Recebido em: 23/05/2016
Aprovado em:05/10/2016

A BRIEF ANALYSIS OF THE LEGAL FRAMEWORK FOR METHYL BROMIDE

BREVES CONSIDERAÇÕES SOBRE O REGIME JURÍDICO DO BROMETO DE METILA

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ABSTRACT: Many international conventions have been celebrated recently in an attempt to avoid or reduce the problems arising from advances in science and technology. In this context, in order to protect the environment, emerged the Vienna Convention for the Protection of the Ozone Layer (1985) and the Montreal Protocol on Substances that Deplete the Ozone Layer (1987), which provide control mechanisms for the production and consumption, for example, of methyl bromide, one of the most aggressive substances for the ozone layer in the world. However, article 2H, paragraph 6, of the Montreal Protocol brings exemptions for the abovementioned gas, which can be freely used for the exclusively purpose of quarantine and pre-shipment of goods for import and export in the international market. Nevertheless, through the Joint Instruction (Instrução Normativa Conjunta – INC) SDA/ANVISA/IBAMA nº 01/2002, Brazil edited rules more severe than the prohibitions prescribed by the Montreal Protocol and banned any use of methyl bromide after 31/12/2015, including the phytosanitary treatment. Considering the potential costs of this restriction for the public health and the Brazilian economy, recently it has been edited the Joint Instruction (Instrução Normativa Conjunta – INC) SDA/ANVISA/IBAMA nº 02/2015 simply to abrogate the previous norm for the sake of the referred exemptions. Thus, there is no violation of any international obligation assumed by Brazil.

KEYWORDS: Vienna Convention. Montreal Protocol. Ozone Layer. Methyl Bromide.

RESUMO: Têm sido celebradas muitas convenções multilaterais visando a regulamentar internacionalmente os problemas advindos dos progressos da ciência e da tecnologia. Nesse contexto, para a tutela do meio ambiente, surgiram a Convenção de Viena para a Proteção da Camada de Ozônio de 1985 e o Protocolo de Montreal sobre Substâncias que Destroem a Camada de Ozônio de 1987, que preveem mecanismos de controle para a produção e o consumo, por exemplo, de brometo de metila, que é uma das substâncias que mais degradam a camada de ozônio. Contudo, o art. 2H, parágrafo 6º, do Protocolo de Montreal (1987) indica que esse gás pode ser utilizado para fins de tratamento fitossanitário em quarentena e pré-embarque de produtos para importação e exportação no mercado internacional, razão pela qual não se sujeitaria ao controle estabelecido naquele instrumento. Apesar disso, por meio da Instrução Normativa Conjunta – INC SDA/ANVISA/IBAMA nº 01/2002, o Brasil havia se adiantado ao Protocolo de Montreal (1987) e estabelecido que seria admitido o uso do brometo de metila apenas até 31/12/2015, ainda que fosse exclusivamente para fins de tratamento fitossanitário em quarentena e

pré-embarque. Considerando os potenciais custos dessa proibição para a saúde e a economia brasileiras, foi editada recentemente a Instrução Normativa Conjunta – INC SDA/ANVISA/IBAMA nº 02/2015 para revogar a norma anterior e permitir as mencionadas exceções. Logo, não há violação de qualquer obrigação internacional assumida pelo Brasil.

PALAVRAS-CHAVE: Protocolo de Montreal. Ozônio. Brometo de Metila.

INTRODUCTION

Throughout the recent world history, mainly the period after 1945, many multilateral conventions have been celebrated in an attempt to avoid or reduce the problems arising from advances in science and technology.

The discussions about possible anthropogenic climate change related largely by industrialization have intensified from the 1970s[1] onwards.

At that time many questions arose whether human activities would indeed cause any damage to the stratospheric ozone layer, which plays a key role in preserving life on the planet due to its functions as a filter of solar radiation, preventing that huge amounts of ultraviolet B – UVB rays reach the surface of Earth causing serious health problems to all mankind (such as skin cancer, cataracts and weakened immune system).

Bearing in mind there are not national borders to disastrous consequences originated by the destruction of the atmosphere, the Vienna Convention on the Ozone Layer Protection (1985) and the Montreal Protocol on Substances that Deplete the Ozone Layer (1987)[2] were signed for the protection of the environment.

The idea was the adoption of precautionary measures even before a complete scientific confirmation related to the harmful effects of the observed phenomenon has become unchallengeable. Accordingly, the Vienna Convention and the Montreal Protocol are important precedents for the precautionary principle.

