

# National Report about the Status of Ozone Monitoring of Nepal

## 1. Background:

Upon the discovery that CFCs and other human-made substances are leading to a depletion of the ozone layer, the international community agreed upon the Vienna Convention for the Protection of the Ozone Layer in 1985. Following this, the Montreal Protocol on Substances that Deplete the Ozone Layer was adopted in 1987 with the objective of reducing and finally phasing out the production and consumption of ozone-depleting substances. Nepal ratified to the Vienna Convention, Montreal Protocol and London Amendment to the Montreal Protocol on 6 April 1990 and came into force on 4 October 1994.

In response to the Convention, Protocol and London Amendment 1990, the Government of Nepal (GoN) formed National Program Preparation Team (NPPT) on 3 October 1996. The NPPT prepared Nepal Country Program for the Phasing out of the Ozone Depleting Substances and the program was agreed on 19 February 1999. The GoN assigned the Nepal Bureau of Standard and Metrology (NBSM) as an Implementing Agency working with the direction of National Ozone Committee (NOC) which was formed under the joint-secretariat level of the then Ministry of Population and Environment in 28 February 2000.

## 2. Institutional Mechanism:

Implementation of the Convention, Protocol and London Amendment in Nepal started with the following undertakings:

- ❖ The then Ministry of Population and Environment (MoPE) (now it is the Ministry of Environment, MoE) was designated as a focal ministry;
- ❖ The then MoPE (now MoE) and the then Ministry of Industries, Commerce and Supplies (now the Ministry of Industry) started working in close coordination;
- ❖ The then MoPE established the coordination with the Convention Secretariat and necessary organizations;
- ❖ The Nepal Bureau of Standard and Metrology (NBSM) was designated as an implementing agency;
- ❖ For the effective implementation of the Vienna Convention, Montreal Protocol and London Amendment, necessary committees were constituted as and when necessary. In this regard the Steering Committee was formed and Secretaries of MoE and Ministry of Industry (Mol) have served as the co-chairs. Similarly the Implementation Committee has formed in the chair of the Director General of the NBSM Implementation Committee under the Mol. Other subject committees were established when necessary with the involvement of

Government organizations, private organizations and experts in the related field was also established by the government decision on 28 April 2000.

- ❖ A National Ozone Unit (NOU) was established in NBSM with the responsibility of implementing and monitoring the ODS.

The Government formulated policies and enacted Acts and regulations such as Environment Protection Act, 1996, Environment Protection Rules, 1997 and Ozone Depleting Substances Consumption Rules (ODSCR), 2001 etc. Environment Impact Assessment (EIA) of development works was institutionalized and standards related to the industrial effluents air quality were implemented by MoE. Similarly, NBSM has also implemented activities as the major Implementing Agency of the Convention, Protocol and London Amendment.

### **3. Activities for Monitoring ODS**

As the focal point of Convention, Protocol and London amendment, the then MoPE issued a public notice in the National Gazette on 25 September 2000 releasing the Government decision, on annual consumption, import quantity and phase-out rates of ODS. Similarly, as the Rule 4 of the ODSCR, the government designated the licensing authority to the Department of Commerce to work under the Export, Import Control Act 1957 on the recommendation of MoE. Procedures and conditions of license including specification and quantitative standards and annual phase-out rates of ODS were also made public by publishing a notice on 6 March 2001. NOU was the implementing and monitoring unit in all these matters under the NBSM.

The National Bureau of Standards and Metrology (NBSM) started activities related to controlling and monitoring the ODS for not being imported to Nepal from the very beginning when Nepal ratified the Convention and the Protocol. In this regard the GoN established a Committee for the implementation of the Montreal Protocol, with its secretariat in the NBSM within the Ministry of Industry. The committee initiated its work by conducting a country wide survey in 1996. The survey established basic profile of Ozone Depleting Substances (ODS) consuming sectors in Nepal

A 1996 survey on ODS consumption in Nepal found 29 tones of Chlorofluorocarbon 12 (CFC12) and 23 tones of Hydro chlorofluorocarbon 22 (HCFC-22). Approximately 1 tones of CFC was used in new equipment and the balance 28 tones for servicing (15.8 tones for domestic and 12.2 tones in commercial and industrial refrigeration). Refrigeration and Air conditioning sector was the predominant consumer of ODS mainly in the assembly, repair and maintenance of equipment. The survey also indicated the general direction for ODS phase-out efforts.

