ILLEGAL TRADE IN OZONE DEPLETING SUBSTANCES

ASIA AND PACIFIC REGION
ILLEGAL TRADE IN OZONE DEPLETING SUBSTANCES
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Acknowledgements

This report was written by Liu Ning from China Customs and seconded to Regional Intelligence Liaison Office for Asia and Pacific (RILO A/P), consultant at the United Nations Environment Programme Division of Technology, Industry and Economics (UNEP DTIE), OzonAction, Compliance Assistance Programme (CAP) team in the Regional Office for Asia and the Pacific (ROAP) and Atul Bagai, Regional Network Coordinator, UNEP ROAP. It has been reviewed by Ludgarde Coppens (Policy and Enforcement Programme Officer, UNEP ROAP), Thanavat Junchaya (Regional Network Coordinator, UNEP ROAP), Shaofeng Hu (Refrigerant Management Plans Officer, UNEP ROAP), Suresh Raj (former Capacity Building Manager, UNEP DTIE), Etienne Gonin (Associate Programme Officer, UNEP DTIE), Katarina Axelsson (Research Associate, Stockholm Environment Institute), Bruce Pasfield (Partner, Alston and Bird LLP, Vice Chair, American Bar Association’s Environmental Enforcement and Crimes Committee), Duncan Brack (Associate Fellow, Energy, Environment and Development Programme, Chatham House-Royal Institute of International Affairs) and Ezra Clark (former expert of Environmental Investigation Agency, London).

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The year 2007 marked the 20th anniversary of the Montreal Protocol on Substances that Deplete the Ozone Layer. The international community celebrated what is considered to be one of the most successful international environmental agreements to date. The success goes beyond the impressive reduction of the production and consumption of ozone depleting substances (ODS) by more than 95 per cent compared to 1986 levels. Without the Montreal Protocol, it is estimated that the effects of these chemicals would have resulted in 1.5 million more cases of melanoma skin cancer, 19.1 million more cases of non-melanoma cancer and 130 million incidents of cataracts by 2035. The health and other benefits that will accrue by the middle of this century are estimated to be in trillions of dollars.

It is expected that full compliance with the Protocol will eliminate almost all of the ozone-depleting chemicals by 2030 and full recovery of the ozone layer will be achieved by the second half of the century. The approaching deadlines to phase out ODS, particularly CFCs (chlorofluorocarbons) and dwindling legal supplies are leading to rises in ODS prices, creating lucrative business opportunities for illegal operators. Illegal trade in ODS could potentially undermine the success of the Montreal Protocol and further delay recovery of the ozone layer. Governments and the international community are encouraging actions on the national, regional and global scales to improve the process of monitoring and control of ODS to prevent such illegal trade.

The UNEP Division of Technology, Industry and Economy (DTIE) has been very active in this regard as part of our mandate under the Protocol’s Multilateral Fund. Through the regional teams of the Compliance Assistance Programme (CAP), UNEP has helped to significantly strengthen the capability of the member countries of the Regional Networks of Ozone Officers to monitor and control ODS import and export and thereby combat illegal ODS trade. Importantly, this work has been done through cooperation with other international, regional and bilateral partners.
The Government of Sweden and UNEP are partnering on a joint project to improve monitoring and control of ODS in the Southeast Asia and Pacific (SEAP) and South Asia (SA) regions. As part of this project, a desk study analysing the transboundary movements of CFCs was conducted. This publication presents the outcome of this study. It analyses the smuggling motives, routes and trends for ODS, which indicate the nature of illegal trade in ODS in the region in recent years. The study is intended to assist customs officers, ozone officers and other enforcement personnel in their work to control such trade. It is also intended to be a useful reference for policy makers and academics.

UNEP is encouraged that governments have intensified actions to curb the illegal ODS trade in collaboration with international organisations and non-governmental organisations. ODS seizures presented in this report demonstrate the achievements of these actions. There are two major initiatives, detailed in this report, which demonstrate the effective collaboration in the region. The first of these, officially launched in September 2006 by UNEP in coordination with the World Customs Organisation and regional customs authorities is a project known as “Project Sky Hole Patching” to curb illegal trade in ODS and dangerous waste in the Asia Pacific region. This operation gained worldwide attention and led to many successful actions and seizures. The second initiative, launched in January 2006, saw the SEAP-SA network countries implement a mechanism of Informal Prior Informed Consent on Export and Import of ODS, which has helped to better manage the import and export of the ODS in the region and to effectively implement the national licensing systems. It is also encouraging to note that the Green Customs Initiative, a partnership of international organisations cooperating to help monitor trade in environmentally sensitive commodities, is being successfully implemented in the region.

We believe that real cooperation between environment agencies and enforcement authorities, between countries, regions and international organisations, of the sort described in this document, will effectively assist in combating illegal trade in ODS and promote the early recovery of the ozone layer.
Finally, I would like to express my appreciation to the Compliance Assistance Programme team in Bangkok for its excellent work in addressing illegal ODS trade issues. I hope this excellent report will inspire enforcement personnel around the globe and we look forward to similar initiatives from other regions in the near future.

Sylvie Lemmet
Director, Division of Technology, Industry and Economics
United Nations Environment Programme
Executive Summary

1. The ozone layer remains fragile and under threat. From September 21-30, 2006, the average area of the ozone hole was the largest ever observed, at 29.53 million square kilometres.

2. The Montreal Protocol is considered to be a great success. International efforts have reduced the production and consumption of ODS by more than 95 per cent compared to 1986. However, illegal trade in ODS has developed into one of the major obstacles in achieving timely and efficient phase-out of ODS in developing countries.

3. India and the Republic of Korea account for approximately 70 per cent of the total global production of chlorofluorocarbons (CFCs). Countries in the region with high volume consumption are China, India, Malaysia, Thailand, Indonesia, Democratic People’s Republic of Korea, the Republic of Korea, Iran, Pakistan, Sri Lanka, Viet Nam, the Philippines and Bangladesh.

4. In developing countries, there is still a significant demand for CFCs as reliance on equipment using these chemicals remains high. The problem is worsened by the imports of used refrigeration and air-conditioning equipment, particularly mobile air-conditioners (MACs) in automobiles. Continued, even if not increased, dependency on CFCs, facilitated by low CFC prices on the international black market, encourages smuggling of these chemicals as controls reduce legal supplies.

5. Motives for smuggling include the following: ODS substitutes are often costlier than CFCs; retrofitting of equipment to enable use of alternative chemicals is generally expensive; the lifetime of CFC-containing equipment is often long; Penalties in many countries for engaging in ODS smuggling are paltry.