1 BARRETT, Scott. *Environment and statecraft:* the strategy of environmental treaty-making. London: Oxford University Press, 2005. p. 222-223.

2 The Vienna Convention for the Protection of the Ozone Layer (1985) and the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) were ratified and promulgated by Legislative Decree (Decreto Legislativo) nº 91/1989 and Decree (Decreto) nº 99 280/1990.

In the following pages of this article the main features of the legal framework for methyl bromide, which is one of the most aggressive substances of the ozone layer controlled by the Montreal Protocol, will be presented, including the recent change made in the national regulation, in order to clarify the limits of its allowed use across the country and consequently the inexistence of any violation of international law.

I. VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER (1985) AND THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER (1985)

The Vienna Convention (1985) is a Framework Convention[3], which can be defined as an international legislative technique through which general principles and obligations are established to enable the continuity of a negotiation process aiming at adopting additional protocols to detail the implementation of its measures according to the evolution of new technologies and scientific discoveries, apart from the costs and risks that the international community will accept as time passes.

Following the disclosure of the existence of a hole in the ozone layer over Antarctica in 1985, it was signed the Montreal Protocol (1987), whose main objective was a timetable for gradual and complete abolition of the production and consumption of certain ozone depleting substances - ODS's, although chemical substitutes and alternative technologies agents were not fully available[4].

In compliance with the principle of common but differentiated responsibilities[5], it has been agreed various deadlines for developed and developing countries.

Then, the Montreal Protocol sought to distribute as fairly as doable the sacrifices necessary to the protection of global resources in consonance with the capabilities and the social and economic conditions of each country involved, considering not only the largest historical contribution

3 ACCIOLY, Hildebrando; SILVA, Geraldo E. do Nascimento; CASELLA, Paulo Borba. *Manual de Direito Internacional Público* , 20. ed. São Paulo: Saraiva, 2012; BIATO, Márcia Fortunato. Convenção-Quadro das Nações Unidas Sobre Mudança do Clima. *Revista de Informação Legislativa*, Brasília, ano 42, n. 16, p. 239, abr./jun. 2005.

4 SANTOS NETO, João Antunes dos. O tratamento jurídico dos recursos atmosféricos. *Revista de Direito Ambiental*, v. 9, n. 33, jan./mar. 2004. p. 125-147.

5 BIATO, Márcia Fortunato. Convenção-Quadro das Nações Unidas Sobre Mudança do Clima. *Revista de Informação Legislativa*, Brasília, ano 42, n. 16, p. 236, abr./jun. 2005.

of developed countries to the emission of pollutants, but at the same time to restrict as much as possible the damage to the economic growth of developing countries.

Later the Montreal Protocol (1987) was revised by the amendments of London (1990), Copenhagen (1992), Vienna (1995), Montreal (1997) and Beijing (1999)[6] concerning, among other purposes, an increase in the size of the list of ODS's and also a shrinkage of the deadlines previously established.

II. METHYL BROMIDE

Due to the methyl bromide´s significant ozone depleting potential, during the 4th Meeting of the Parties to the Montreal Protocol[7], held in 1992 in Copenhagen, it was adopted for the first time a control mechanism for its production and consumption. For example, starting from 1995, its production by the developed countries would be limited to levels registered in 1991. However, the same rule did not apply to developing countries.

At the 7th Meeting of the Parties to the Montreal Protocol[8], held in Vienna in 1995, the controls on the use of methyl bromide as a pesticide in agriculture were increased. In fact, while it was scheduled a deadline for the abolition of this chemical compound in industrialized countries by 2010, it was set a limit of production and consumption to developing countries by 2002 according to the average levels registered between 1995 and 1998.

After a few years, specifically at the 9th Meeting of the Parties to the Montreal Protocol[9], held in Montreal in 1997, the aforesaid schedule was brought forward to completely eliminate methyl bromide in developed countries by 2005 and in developing countries by 2015. Notwithstanding

6 All amendments to the Montreal Protocol (1987) were approved by Brazil through Decrees (Decretos) nº 181/1991, 2.679/1998 and 5.280/2004.

7 PARSON, Edward A. *The complex chemistry of the international ozone agreements.* Environment, v. 37, n. 2, p. 20, mar. 1995.

