meeting the concerns raised by industry during the survey.

3. To ensure that the remaining challenges can be adequately addressed in future, the focus was on the three following areas:

- (a) Release of "banked" ODS/GHG emissions into the atmosphere – Because the Protocol has been focusing on gradually banning consumption and production of ODS, significant amounts of ODS remain stored or "banked" in products and equipment (e.g. in insulation foams, refrigerants and air-conditioning systems). Considering the high global warming potential (GWP) of these banked ODS, failure to recover and ultimately destroy them also poses significant risks of global warming. In 2010, ODS banks in the EU could add up to approximately 700 000 ODP tonnes (5 billion tonnes of CO_{2eq}), although experts acknowledge a large degree of uncertainty due to the limited measurement data available. Emissions could potentially total around 24 000 ODP tonnes (or 170 million tonnes of CO_{2eq}) per annum over the period 2005-15.⁵ A number of measures to tighten up the provisions on recovery and destruction of ODS contained in products and equipment are proposed for inclusion in the Regulation. They could yield environmental benefits of up to

⁵ Estimates were derived by extrapolating the best available global estimates contained in a 2005 TEAP report, according to which global banks totalled 3.5 million ODP tonnes (20 billion tonnes of CO_{2eq}) in 2002 with projections pointing to 2 million ODP tonnes for 2015 (13.4 billion tonnes of CO_{2eq}).

14 000 ODP tonnes, or 112 million tonnes of CO_{2eq}, over 10 years. In addition, implementation of the EU Waste Framework Directive and of the Waste from Electric and Electronic Equipment (“WEEE”) Directive is being improved to capture ODS/GHG emissions, potentially yielding additional benefits of up to 34 000 ODP tonnes (270 million tonnes of CO_{2eq}). Furthermore, considering the large variability in costs for the various products (ranging from €4.5 for simple destruction to €100 per kg of ODP for recovery and destruction of ODS contained in insulation foams), follow-up action will focus on smart and measured incentives to increase (significantly) the volume of products and equipment presented for recovery and recycling or destruction.⁶

- (b) Marketing new ODS – The 2007 report by the Scientific Assessment Panel set up under the Protocol revealed new scientific evidence that the ODP of certain chemical substances not currently controlled by the Protocol (e.g. nPB) is substantially higher and recommended that Parties consider certain control measures to avoid reversing the progress made to date. Currently, EC emissions of new ODS are estimated to total less than 300 ODP tonnes per year. To avoid expanding markets that would have to be tackled later, precautionary measures are proposed in the form of listing new ODS in an Annex to the Regulation (e.g. based on companies’ disclosures under REACH) and requiring producers and importers of such ODS to report the volumes traded. Although effective for raising awareness amongst consumers of ODS, these measures are not expected to give rise to any significant economic impact on industry, which is expected to continue to move away from ODS.
- (c) Reducing use of methyl bromide for QPS activities – Considering that methyl bromide is a toxic substance that causes significant health hazards (which is why the Regulation is already more stringent than the Protocol), the preferred option is to make recapture mandatory up to 2015 and to phase out the substance thereafter. This measure will allow a transition phase, where alternatives such as heat treatment are likely to be more competitive in many situations, followed by phasing-out when more alternatives are available. The total cost to industry would be €9.5 million over the period 2010-2020, saving methyl bromide equivalent to 2000 ODP tonnes.

7. CONCLUSIONS

The policy options proposed reflect a deep commitment to simpler and better regulation based on sound analysis. The resultant package will lead to a significantly simplified regulatory text whilst simultaneously offering guarantees for locking in and consolidating the progress made to date on the ODS phase-out. Although the successful phase-out has already reduced the administrative burden associated with implementation of the Regulation, additional net savings for the total package (after also taking account of the few measures that may lead to increases in administrative costs) will total nearly €3 million, with about €2 million accruing to industry, €0.7 million to Member State authorities and the remainder to the European Commission. The package will not lead to significant net direct incremental costs.

⁶ E.g. standards linked to offset or deposit systems, funding destruction from regional funds, etc.

The cumulative additional direct economic impact is expected to stay below €13 million, mainly related to measures to reduce methyl bromide use for QPS purposes⁷. Simplification is expected to be particularly beneficial to SMEs which have less access to specialist knowledge for implementing the Regulation.

The most tangible environmental benefits from the package are related to reduced consumption and increased recovery mostly stemming from policy action on banks and QPS activities. These could add up to a net gain of 16 000 ODP tonnes, or 112 million tonnes of CO_{2eq}.⁸ Further translation in terms of reduced cancer risk would not be meaningful considering the small quantities involved compared to the global scale of the problem, and the large uncertainties around the dose-response function linking a unit ODP tonne to the final human and environmental health impacts. This net reduction in ODP emissions would however contribute to reducing the risk of further depletion of the ozone layer, whilst also bringing real climate change benefits. Details, including a full list of all the options considered and their impact (including rejected options), are available in the full impact assessment.

Action will be stepped up to finally phase out use of ODS where alternatives are expected to be available soon. Such action is outlined in the Communication accompanying the proposal to recast the Regulation. In parallel, as a follow-up to this review, the Commission will work closely with Member States to tackle the key remaining issue of banked ODS. Such action may yield significant additional environmental benefits. Likewise, the Commission will work closely with Member States and other Parties to the Protocol to reduce remaining uses of ODS, notably those related to QPS activities, and to avoid the marketing of new ODS.

⁷ Costs would be significantly lower if taking into account the likely decision to deregister Methyl Bromide on health grounds.

⁸ In terms of global warming potential, this is equivalent to about 2% of greenhouse gas emissions in 1990. For comparison only, reductions are equivalent to 1/10th of the reductions necessary to achieve the 2020 objective of cutting greenhouse gas emissions by 20% under the climate and energy package.