6. Magnitude of illegal trade in ODS: The size of the black market in developed countries for CFCs in the mid-90s was estimated to be around 16,000-38,000 tonnes. Reports about recent seizures indicate that illegal trade in the Asia and
Pacific region has increased dramatically. It is estimated that 7,000 to 14,000 tonnes of CFCs were smuggled annually into developing countries based on a 2006 estimate.

7. *A study on trans-boundary movement of ODS* shows that there are large discrepancies in trade data between, for example, China and Indonesia, China and the Philippines, China and Malaysia, China and Viet Nam, India and Thailand, India and Viet Nam, and Singapore and Malaysia. Meetings organized by UNEP ROAP have identified the reasons for such trade data discrepancies among Viet Nam, India and China, and between China and Malaysia.

8. *Smuggling Routes*: It may be possible that transit ports are often utilized in ODS smuggling operations. Some routes often employed by smugglers include: Bangladesh-India, Nepal-India, India-Lao PDR-Thailand, China-Malaysia, China-the Philippines, China-Viet Nam-third country, India-Viet Nam-third country, etc.

9. *A number of activities* have been encouraged at national, regional and global scale aimed at improving the process of monitoring and controlling ODS in order to combat illegal trade in these chemicals. They include:

(a) The UNEP Division of Technology, Industry and Economy (DTIE) through the OzonAction Programme has been very actively involved in this. A number of initiatives have been undertaken by UNEP in the framework of Refrigerant Management Plans and other projects. The actions of UNEP regional networks aimed at combating illegal trade in ODS have been significantly intensified owing to the establishment of the Compliance Assistance Programme.

(b) In 2001, UNEP DTIE launched the Green Customs Initiative to encourage coordinated intelligence gathering, information exchange, guidance and training amongst the partner organisations involved to counter illegal trade and environmental crime.
(c) From 2001 to 2006, UNEP and the Government of Sweden implemented a *Customs-Ozone Networking Project* to improve monitoring and control of ODS in the South East Asia and the Pacific and the South Asia region. The project provided structure, guidance, training and direction for the dynamic process of integrating the efforts of participating countries and various relevant international organisations.

(d) Since January 2006, the South Asia-South East Asia and Pacific network countries have agreed on *a mechanism on Informal Prior Informed Consent (iPIC) on Export and Import of CFCs* to assist member countries to implement licensing systems effectively. The European Commission fully participates in the iPIC.

(e) “*Project Sky Hole Patching*”, a joint operation of customs administrations and international organisations in the Asia Pacific region, was launched on September 1, 2006. It established a monitoring and notification system among member administrations to keep track of the movement of suspicious shipments of ODS and dangerous waste, which are imported, re-exported or trans-shipped across international borders.

(f) *A Regional Partners’ Forum on Combating Environmental Crime* was set up during a meeting of regional officers of concerned international organisations working to curb illegal trade in environmentally sensitive commodities in August 2005.

(g) *A Private-Public Partnership* was established between ODS producers and national stakeholders in the Asia and Pacific region.

(h) Customs administrations in the Asia and Pacific region have prioritised environmental issues in their agenda. UNEP, National Ozone Units and customs administrations are cooperating closely in combating illegal trade in ODS.
Life on Earth depends on the protection provided by ozone in the stratosphere, which acts to screen harmful ultraviolet (UV) solar radiation from the Sun. The ozone layer is depleted as a result of the emission of certain human-made chemicals that react and destroy ozone molecules in the stratosphere. The major ODS include: chlorofluorocarbons (CFCs), which are used in refrigerators and air-conditioning units; halons, used in fire extinguishers and fire suppressant installations; and methyl bromide, an ozone depleting pesticide.

Ever since the late 1970s, an ozone “hole” has formed over Antarctica every spring season (September/October) in the Southern Hemisphere. Up to 60 per cent of the total ozone has been depleted over Antarctica.\(^1\) Satellite measurements have confirmed the size of the Antarctic ozone hole, which has grown larger throughout the 1990s. American National Aeronautics and Space Administration (NASA) and National Oceanic and Atmospheric Administration (NOAA) scientists have reported: “Data from NASA’s Earth-observing Aura satellite show that the ozone hole peaked in size on September 13 [2007], reaching a maximum area extent of 9.7 million square miles [equivalent to 25.12 million square kilometres], just larger than the size of North America... In comparison, 2002 and 2004 turned up weak ozone holes with maximum areas of about 8.3 million and 8.7 million square miles [equivalent to 21.50 million and 22.53 million square kilometres], respectively. The hole in 2006, however, reached a record-breaking maximum area of 11.4 million square miles [equivalent to 29.53 million square kilometres]”.\(^2\)

\(^1\) Source: NASA.

\(^2\) Source: NASA.
Recently, observations of severe ozone loss over the Northern Hemisphere have led some scientists to warn of the possibility of an ozone hole developing over the Arctic region.

The impact on human health of increased UV exposure due to ozone depletion is of great concern, and is not limited to the Polar region. The depletion of the ozone layer results in increased UV radiation, which can have a number of adverse effects on health and environment. Examples include: skin cancers and cataracts, weakened immune systems, damage to terrestrial plant life and aquatic eco-systems.

The Montreal Protocol

Based on scientific findings on the causes of ozone layer depletion, international community has catalysed global action to protect the ozone layer resulting in the adoption of the Vienna Convention in 1985 and the Montreal Protocol in 1987. To date, 191 countries have ratified, accessed or approved the Montreal Protocol.

The Montreal Protocol’s primary goal is the phase-out of both production and consumption of ODS through a step-by-step reduction schedule.