8 Secretaria do Meio Ambiente de São Paulo. *Convenção de Viena para a Proteção da Camada de Ozônio e Protocolo de Montreal sobre Substâncias que Destroem a Camada de Ozônio.* Entendendo o Meio Ambiente, v. V, 1997, p. 11; OBERTHUR, Sebastian A. *Montreal Protocol:* 10 years after. Environmental policy and law, v. 27, n. 6, dec. 1997, p. 432; BARRETT, Scott. *Environment and statecraft*: the strategy of environmental treaty-making. London: Oxford University Press, 2005. p. 237.

9 OBERTHUR, Sebastian A. Montreal Protocol: 10 years after. *Environmental policy and law*, v. 27, n. 6, p. 432 e 434, dec. 1997.

the prohibition, there would remain an exceptional use of methyl bromide for quarantine and pre-shipment of products:

> *The Montreal Protocol also has an exemption for quarantine and pre-shipment uses of methyl bromide. The exemption allows for the continued production of methyl bromide for these limited uses. In order for the protocol exemption to be applied in the United States, the Clean Air Act had to be amended in 1998, allowing the EPA Administrator to create the exemption (...) The exemption does, however, show that the parties to the Protocol and the Administrator are aware that certain uses of methyl bromide need to be allowed in order to not stifle intra and international trade.*[10]

Indeed, article 2H, paragraph 6, of the Montreal Protocol (1987), added by the amendments mentioned before, indicates that the methyl bromide used for phytosanitary treatment in quarantine and pre-shipment of goods for import and export in the international market is not considered consumption and therefore would not be subject to the control established in the agreement:

> The calculated levels of consumption and production under this Article shall not include the amounts used by the Party for quarantine and pre-shipment applications. [11]

This means the international obligations assumed by Brazil do not include banning the use of methyl bromide in quarantine and pre-shipment treatments.

The International Standards for Phytosanitary Measures - ISPM, adopted by the signatory countries of the International Plant Protection Convention - IPPC[12] to prevent the introduction and spread of pests that threaten plants and plant products as well as to promote their respective control measures, corroborate this affirmation.

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10 BACKSTROM, Madonna J. Methyl bromide: the problem, the phase out and the alternatives. *Drake Journal of Agricultural Law*, v. 7, p. 226, 2002.

11 Transcript from the website: <http://ozone.unep.org/en/handbook-montreal-protocol-substances-deplete-ozone-layer/16>. Last accessed on: 31 jan. 2016.

12 See Decree (Decreto) nº 5.759, de 17/04/2006, through which Brazil promulgated the revised text of the International Plant Protection Convention - IPPC approved at the 29th United Nations Conference on Food and Agriculture – FAO.

Actually, the ISPM nº 15[13] admits the use of methyl bromide, for instance, for the treatment of wood packaging material. Nevertheless, it not only recommends that measures be taken to reduce or eliminate its emission to the atmosphere where technically and economically feasible, but it also encourages the promotion of alternative treatments.

III. THE ABROGATION OF JOINT INSTRUCTION (INSTRUÇÃO NORMATIVA CONJUNTA – INC) SDA/ANVISA/IBAMA Nº 01/2002

Afterwards, through the Joint Instruction (Instrução Normativa Conjunta – INC) SDA / ANVISA / IBAMA No. 01/2002, Brazil stepped forward to the Montreal Protocol (1987) and prescribed the use of methyl bromide would be allowed only until 31/12/2015, even for phytosanitary treatment in quarantine and pre-shipment (article 2º).

This meant a more rigid protection of the environment under national law. On the other hand, it could create an unnecessary risk of introduction and spread of new pests in Brazil, besides a considerable loss in international trade of Brazilian products because of their impossibility to comply with the phytosanitary requirements demanded by many importing countries.

Pursuant to the data below, compiled from reports submitted to the United Nations Environment Programme – UNEP[14], the consumption of methyl bromide for quarantine and pre-shipment is a regular practice for most of the countries signatories to the Vienna Convention and the Montreal Protocol:

METHYL BROMIDE QUARANTINE AND PRE-SHIPMENT - QPS CONSUMPTION IN TONNES						
Country signatory	2009	2010	2011	2012	2013	2014
Argentina	38.80	31.02	39.00	59.40	124.85	69.10
Australia	502.30	471.92	689.50	675.54	617.87	488.54
Brazil	56.39	132.10	84.43	74.17	89.24	72.99
Camaroon	21.00	21.00	23.00	23.00	35.00	20.00
Canada	16.91	3.41	1.36	1.82	0.36	1.00
Chile	25.91	143.87	22.22	108.21	63.87	88.73
China	1073.40	1258.93	1173.62	1094.29	1102.44	1124.96
Dominican Republic	8.00	25.20	25.70	29.40	30.00	20.70
Egypt	379.00	309.00	205.00	439.00	238.00	226.00

