

QNO6:-

## 1) Introduction:-

On the backdrop of changing climate, the <sup>World</sup> parties gathered at Montreal on 16 Sept 1987 to combat <sup>and limit</sup> the increasing levels of Ozone Depleting Substances (ODSs) in the atmosphere. These substances were extremely dangerous and lethal for the ozone layer which lies in the Stratosphere region some 30-40 km above the ground level. The objectives of this protocol was to reduce and minimize the levels of ODS through phasing them out, to control trade of ODSs and to issue national licensing for import and export of these substances etc. Various amendments were made afterwards to control the production and consumption of ODSs like the London Amendment (June 27-29 1990), The Copenhagen amendment (Nov 23-25, 1992), The Montreal amendment (Sep 15-17, 1997), the Beijing amendment (Nov 29 - 3<sup>rd</sup> Dec 1999) and the Kigali amendment (Oct 10-15 2016)

## 2) Objectives of Montreal Protocol:-

Montreal protocol was adopted by the parties at Sep 16, 1987 in Montreal (city of Canada). The objectives of this protocol were to phase out the substances like ODS, to control the trade of



ODSs and to accoutre the national licensing for exports and imports of ODSs in order to stymie the increasing levels of ODSs into the atmosphere, which were an imminent threat to the survival and sustainability of the ecosystems, biodiversity<sup>etc</sup> and for climate of the earth.

### 3) Provisions of the Protocol:-

The provisions of the Montreal Protocol include Control Measures (which are enshrined in the Article 2), Calculation of Control levels (Article 3), Control of trade with non-Parties (Article 4), Special situation of developing countries (Article 5), Reporting of data (Article 7), Non-compliance (Article 8), Technical assistance (Article 10), as well as other topics.

### 4) Annexes for the classification of ODSs

The Montreal Protocol specified and classified the ODSs into various and multiple annexes depending upon the level of their danger. These annexes comprise Annex A (which contains CFCs and halons), B (other fully halogenated CFCs, carbon tetrachloride, methyl chloroform), C (entails HCFCs), E (encompasses methyl bromide), and F (HFCs).

### 5) Specific responsibilities for the countries:-



Under Montreal Protocol is among one of the rare multilateral agreements which got universal ratification and it is binding in nature for all <sup>member</sup> countries. Montreal Protocol has overstated and designated specific responsibilities to phase down the consumption and production of different ODS in a step-wise manner. It has issued different timetables for developed and developing countries. The obligations for the developed and developing countries are described below:

### (A) Obligations for the developed and developing countries:

Under Montreal Protocol, the developed and developing countries are charged with certain obligations to eliminate and phase out the consumption and production of ODS. Under this, all countries have equal but differentiated responsibilities, but both groups of countries have binding, time-targeted and measurable commitments. The developing countries have given to some extent relaxation in the phasing out process.

### 6) Working mechanism:

The Montreal protocol sets out a mandatory timetable for the phase out of ozone depleting substances.



This timetable has been reviewed regularly, with phase out dates accelerated in accordance with scientific understanding and technological advances.

## 7) Summary of Montreal Protocol control measures:

Montreal Protocol has devised <sup>and formulated</sup> certain control measures for the developed and developing countries. The summary of which is given below in tabular form.

Ozone depleting Substances	Developed countries	Developing countries
Chlorofluorocarbons (CFCs)	Phased out end of 1995	Phased out end of 2010
Halons	Phased out end of 1993	Phased out end of 2010
Carbon tetrachloride (CCl <sub>4</sub> )	Phased out end of 1995	Phased out end of 2010
Methyl chloroform (CH <sub>3</sub> CCl <sub>3</sub> )	Phased out end of 1995	Phased out end of 2015

## 8) Subsequent amendments to the Protocol:

Subsequent amendments have been made to the protocol to incorporate more substances to the target list and to brought forward phase out schedules. These amendments are discussed below:-



## (a) London amendment (1990):-

This amendment was agreed by <sup>second meeting</sup> ~~(DOT)~~ parties in London, 27-29 June 1990.

This amendment proposed several changes to the existing articles of the protocol. Some of which are discussed here

### (i) Article 2C: other fully halogenated CFCs:

According to this, the following paragraphs shall be added to the Protocol as Article 2C:

1) Each party shall ensure that for the twelve month period commencing on 1 Jan 1993, and in each twelve month period thereafter, its calculated level of the consumption of controlled substances in **Group I of Annex B** does not exceed, annually, **8%** of its calculated level of consumption in 1989. But in order to satisfy the basic domestic needs, its calculated level of production may exceed that limit by up to **10%** of its calculated level of production.