The Protocol includes provisions enabling its revisions on the basis of periodic scientific and technological assessments. Indeed, the commitments were strengthened by the Copenhagen Amendment and Adjustment in 1992, Vienna Adjustment in 1995, Montreal Amendment and Adjustment in 1997, Beijing Amendment and Adjustment in 1999 and Montreal Adjustment in 2007. The Montreal Protocol allows a grace period for developing countries (referred to as “Article 5 countries” in the Montreal Protocol) in implementing the control measures. It recognises the fact that more time is required to obtain and introduce alternative ODS-free technologies. Table 1 (next page) illustrates the phase-out schedules for developed and developing countries.
Table 1: Global ODS Phase-Out Schedule

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<tr>
<th>Developed Countries Freeze</th>
<th>Developed Countries Phase-Out</th>
<th>Developing Countries Freeze</th>
<th>Developing Countries Phase-Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorofluorocarbons (CFCs)</td>
<td>July 1, 1989</td>
<td>January 1, 1996</td>
<td>July 1, 1999</td>
</tr>
<tr>
<td>Developing Countries Freeze</td>
<td>Developing Countries Phase-Out</td>
<td>Developing Countries Freeze</td>
<td>Developing Countries Phase-Out</td>
</tr>
<tr>
<td>Halons</td>
<td>–</td>
<td>January 1, 1994</td>
<td>January 1, 2002</td>
</tr>
<tr>
<td>Other CFCs</td>
<td>–</td>
<td>January 1, 1996</td>
<td>–</td>
</tr>
<tr>
<td>Carbon Tetrachloride</td>
<td>–</td>
<td>January 1, 1996</td>
<td>–</td>
</tr>
<tr>
<td>Hydrochlorofluorocarbons (HCFCs)</td>
<td>January 1, 1996</td>
<td>January 1, 2020</td>
<td>January 1, 2013</td>
</tr>
<tr>
<td>Methyl Bromide</td>
<td>January 1, 1995</td>
<td>January 1, 2005</td>
<td>January 1, 2002</td>
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</table>

The Montreal Protocol is widely accepted as one of the most successful multilateral environmental agreements to date. International efforts have reduced the production and consumption of ODS by more than 95 per cent compared to base-year levels. Total consumption of CFCs worldwide has decreased from about 1.1 million Ozone Depletion Potential [ODP] tonnes in 1986 to about 34,799 ODP tonnes in 2006.³

Without the Protocol, the consumption of ODS was projected to reach three million tonnes in 2010 and eight million tonnes in 2060, resulting in a 50 per cent depletion of the ozone layer by 2035. The Applied Research Consultants (ARC) for Environment Canada analysed that the global benefits and costs of the Montreal Protocol between 1987 and 2060 would include avoidance of possible: (1) 19.1 million cases of non-melanoma skin cancer; (2) 1.5 million cases of melanoma skin cancer; (3) 120 million cases of cataract; (4) US$238,000 million worth of damage to the world’s fisheries; and (5) US$191,000 million worth of damage to agricultural production.⁴

Full compliance with the Montreal Protocol will eliminate most of the ozone-depleting substances by 2030. Current predictions indicate that the ozone layer would be expected to repair itself by about 2060-2070, assuming recovery is not further delayed by other factors such as interactions with global climate change. Nevertheless, the ozone layer currently remains fragile and under threat.
Illegal trade in ODS could potentially undermine the success of the Montreal Protocol and further delay recovery of the ozone layer.

There are a number of factors that provide incentives for smuggling. The first and most important factor is economic. ODS substitutes generally remain more expensive than ODS. For example, information from the Philippines National Ozone Unit shows that in the Philippines, the market price for a kg of CFC-12 was around US$6 in 2006; but hydrofluorocarbon-134a (HFC-134a), an alternative for CFC-12, cost around US$9 per kg. This price difference alone acts as the main catalyst behind many smuggling operations.

In the Asia and Pacific region, demand for CFCs in the servicing sector remains very high. For CFCs to be replaced by alternative chemicals, the equipment will often require retrofitting or will need to be completely replaced. For example, based on the UNEP surveys in Asia, retrofitting a mobile air-conditioning system to enable it to use HFC-134a in developing Asian countries could cost between US$100 and US$200. However, the cost of acquiring a 13.6 kg cylinder of CFCs, which contains enough refrigerant to service many such systems, is only about US$50. The financial incentives for continued use of CFCs will persist until all ODS-based equipment reaches its life’s end or is finally replaced with newer technology that can function on ODS alternatives. However, the availability of illegal ODS holds back the replacement process by effectively extending the operating life of the equipment being used.

The lifetime of ODS-containing equipment, such as refrigerators and air-conditioners, is often long. The longer these products remain on the market, the longer the demand for illegal ODS will remain.

Many countries have banned imports of ODS-containing equipment. However, this kind of equipment, for example second-hand cars, are smuggled into developing countries, further increasing the demand for ODS.
Other important factors behind the persistent demand for smuggled ODS in the Asia-Pacific region include:

(1) Legal ODS are easily obtained in the region where the main producers – India, China and the Republic of Korea – reside;

(2) The continued high demand for ODS in some countries, which may be higher than their legal import quotas;

(3) Smuggling also thrives as it helps evade import duty levied on ODS; for example, the import duty for CFCs in Thailand is about 30 per cent;

(4) The fierce competition between companies along with the limited availability of licences and quotas;

(5) The price difference between the ODS on legal domestic market in India, for example, and the low price of CFCs and other ODS on the international market due to a supply cartel, which has maintained inflated prices; and

(6) The lack of enforcement of trade restrictions.

Although illegal trade has thus far involved mainly CFCs and halons, phase-out dates for methyl bromide and hydrochlorofluorocarbons (HCFCs) are fast approaching. It can be anticipated that illegal trade in these substances will develop in a similar manner as in CFCs and halons.
Linkages Between ODS Smuggling and Drug Trafficking

Reports show that there are linkages between ODS smuggling and drug trafficking. The U.S. Department of Justice reported on August 4, 2005 (www.usdoj.gov): “Dov Shellef and William Rubenstein were convicted of conspiring to evade approximately US$1.9 million in excise taxes due on sales of an ozone-depleting chemical called trichlorotrifluoroethanes (CFC-113)...

The investigation began as Environmental Protection Agency (EPA) and Drug Enforcement Administration (DEA) agents traced the supply of CFC-113 to California ‘meth labs’ that used the product for the illegal manufacture of methamphetamine. The investigation revealed that a company called All Discount Labs Supplies was selling CFC-113 to individuals who used the product in meth labs, and the principals of All Discount Labs have since pleaded guilty to selling CFC-113 with reasonable cause to believe it was being used for the illegal manufacture of methamphetamine. Although Shellef and Rubenstein were not indicted on drug charges, the investigation revealed that they were major suppliers of CFC-113 to All Discount Labs. When used in meth labs, the CFC-113 is typically released directly into the atmosphere”.

Pollution crimes also are linked with terrorism. Interpol Pollution Crimes Working Group “Assessing the Links between Organised Crime and Pollution Crimes” (June 2006) stated that: “Some of the case studies provide evidence of the link between terrorism and pollution crimes. For example, 15 case studies of illegal waste disposal associated with diesel laundering were collated from the UK, and it is noted that red diesel laundering is often linked to terrorist groups in Northern Ireland. Terrorism relies on some element of organised criminal activity, for example to generate funding, and further research is required on the links between pollution crime and terrorism”.