13 According to the website: <http://www.ispm15.com/ISPM15_Revised_2009.pdf>. Last accessed on: 31 jan. 2016.

14 According to the website: <http://ozone.unep.org/en/data-reporting/data-centre>. Last accessed on: 31 jan. 2016.

El Salvador	70.20	106.80	164.60	109.50	189.25	157.21
Fiji	6.40	12.80	15.00	16.30	11.92	13.80
Guatemala	26.60	16.00	46.91	37.00	24.00	47.70
Honduras	11.80	11.84	9.33	21.41	18.20	22.81
India	540.25	379.24	581.15	759.53	624.51	280.94
Indonesia	288.00	313.30	243.30	202.00	254.00	256.00
Islamic Republic of Iran	30.00	28.00	26.00	25.00	11.00	20.00
Israel	7.90	8.53	11.96	10.39	13.23	14.00
Jamaica	2.00	2.00	1.50	2.00	2.00	2.00
Japão	697.25	603.50	723.76	594.85	499.38	450.24
Jordan	10.00	12.00	12.00	12.00	10.00	12.00
Malaysia			148.23	124.77	157.18	152.53
Mexico	458.00	453.07	519.71	501.96	502.80	505.73
Morocco	10.00	10.00	10.00	10.00	10.00	7.00
New Zealand	269.60	406.40	469.10	571.30	568.60	524.60
Nicaragua	22.52	18.82	13.50	18.96	18.00	23.00
Filipinas	48.04	72.22	54.49	47.96	31.01	37.55
Republic of Korea	708.00	574.10	639.00	445.30	542.10	432.30
Saudi Arabia	10.00	15.00	18.00	15.00	12.00	15.00
Singapore	165.50	52.30	130.07	100.21	86.10	85.43
Solomon Islands	1.20	1.40	1.36	1.20	1.00	1.50
Sri Lanka	18.55	23.97	25.27	33.03	37.44	33.97
Swaziland	0.30	0.30	0.35	0.23	0.20	0.20
Thailand	465.25	466.79	342.54	320.20	156.10	122.70
Trinidad and Tobago	1.54	1.56	1.50	1.00	2.00	1.11
Turkey	27.00	27.00	40.00	40.00	50.00	39.90
United Arab Emirates	47.20	54.70	59.20	57.50	43.00	43.00
United States of America	2099.40	3843.80	1915.90	1170.90	2527.50	4676.90
Uruguay	43.00	51.98	40.62	24.40	20.30	32.70
Viet Nam	739.00	761.00	796.00	838.00	849.70	839.66
Zimbabwe	1.00	2.00	1.00	1.00	1.00	2.00

Extracted from: UNEP

For these reasons, the Joint Instruction (Instrução Normativa Conjunta – INC) SDA / ANVISA / IBAMA nº 02/2015[15] abrogated the previous norm to admit the use of methyl bromide in Brazil for the exclusively purpose of quarantine and pre-shipment of goods for import and export in the international market.

15 BRASIL. Instrução Normativa Conjunta – INC SDA/ANVISA/IBAMA nº 02/2015, de 14 de dezembro de 2015. Published on: *Diário Oficial da União de 21 de dezembro de 2015.*

IV CONCLUSION

Methyl bromide is one of the most degrading chemical compounds for the ozone layer in the world and consequently it was included in the list of substances whose consumption is controlled by the Montreal Protocol.

However, article 2H, paragraph 6, of the Montreal Protocol indicates that the use of methyl bromide for phytosanitary treatment in quarantine and pre-shipment of goods for import and export in the international market is not considered consumption under its terms.

Nevertheless, through the Joint Instruction (Instrução Normativa Conjunta – INC) SDA / ANVISA / IBAMA nº 01/2002, Brazil stepped forward to the Montreal Protocol and allowed the use of methyl bromide only until 31/12/2015, even for phytosanitary treatment.

But the potential costs of such a prohibition for public health and also the Brazilian economy, considering simultaneously the absence of a suitable technological substitute for methyl bromide and the fact there is no international obligation to ban it worldwide for the exclusively purpose of quarantine and pre-shipment, the Joint Instruction (Instrução Normativa Conjunta – INC) SDA / ANVISA / IBAMA nº 02/2015 has recently abrogated the previous norm.

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