#### **(a) Refrigeration Management Plan (RMP):**

Country Program for the phasing out of the ODS in Nepal was approved in 1998. Due to the predominance of the Refrigeration and Air conditioning sector in terms of ODS

consumption, the need for formulating a Refrigerant Management Plan (RMP) was identified, taking into account the following factors such as availability of alternate refrigerants, residual economic life of CFC containing equipment, training, and technical assistance for transitioning to non-CFC alternatives.

Nepal RMP was approved in July 1999. Under the RMP, the following key activities such as promulgation of regulations covering registration of importers establishing maximum permissible annual limits on import quantities; prohibition on import of CFC based equipment; national CFC recovery and recycling program which covered establishment of two recovery and recycling centers, provision of recovery units to servicing establishments/end users and additional refrigerant equipment to service technicians; training of customs officers related to RMP and training program in good practices in refrigeration servicing through train the trainers program.

**(b) CFC Monitoring**

The Government made a Gazette Notification in September 2000 laying down the strategy for ODS phase-out by 2010. Thereafter, in exercise of powers conferred by Article 24 of the Environment Protection Act 1996, the Government approved and made public the Ozone Depleting Substances Consumption Rules in February 2001 for enforcement with immediate effect.

**CFC Phase-out Plan:**

Year(AD)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CFC-11 & CFC-12 Joint (Metric Ton)	29.058	26	23	20	17	14	11	8	5	2	0

Monitoring through licensing also followed as the plan and now CFC import in the country has been controlled fully. Actually Nepal baseline for CFC was 29 ODP tones. It reported import of 94 ODP tones of CFC12 during the period of 1<sup>st</sup> July 2000 to 30 June 2001. As a consequence for the July 2000 to June 2001 Nepal was in non-compliance with its obligation under Article 2A of the Montreal Protocol as per decision made at 14<sup>th</sup> Meeting of the Parties held at Italy.

Further the illegally traded quantities should not be counted against a Party consumption provided the Party does not place the said quantities on its own market and if Nepal decides to release any of the seized quantity of CFC into its domestic market, it would be considered to be in non-compliance as per the decision made at 15<sup>th</sup> meeting of the Party held at Nairobi.

Nepal informed the seizing of the illegal ODS during MOP 16 at Prague in 2004 and the meeting agreed the removal of previous non-compliance issue by Nepal including a commitment by Nepal to report annually on the quantity of CFCs released on to its market.

Accordingly, in the 20<sup>th</sup> meeting of the Parties, Nepal requested guidance from Parties on continued use of confiscated CFCs post 2010. Nepal proposes to consider options

for destruction of CFC (around 10 tons) which was approved by the Executive Committee and we are working on this in close cooperation with the Department of Customs.

#### **4. Present Status**

Nepal has addressed non-compliance issues in a very remarkable manner during the last four years to adhere strictly to the plan of action and controlled distribution of the stockpiled CFCs into the domestic market. Nepal has also taken significant steps to control and phase-out its CFC consumption, including improved cross-border coordination with countries also engaged in CFC production, creation of awareness among importers of refrigeration and air conditioning equipment and control of such imports.

The continuity of operation of the Ozone Officer appointed in 1998 and establishment of the NOU in Nepal has worked well which makes Officer one of the longest serving National Ozone Officers of all Article 5 countries,

Nepal Refrigeration and Electro Mechanical Association (NREMA) has been established in 2006; it cooperates very closely with the NOU. The CFCs are provided to the workshops/technicians through this association following the procedure established for this purpose. The association is also responsible for tracking the use of CFCs provided through this arrangement and reporting on the same to NOU.

NREMA started organizing training courses of different levels (basic and advanced) with the cooperation of Lalitpur Valley College in Lalitpur for technician students or other interested persons. The training costs were partly covered by the participants and partly by the funding from UNEP, GTZ and India.

Nepal was awarded with "The Montreal Protocol Implementers Awards" by UNEP (United Nations Environmental Program) for the year 2007. The National Ozone Unit of Nepal was honored by this award in reorganization of its extraordinary contribution to the effective implementation of the Montreal Protocol and the global effort to protect the ozone layer.

At 19<sup>th</sup> Meeting of the Parties, the Parties agreed to accelerate the phase-out of production and consumption of HCFCs by way of an adjustment in accordance with paragraph 9 of Article 2 of the Montreal Protocol by choosing the baseline the average of 2009 and 2010 levels of respectively and to freeze at that baseline level consumption in 2013 and then 10% reduction by 2015, 35% reduction by 2020 and 67.5% reduction by 2025 and 97.5% reduction by 2030.