Currently, global production of various ODS is mainly restricted to nine countries. Of these nine, two (India and the Republic of Korea) are in the Asia and Pacific region. These two countries account for approximately 70 per cent of the total production and consumption among developing countries. The region includes the largest producers and consumers of CFCs as well as large consumers of HCFCs, a group of chemicals whose consumption is rapidly growing. It is highly probable that the region will become a large producer of HCFCs as it has swing plants – facilities that can be easily reconverted to HCFC production. The region still produces methyl bromide, carbon tetrachloride (CTC), methyl chloroform, HFCs and halons.

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<tr>
<td>China</td>
<td>29,964</td>
<td>25,264</td>
<td>18,700</td>
<td>13,060</td>
<td>7,400 (Only use for China MDI)</td>
<td>550 (Only use for China MDI)</td>
<td>550 (Only use for China MDI)</td>
<td>0</td>
</tr>
<tr>
<td>India</td>
<td>15,008</td>
<td>13,047</td>
<td>11,259</td>
<td>6,890</td>
<td>3,389</td>
<td>2,259</td>
<td>1,130</td>
<td>0</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>6,838</td>
<td>9,152</td>
<td>3,518</td>
<td>4,601</td>
<td>1,380</td>
<td>1,380</td>
<td>1,380</td>
<td>0</td>
</tr>
<tr>
<td>Global Production</td>
<td>82,811</td>
<td>69,907</td>
<td>49,451</td>
<td>31,955</td>
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In developed countries, the illegal trade in ODS has been severely reduced, particularly due to the phase-out of Annex A CFCs in 1996. The United States, in its efforts to enforce the Montreal Protocol, has imposed a total of US$40 million in fines and 76 years of jail time. The EU has banned the sale and use of CFCs and halons.
In developing countries, the illegal trade in ODS has increased significantly as control measures for such ODS as CFCs have decreased legal supplies. CFC-reliant equipment continues to be widely used, thus prolonging demand for these chemicals.

A UNEP report on “Illegal Trade in Ozone Depleting Substances” (2001), stated that “By 1996, illegal ODS trade had grown to an alarming level. Though reliable figures on the scope of illegal trade are difficult to come by, it is estimated that between 16,000 and 38,000 tonnes of illegal CFCs were traded worldwide during 1995”. By the end of last decade, the volume of illegal trade in CFCs had declined in developed countries.

Reports of recent seizures indicate that illegal trade in the Asia and Pacific region is on the rise. The Environmental Investigation Agency (EIA) estimated (based on a 2006 estimate) that 7,000 to 14,000 tonnes of the CFCs are smuggled annually into developing countries. The illegal trade in ODS could adversely affect the efforts of the countries to meet their commitments under the Montreal Protocol.

In order to monitor imports and exports of ODS, prevent smuggling and illegal traffic of ODS and enable data collection, the Montreal Amendment to the Montreal Protocol (Montreal, September 17, 1997) requested that each Party, by 2000, establish and implement a system for licensing the import and export of new, used, recycled and reclaimed controlled substances under the Montreal Protocol.

As of September 2007, 147 Parties to the Montreal Amendment had established import and export licensing systems, as required under the terms of the Amendment. The aim of the licensing system is to help tackle the growing illegal trade in ODS, which stems from some users’ attempts to avoid the cost of replacing machinery requiring banned categories of chemicals. It provides a basis to monitor and track the movement of ODS.
Illegal trade has become one of the major obstacles in achieving efficient phase-out of ODS in the Asia and Pacific region. Nations, international organisations and non-government organisations (NGOs) need to work more closely to address this issue. Cooperation between enforcement authorities at the national and regional level also plays a very important role in dealing with illegal ODS trade issues.

The UNEP Division of Technology, Industry and Economy has been very active in this regard. The establishment of a Compliance Assistance Programme in 2002 has significantly intensified the efforts of UNEP regional networks aimed at combating illegal trade in ODS.

UNEP regional networks have supported the implementation of national and sector phase-out plans being implemented by Article 5 countries through raising awareness, improving exchange of information and creating an enabling environment for collaborative efforts of different groups of stakeholders.

In 1999, the Multilateral Fund Executive Committee (ExCom) approved a pilot regional workshop on monitoring and control of ODS implemented jointly by UNEP and Sweden and funded by Sweden and Japan. This Workshop subsequently led to the first Customs Network Initiative approved by ExCom in 2001.
In July 2001, ExCom gave its approval to a regional project to improve monitoring and control of ODS in the South East Asia and the Pacific (SEAP) region, funded by Sweden through the Swedish bilateral contribution to the Multilateral Fund and implemented together with UNEP. In April 2003, the project was expanded to include also the South Asia (SA) region. Twenty-four countries in the SEAP-SA regions participated in the Sida project. The project was designed to provide structure, guidance, training and direction for the dynamic process of integrating the efforts of participating countries and various relevant international organisations. Inherent in this approach was learning and adjusting, based on the accumulation of experience and the injection of expertise.

Regional Findings on the Trans-Boundary Movements of CFCs

The aim of the joint Customs-Ozone Networking Project of UNEP and the Government of Sweden implemented between 2001 and 2006 was to improve monitoring and control of ODS in the Southeast Asia and Pacific and South Asia regions. As part of this project, a desk study analysing the trans-boundary movements of CFCs was conducted. The report documents discrepancies in reported CFC data of up to 2,000 tonnes a year between importing and exporting countries in the Asia and Pacific region.

The data obtained from publicly available sources also confirmed these findings. The trade data extracted from the Global Trade Atlas and the United Nations Commodity Trade Statistics database (UN Comtrade) provided further proof of the illegal ODS trade in the region. The following data from the Global Trade Atlas (provided courtesy of the Environmental Investigation Agency) and UN Comtrade illustrate this.
The United Nations Department of Economic and Social Affairs/Statistics Division pointed out that “Differences between imports reported by one country and exports reported by its trading partner are due to various factors including valuation [imports CIF (Cost, Insurance, and Freight), exports FOB (Free on Board)], differences in inclusions/exclusions of particular commodities, timing, etc.” However, it is worth noting that one reason which could account for such discrepancies is smuggling.

(1) China-Indonesia

![Chart 1: CFC Import-Export Data Discrepancies: China-Indonesia](chart)

Source: Global Trade Atlas.