2) Each party shall ensure that its calculated level of consumption of the controlled substances in **Group I of Annex B** does not exceed zero for the twelve month period commencing on 1 Jan 2000, and each twelve month period thereafter

But, its calculated level of production may exceed that limit by up to 15% of its calculated level of production in 1989 to cater the basic domestic needs.

## ii) Article 2D : Carbon tetrachloride:

The following paragraphs shall be added to the Protocol as Article 2D:

1) Each party shall ensure that its calculated level of consumption of controlled substances in **Group II of Annex B** does not exceed, annually, 15% of its calculated level of consumption in 1989 for the twelve month period commencing on 1 Jan 1995, and in each twelve month period thereafter. However, may exceed that limit up to 10% of its calculated level in 1989 to satisfy the domestic needs.

## (b) Copenhagen amendment (1992):

It was agreed by fourth meeting of parties in Copenhagen on 23-25 Nov, 1992. The following amendments were made to the protocol under this:-

### (i) Article 2F :- Hydrofluorocarbons:

The following article shall be inserted after Article 2E of the Protocol:



1) Each party shall ensure <sup>that</sup> for the twelve-month period commencing on 1 Jan 1996, and in each 12 month period thereafter, its calculated level ~~to~~ of consumption of controlled substances in Group I of Annex C does not exceed, ~~annually,~~ the sum of:

(a) 3.1% of its calculated level of consumption in 1989 of the controlled substances in **Group I** of **Annex A**; and

(b) its calculated level of consumption in 1989 of the controlled substances in **Group I** of **Annex C**.

2) Each party shall ensure that for the 12 month period commencing on 1 Jan 2004, and thereafter, its calculated level of consumption in **Group I** of **Annex C** does not exceed, annually, 65% of the sum referred to in paragraph 1 of this Article.

### c) Montreal Amendment (1997):

This amendment was agreed by the ninth meeting of parties in Montreal on 15-17 Sep, 1997. Under this amendment, following amendments were done ~~and~~ to the protocol, which are discussed below:

(i) Article 4A: Control of trade with Parties:

The following Article shall be added to the protocol as Article 4A:

1) Paragraph 1 of this Article shall apply without prejudice to the operation of Article 11 of the Convention and the non-compliance procedure developed under Article 8 of the Protocol.

### (ii) Article 4B: Licensing:

The following Article shall be added to the Protocol as Article 4B:

1) Each party shall, by 1 Jan 2000 or within 3 months of the date of entry into force of this Article for it, whichever is the later, establish and implement a system for licensing the import and export of new, used, recycled and reclaimed substances in Annexes A, B, C and E.

2) Each party shall report to the secretariat on the establishment and operation of licensing system within 3 months of the date of its introducing.

### (d) Beijing amendment (1999):

It was agreed by the eleventh meeting of parties on 29 Nov - 3 Dec, 1999. Following amendments



were made under this:

(i) Article 5, paragraph 8 ter (a)

The following sentence shall be added at the end of subparagraph 8 ter (a) of Article 5 of the Protocol:

As of Jan 2016 each party operating under paragraph 1 of this Article shall comply with the control measures set out in paragraph 8 of Article 2F and, as the basis for its compliance with these control measures, it shall use the average of its calculated levels of production and consumption in 2015.

(ii) Article 7, paragraph 3:

Each party shall provide to the Secretariat statistical data on the annual amount of the controlled substances listed in Annex E used for quarantine and pre-shipment applications.

e) Kigali amendment (2016):

It was agreed by twenty eighth meeting of parties in Kigali, on 10-15 Oct, 2016. Under this amendment, actions were discussed to limit the use of HFCs to prevent the emissions of up to 105 billion tonnes of CO<sub>2</sub> equivalent of greenhouse

gases, helping to avoid up to  $0.5^{\circ}\text{C}$  of global temperature rise by 2100.

### 9) Conclusion:-

In the nutshell, Montreal Protocol ~~was~~ is an environment protection agreement, devised to phase out the consumption and production of ODS and subsequently various amendments were added in it for this purpose.