Nepal HCFC Phase-out Management Plan (HPMP) was prepared and submitted to the 61<sup>st</sup> Executive Committee to implement above decision made during the 19<sup>th</sup> Meeting of the Parties.

However, the Committee deferred consideration of the HPMP for Nepal to 62<sup>nd</sup> Meeting of Executive Committee in light of any additional information regarding the commitment

of Nepal of ratifying the Copenhagen Amendment and to phase-out HCFC in accordance with the Executive committee.

It may be pointed out that without ratification of Copenhagen Amendment, Nepal would not be entitled to any Multilateral Fund (MLF) assistance to phase-out HCFCs since they would have no commitment to address these substances or any resultant compliance issue.

Nepal understands and appreciates the decisions of the 62<sup>nd</sup> Executive Committee which mentions that stage I of HPMP could be implemented if Nepal complies with the following by the time of 23<sup>rd</sup> MOP (14-18 November 2011):

- I. Officially deposit its instrument of ratification of Copenhagen Amendment to the Montreal Protocol with the United Nations Treaty depository Office in New York;
- II. Submit on official request to 23<sup>rd</sup> MOP to be considered under Article 4, Paragraphs 8 and 9 of the Montreal Protocol, which *inter alia* allows a State not Party to an amendment nevertheless to be found by the MOP to be in full compliance with the control Provision of the Montreal Protocol, thereby obviating the trade sanctions that might otherwise apply.

The Executive Committee decided that if one of the condition in i) and ii) above had been met, the Government of Nepal would submit a request to the Executive Committee for the first tranche of the HPMP and present the corresponding Agreement between the Executive Committee.

Taking into consideration the above, the Mol has processed for the ratification of all Amendments including Copenhagen Amendment with the inputs of the Ministry of Environment and Ministry of Law and Justice and the proposal has been put forward for Cabinet approval. After due consideration of the Cabinet, the proposal will be submitted to the Parliament for formal ratification.

## **5. Observations**

Beside the given outcomes of these efforts some issues in the government are unclear. The ODSCR chiefly focuses on the licensing system to the importer to control over the illegal import of the ODS. However, rule has not mentioned anything about the exporter because of the reason that Nepal does not produce any ODS within the country.

In addition to this, ODSCR has given authority to the focal ministry to prescribe necessary procedures and conditions for the import of the substance; prescribe necessary specification, annual import and consumption quantity as well as the phase-out rate of the substance for trade, business needed in refrigeration, air conditioning, agriculture and health including fire extinguishing services and in industrial uses; take actions for gradual phasing-out of the annual import and consumption quantity of the substance up to the zero limits within a scheduled period in accordance with the

provision of the Protocol; and monitor and evaluate the status of the consumption as well as sales and distribution of the substance regularly.

At the beginning, the then MoPE started the implementation process on ODS which was smooth and effective also due to the issuance of the ODS Consumption Rules. However, its effective implementation was not achieved to the desired extent, as the then MoPE was dissolved in 2005 and it took time to integrate the functions of the Environment Division of the then MoPE by renaming the Ministry of Science and Technology into the Ministry of Environment, Science and Technology (MoEST). Once the implementation was re-initiated the Government of Nepal separated MoEST again in 2009 into the Ministry of Science and Technology and the Ministry of Environment (MoE). After this, MoE has initiated working on ODS in the spirit of the Convention and the Protocol and has started the ratification process of the Copenhagen Amendment.

For the effective implementation of the licensing system, the NOU has been designated to make this licensing system operational. As mentioned earlier, NREMA has also attempted several activities regarding the awareness raising on ODS including training to the students and capacity building. International Organizations like UNEP has also conducted three days training to the custom officers regarding the ODS in 2001 aiming to build capacity of the custom officers of Nepal on ODS. However, those efforts are not enough to raise awareness on ODS as well as to build capacity for the ODS monitoring and regulating activities.

Despite of the specific ODS study, Nepal has also prepared the Initial National Communication in 2004 in which greenhouse gas inventory was one of the major components. CFCs inventory was not included under the GHGs at that time because of lack of available data. Now, Nepal is engaged in the preparation of the Second National Communication (SNC). The CFCs are also the target for inventory in SNC.

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