Chinese trade data show exports of 1,529 tonnes of CFCs to Indonesia in 2004, but Indonesian trade data show imports of only 248 tonnes of CFCs from China in 2004. These large data discrepancies are evident from 2001 (see chart 1).

The statement of an Indonesian environmental official tends to confirm the finding. Sigit Edi Pratiknyo, the State Ministry’s programme manager for sectoral planning, management and coordination, said: “400 to 500 tonnes of ODS were imported legally each year, but at least 4,000 tonnes of ODS were being traded in Indonesia every year”. China’s exports of ODS in 2004 to Indonesia only account for 38.23 per cent of the total estimated importation of ODS into Indonesia the same year.
The Government of Indonesia has planned to ban the import of methyl bromide for Non-Quarantine and Pre-shipment (QPS) and all CFCs starting from January 1, 2008, as stipulated by the Ministry of Trade Regulation No. 24/2006.

To support efforts in accomplishing the ODS phase-out target in Indonesia and enhance cooperation in controlling ODS movement in the region, “The Special Dialogue on Potential Actions for Controlling and Monitoring ODS trade in South Asia/South East Asia” was held on November 10, 2007, in parallel with “The 1st Regional Enforcement Network on Multilateral Environmental Agreements Workshop” in Bali, Indonesia.

(2) China-Malaysia

A considerable discrepancy in trade data is also evident between China and Malaysia. Chinese data show that 1,288 tonnes of CFCs were exported to Malaysia in 2003, but Malaysia recorded only 414 tonnes of CFCs imported from China in 2003, accounting for just 32 per cent of the Chinese data. Again for 2004, Chinese data show exports of 827 tonnes of CFCs to Malaysia, but Malaysian data show imports of 381 tonnes of CFCs from China that year (see chart 2).
UN Comtrade shows that China exported 201 tonnes of CFC-12 to Malaysia in 2005, whereas Malaysia reported imports of 106 tonnes of CFC-12 from China in the same year.

Since 2004, UNEP Regional Office for Asia and Pacific has facilitated bilateral discussions between Malaysia and China to analyse these trade data discrepancies. After ozone officers from the two countries exchanged information on licences and the companies involved, it was found that eight Malaysian companies that had not registered in Malaysia had imported more than 1,000 tonnes of CFCs into the country in 2004. Malaysia Customs conducted an investigation on these eight companies afterward.

(3) China-Thailand

There is a large discrepancy between China’s export data and Thailand’s import data for CFCs in 2001. In this case, the declared quantity imported is almost five times the declared exports from China. In later years, the reduction of the CFC trade between the two countries has led to a reduction in the inconsistency of reported data.
In 2003, the importation of CFCs from China recorded by the Philippines was 34 per cent less than exports reported by China. In 2004, the trade data discrepancy was recorded to be 81.2 tonnes, accounting for 27 per cent of China’s exportation to the Philippines (see chart 4).

**Some ODS Seizures in the Philippines in 2002-2006**

As a result of effective enforcement by the Philippines Customs Administration and environmental authority, a number of ODS seizures have been made in recent years:

In November 2002, the Philippines Department of Environment and Natural Resources (DENR) confiscated 30,000 kg of CFC-12 from a private business and arrested its general manager for illegal importation of a banned substance.\(^{10}\)

In May 2003, the Philippines Customs authorities seized 454 cylinders of 13.6 kg/cylinder of CFC-12 and HCFC-22, respectively. Using Neutron refrigerant identifiers, the shipment was tested and found to be 30.7 per cent HFC-134a, 9.9 per cent CFC-12, 48.3 per cent HCFC-22 and 11.1 per cent hydrocarbon; instead of pure HFC-134a, as declared. If computed by percentage weight, CFC-12 amounted to 539 kg.
In May 2003, the Philippines Customs authorities seized a shipment of CFC-12 imports from China contained in 1,140 cylinders at 13.6 kg/cylinder (total of 15,504 kg). An investigation revealed that the importer applied for a licence to import HFC-134a; but, instead, illegally imported CFC-12. The shipment was packed and labelled as HFC-134a, but without mentioning the brand name and without indication of where the substances had been manufactured.

In July 2003, the Philippines DENR confiscated 28 tonnes of chlorofluorocarbon – CFC-12 – during an inspection of two 20-foot containers from Shanghai, China. The 2,076 cylinders filled with CFC-12 were hidden behind two stacks of HCFC-22. The importer had obtained permits from the DENR’s Philippine Ozone Desk to import 31.2 tonnes of HCFC-22. When checked, the shipment yielded only three tonnes of HCFC-22, while the rest was made up of CFC-12.\(^{11,12}\)

The DENR estimates that about 15 to 20 per cent of CFCs shipped to the Philippines in 2002 arrived without permits through mislabelling or fraudulent papers.\(^{13}\) Thirteen illegal ODS cases have been detected in the country in the past five years.

In October 2006, a new brand of CFC-12 in a 13.6 kg white container was spotted in Manila, the Philippines. This new CFC brand was FUSH 12. One of the retailers who acquired it from a suspicious supplier requested the National Ozone Unit (NOU) to check the purity of the product. The results indicated that it
was indeed 100 per cent CFC-12. The address given by the supplier to the retailer was found to be non-existent.

When this particular brand-name was checked against the lists of CFC-12 imports in 2006, it was found that it did not appear on the NOU list or in the customs manifest. Additionally, there was no mention of the country of origin given on the label or on the cylinder itself. There have been complaints from legitimate importers about the presence of this brand on the market because its price is less than that of the legally-imported CFC-12.

**Some ODS Seizures in China in 2005-2006**

The Chinese Government is playing a leading role in combating illegal trade in environmentally sensitive commodities in the region. In April 2006, China Customs proposed Project Sky Hole Patching, an operation on combating illegal trade in ODS and hazardous waste in Asia and Pacific region (details on page 32). In support of the project, China Customs also launched a national operation on combating illegal trade in ODS and hazardous waste. China strengthened capacity building for its customs officers by organising training workshops in 2006 and 2007. Furthermore, China intensified the control of trade in environmentally sensitive commodities and investigation of environmental crime since the launch of the operation. Environmental issues have been prioritised on its agenda.

China, the world’s largest producer of CFCs and halon since 1996, shut down five of six remaining plans, on July 1, 2007, putting the country two and a half years ahead of the Montreal Protocol’s 2010 deadline for phase out of CFCs and halon.

Some ODS seizures in China are as follows:

(i) In January 2005, a company in Jiangsu Province made an export declaration of 2,500 kg of refrigerant. After inspection, it was identified as HCFC-123. The company tried to avoid using an export permit.
(ii) In May 2005, a company in Ningbo, Zhejiang Province, made an export declaration of 19.36 tonnes of refrigerant. After inspection, the goods were found to be 14.96 tonnes of HFC-134a. The company wrongly declared the quantity of the goods.

(iii) In June 2005, a company in Shenzhen, Guangdong Province, made an export declaration of 24,240 kg of foaming agent. After inspection, customs officers found that the goods were actually 2,020 cylinders of methyl bromide, weighing 27,472 kg.

(iv) On August 22, 2005, a company made an export declaration of 1,020 “compressor pieces” to Huangpu Customs, Guangdong Province. Customs seized 400 cylinders of R-406 among the goods. The Customs fined the company RMB 3,000 (equivalent to US$361) for false declaration.

(v) On March 15, 2006, a company declared an export of 18,240 kg of aluminium to Dapeng Customs (Shengzhen). Customs officers found 1,060 cylinders of CFC-12 with a weight of 14,416 kg among the goods. Dapeng Customs fined the company RMB 25,000 (equivalent to US$3,125) for false declaration.

(vi) On April 15, 2006, a company made an export declaration of plastic racks, men’s trousers and shoes to Dapeng Customs. However, 200 cylinders of CFC-12 weighing 1,840 kg were seized by the Customs.

(vii) On June 8, 2006, a company made an export declaration on “mist lamps” and “cartons” to Jinhua Customs (Zhejiang Province). During inspection, customs officers found 200 cylinders of CFC-11 among the goods, valued at RMB 458,000 (equivalent to US$57,250). Jinhua Customs confiscated the CFC-11 and fined the company RMB 5,000 (equivalent to US$625).

Source: China Customs.
India is another main exporter to the Philippines. It is notable that in 2003, the discrepancy between the import and export data was only 8.3 per cent; but in 2004, the imports recorded by the Philippines were 58 per cent less than the exports reported by India (see chart 5). No seizures have been reported of ODS from India en route to the Philippines.

India-Thailand

Source: Global Trade Atlas.
There are considerable discrepancies in the trade data for CFCs between India and Thailand. In 2001, the exports reported by India to Thailand were almost four times the quantity of imports reported by Thailand from India. Discrepancies of this magnitude have continued for the past five years. Indian data show the export of 1,340 tonnes of CFCs to Thailand in 2004, yet Thailand’s data indicate import of only 508 tonnes of CFCs from India in 2004 (see chart 6).

During the Fourth Joint South East Asia Pacific-South Asia Customs-Ozone Officers Cooperation Workshop in May 2006 in Bangkok, UNEP ROAP facilitated a bilateral discussion between Thailand and India. After having compared import and export records, Thailand and India confirmed the discrepancy identified in the 2003 CFC trade data. The Thai NOU provided the Indian NOU with the list of importers and quantities imported. The Indian NOU later checked their export record and provided the relevant information to the Thai NOU and UNEP ROAP. Furthermore, Thailand and India sorted out the trade data in 2004.

Some ODS Seizures in Thailand in 2003-2006

It is very encouraging that Thailand has played a very active role in information exchange on illegal trade in ODS. Thailand reported seven seizures in 2003 to the Meeting of the Parties to the Montreal Protocol. Four of these seizures were imported from India and two of them were seized by a special Khong River division during transport across the river from the Lao People’s Democratic Republic to Thailand. In 2005, Thai Customs reported 46 ODS seizures during the period 2003-2005 to the Customs Enforcement Network (CEN). Among the 46 cases, 27 were smuggled from Lao PDR accounting for 58.9 per cent, followed by Malaysia, accounting for 17.4 per cent. In early 2007, Thai Customs reported an ODS seizure at the Thai-Malaysia border. By being aware of the trade data inconsistencies between China and Malaysia, customs officers at the border of Malaysia and Thailand are better informed and more vigilant in combating ODS smuggling from Malaysia to Thailand.
The desk study on trans-boundary movements of ODS revealed that Lao PDR reported to the Ozone Secretariat that no ODS were exported from Lao PDR to other countries in recent years. It is highly probable that smugglers use Lao PDR as a transit country to smuggle ODS from India and other countries into Thailand.

**Statistics of CFCs Import Smuggling Cases in Thailand**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number (cases)</th>
<th>Value</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Thai Baht</td>
<td>Equivalent to US$</td>
</tr>
<tr>
<td>2004</td>
<td>13</td>
<td>1,949,764</td>
<td>48,744</td>
</tr>
<tr>
<td>2005</td>
<td>25</td>
<td>4,707,531</td>
<td>117,688</td>
</tr>
<tr>
<td>2006</td>
<td>9</td>
<td>326,070</td>
<td>8,151</td>
</tr>
</tbody>
</table>

*Source: Thai Customs.*

On July 14, 2005, in Pran Buri, Thai Customs officers used an X-ray scanner to inspect a shipment which was declared as used empty cylinders. Customs found 200 cylinders of CFC-12, HCFC-22 and HFC-134a valued at 786,450 Thai Baht (equivalent to US$19,661). See images below.

(7) **India-Bangladesh-Nepal**

India reported to UNEP ROAP that 2,033 cylinders of CFCs, with a total weight of 28,329 kg, were seized from January to June 2003 at the border...
between India and Bangladesh. Smuggled ODS were also reported to have been seized on the border of India and Nepal. In 2001, 74 tonnes of smuggled CFC-12 and HCFCs were seized at Birganj Customs. The open border makes it difficult for customs officials to keep track of appliances entering Nepal.\(^\text{14}\)

In 2003, UNEP organised the “Nepal Dialogue” among Nepal, China and India in Kathmandu where the three countries agreed to share information on smuggling and production. They also agreed to hold regular meetings among customs officers working at Nepal’s borders with China and India.

Mr. S.C. Wadhwa, the then Vice President, Corporate Marketing, at Gujarat Fluorochemicals Ltd., one of India’s leading producers of CFCs/HCFCs, points out that “As India begins to cut CFC production in accordance with the Montreal Protocol, illegal trade in ODS has become a subject of great concern. Surfacing in India sometime in 1996, this illegal activity reached alarming levels in 1999. According to rough estimates, about 900 to 1,000 metric tonnes of ODS infiltrated into India between 1999 and 2000. Industry associations claim that porous land borders shared with neighbouring countries provide major routes for illegal ODS imports”.\(^\text{5}\)
Some Cases of ODS Seizures in India

(i) On August 20, 2006, 111 CFC cylinders were seized from a storage facility in Nadia, West Bengal.

(ii) On July 23, 2006, 161 cylinders containing ODS were seized near the Indo-Bangladesh border.

(iii) On June 30, 2006, 10 CFC cylinders were seized from a railway station in West Bengal.

(iv) On June 20, 2006, 586 CFC cylinders were seized from an abandoned house in West Bengal.

(v) On March 4, 2006, 104 cylinders (each weighing 13.6 kg) containing monochlorodifluoromethane (HCFC-22) gas were seized near the Indo-Nepal border.

Source: India Customs.

(8) India-European Union-China

India is one of the world’s largest remaining ODS producers and it does not have any registered importers. However, the United Nations Comtrade Database shows that the European Union (EU) exported 242.2 tonnes of CFC-12 and 122.943 tonnes of CFC-11 to India in 2005.

The database also shows that Indian Customs recorded imports of CFC-11 and CFC-12 from the EU and China from 2003 to 2005 (as shown in the Table 3 next page).

One may notice that India recorded imports of more than 220 tonnes of CFC-12 from China annually during the period 2003-2005. There was no record of corresponding exports from China. In 2005, Indian Customs reported imports of 19.98 tonnes and 0.1 tonnes of CFC-11 from Spain and the U.K., respectively, accounting for 16.3 per cent of the EU’s exports to India.
Table 3: Imports of CFC-11 and CFC-12 into India, 2003-2005

<table>
<thead>
<tr>
<th>Period</th>
<th>Trade flow</th>
<th>Importing Country</th>
<th>Exporting Country</th>
<th>Code</th>
<th>Net Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>Import</td>
<td>India</td>
<td>China</td>
<td>290342 (CFC-12)</td>
<td>273,437</td>
</tr>
<tr>
<td>2003</td>
<td>Import</td>
<td>India</td>
<td>U.K.</td>
<td>290342 (CFC-12)</td>
<td>34,320</td>
</tr>
<tr>
<td>2004</td>
<td>Import</td>
<td>India</td>
<td>China</td>
<td>290342 (CFC-12)</td>
<td>279,399</td>
</tr>
<tr>
<td>2004</td>
<td>Import</td>
<td>India</td>
<td>Greece</td>
<td>290342 (CFC-12)</td>
<td>8,400</td>
</tr>
<tr>
<td>2005</td>
<td>Import</td>
<td>India</td>
<td>Spain</td>
<td>290342 (CFC-12)</td>
<td>134,500</td>
</tr>
<tr>
<td>2005</td>
<td>Import</td>
<td>India</td>
<td>China</td>
<td>290342 (CFC-12)</td>
<td>224,800</td>
</tr>
<tr>
<td>2005</td>
<td>Import</td>
<td>India</td>
<td>Netherlands</td>
<td>290342 (CFC-12)</td>
<td>18,420</td>
</tr>
<tr>
<td>2005</td>
<td>Import</td>
<td>India</td>
<td>Spain</td>
<td>290341 (CFC-11)</td>
<td>19,980</td>
</tr>
<tr>
<td>2005</td>
<td>Import</td>
<td>India</td>
<td>U.K.</td>
<td>290341 (CFC-11)</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: UN ComTrade.

(9) China-India-Viet Nam

The desk study on analysis of trans-boundary movements of ODS revealed significant data discrepancies between India’s and China’s reported exports of CFC-12 to Viet Nam and Viet Nam’s consumption reported to the Ozone Secretariat. Publicly available trade data also confirmed these

Chart 7: CFC-12 Import-Export Discrepancies: India+China-Viet Nam

Source: Global Trade Atlas.
findings. For example, in 2003, India reported exports of 895 tonnes to Viet Nam, China reported exports of 242 tonnes, while Viet Nam’s consumption was only 244 tonnes that year. One possible reason for the discrepancy may be that 894 tonnes of CFC-12 had been re-exported to other countries. In 2004, the discrepancy was 540 tonnes. UN Comtrade indicates that in 2005 China reported exports to Viet Nam of 486.817 tonnes of CFC-12 and India reported exports of 614.2 tonnes of CFC-12 to Viet Nam. In the same year, Viet Nam’s consumption was declared as 234.8 tonnes.

Japan reported to the Parties of the Montreal Protocol that in July 2002, two men tried to import 6,030 kg (each 250 g x 24,120 cans) of CFC-12 from Viet Nam in marine containers. The cans were concealed in the container behind boxes containing paints. A false declaration of “paints” was made to Customs. Another case was also reported to Customs Enforcement Network (CEN) en route from Viet Nam to Japan.

In a meeting among Cambodia, Lao PDR, Thailand and Viet Nam, organised by UNEP ROAP in April 2006 in Vientiane, Lao PDR, it was noted that several hundred tonnes of ODS were exported by Viet Nam in 2005 to neighbouring countries such as Lao PDR and Cambodia and that these ODS were subsequently smuggled into Thailand. It is highly probable that smugglers imported ODS from India and China and then re-exported to neighbouring as well as other countries.

(10) Singapore-Malaysia

From chart 8, it is clear that Singapore’s reported exports were 8.8, 6.4 and 6.4 times higher, respectively, than Malaysia reported imports from Singapore from 2002 to 2004.

<table>
<thead>
<tr>
<th>Year</th>
<th>Singapore’s reported exports</th>
<th>Malaysia’s reported imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>715</td>
<td>81</td>
</tr>
<tr>
<td>2003</td>
<td>647</td>
<td>101</td>
</tr>
<tr>
<td>2004</td>
<td>801</td>
<td>124</td>
</tr>
</tbody>
</table>

Source: Global Trade Atlas.
The United Nations Comtrade data show that in 2005, Iran recorded imports of 313.84 tonnes of CFC-11 and 338.067 tonnes of CFC-12 from China. However, China recorded exports of only 126.8 tonnes of CFC-11 and 15.3 tonnes of CFC-12 to Iran. Similar trade discrepancies also existed in 2003 and 2004.

The United Nations Comtrade data show that India exported only 92 tonnes of CFC-12 to Iran in 2005, but Iran recorded imports of 398.127 tonnes of CFC-12 from India.

In 2002, India recorded exports of 416 tonnes of CFC-12 and 313.8 tonnes of CFC-11 to Iran, but Iran recorded imports of 236.256 tonnes of CFC-12 and 616.44 tonnes of CFC-11 from India. Although the total quantities of CFCs in this case do not represent a considerable discrepancy, the classification and Harmonised System (HS) customs codes usage may indicate some problems.
Japan

Japan has reported seven ODS smuggling cases to the Meeting of the Parties of the Montreal Protocol and Japan Customs has reported 11 ODS cases to the Customs Enforcement Network (CEN).

Among the 11 seizures, seven originated from China, two from Viet Nam and one each from Thailand and Egypt. It is also worth noting that two shipments of ODS were smuggled by air.

*Oil Drum Case:* In October 2002, a firm tried to import 18,142 cans of CFC-12 from China into Japan. The firm falsely declared to Japan Customs authorities that the drums contained ethylene glycol. After inspection, 18,142 cans of CFC-12, weighing 4,536 kg, were found in drums. The concealment method used was very complicated (see photos on page 27).

The Oil Drum Case suggested that illegal ODS trafficking has become very sophisticated and large-scale, and offers criminal syndicates enough profits to invest their resources in ODS trafficking.
Japan Oil Drum Case: In October 2002, a firm tried to import 18,142 cans of CFC-12 from China into Japan. The firm falsely declared that the drums contained ethylene glycol. After inspection, 18,142 cans of CFC-12, weighing 4,536 kg, were found in drums. The concealment method used is demonstrated as follows.

On January 11, 2007, Japan Customs seized 5.67 tonnes of CFC-12 (dichlorodifluoromethane) originating from the Republic of Korea. It is notable that although Japan phased out CFCs more than 10 years, smuggling of ODS continues.
(14) Fiji

It is encouraging that in 2005, Fiji brought two ODS cases to court successfully. In the first of these cases, the accused was charged for unlawful storage of a controlled substance namely CFC-12 on its premises without a licence, contrary to the ODS Act of 1998. In the second case, the accused was charged for handling of a controlled substance, namely CFC-12, without a licence, contrary to the ODS Regulation 2000. The two accused were fined US$1,000.

In 2006, 20 bottles (each 500 ml) of carbon tetrachloride (CTC) were seized from a fishing company in Fiji. Fiji Ozone Officer, Shakil Kumar, informed UNEP that Fiji Island Revenue and Customs Authority had seized 5,000 cases of second-hand cars containing ODS-mobile air-conditioner since 2001. The used vehicles were imported mainly from Japan. There is a company in Japan that now checks second-hand vehicles before exporting them to Fiji. It ensures that all the gases are recovered in Japan before they are shipped to Fiji.

(15) Pakistan

Environmental Investigation Agency pointed out that “Smuggling of CFCs into Pakistan has risen over the past couple of years, fuelled by a small domestic quota compared with the demand. In September 2000, several 20-foot containers of CFC-11 and CFC-12 were illegally imported into Pakistan by declaring that the containers held HCFC-22. The smugglers had placed a single layer of HCFC-22 cylinders next to the door of each container to disguise the contraband. Another method used by smugglers is to falsely declare the quantity of imports. Pakistan also receives considerable quantities of smuggled CFCs through its land borders”.

28
Another outcome of the Customs-Ozone Networking Project was that since January 2006, the South Asia-South East Asia and Pacific network member countries, in order to better manage the import and export of CFCs in the region and to effectively implement the national licensing systems, have agreed on a mechanism of In formal Prior Informed Consent (iPIC) on Export and Import of CFCs. The mechanism is being implemented on a voluntary basis in the region.

Countries in the network had earlier developed “Info Sheets on ODS licensing” that listed registered importers/exporters, substances and quotas allowed and that were being distributed to all the countries within the network. It was subsequently agreed that when issuing import/export licences in 2006 ozone officers would informally consult the list of registered importers/exporters provided by the network countries and inform the corresponding NOU of the import and export licences issued.
The mechanism aims at assisting member countries to implement licensing systems effectively so that they do not exceed their maximum allowable annual consumption levels, as contained in phase-out strategies or prescribed by the Protocol.

**iPIC in 2006**

“Info sheet ODS Licensing” for 20 countries were received and circulated within the Network in 2006.

As a major transit country for trade in the region, Singapore has actively implemented the mechanism for informing concerned NOUs as to the details of CFCs being re-exported to their countries. Singapore also requested that other countries in the South East Asia Pacific-South Asia network contact the Singaporean NOU before exporting CFCs, halons and methyl bromide to the country.

When issuing export licences, China checked that companies were registered and verified their quotas by referring to the Licensing Info Sheet 2006. It did not issue licences to non-registered companies. Other countries in the region have reported that this mechanism helps them to control import and export of CFCs.

The Indian NOU has discussed with the Director General of Foreign Trade of India on ways to implement this mechanism. The Republic of Korea assisted Pakistan in controlling CTC in 2006. Information on iPIC has been exchanged during regional network meetings and customs workshops.

In addition, agencies in other regions also showed interest in the mechanism. For example, the European Commission has provided a list of registered companies and quotas for 2006 to UNEP ROAP.

**iPIC in 2007**

It is encouraging that this mechanism has made rapid progress in the region in 2007. Twenty-four Info Sheets have been received and circulated in 2007. Countries which participated/submitted information include Australia, Brunei Darussalam, Cambodia, China, India, Indonesia, Iran, Fiji, Japan, Democratic People’s
Republic of Korea, the Republic of Korea, Lao PDR, Malaysia, Mongolia, the Philippines, Sri Lanka, Singapore, Sweden, Thailand, Viet Nam and the European Community (EC).

The Info Sheet has contributed to helping countries control ODS trade. For example, the Info Sheet from the EC shows that an “X” number of tonnes of CFCs had been planned for export to India in 2007 and UN Comtrade data show that 242 tonnes of CFC-12 and 123 tonnes of CFC-11 were exported from EC to India in 2005. However, India does not have any registered importers. UNEP has had consultations with India on this issue.

On March 14, 2007, the EC consulted with Iran on the export of CFC-11 to Iran. The issue was raised, as the importer was not listed on the 2007 Licensing Information Sheet. Iran subsequently reported that the importer had been registered.

On March 19, 2007, the Pakistan NOU informed the EC, China, India and the Republic of Korea of Pakistan’s maximum allowed consumption limits of ODS for the fiscal year 2007-2008, which are as follows:

- CFCs 164 tonnes
- Halon 2.3 tonnes
- CTC not allowed
- Methyl Bromide banned

Subsequently, on March 20, 2007, the EC informed a particular European company that “In [the European company’s] export declaration for 2007, [they] announced that [they] intend to export quantities of CFC-11 and CFC-12 that would exceed the limits mentioned in the message from Pakistan”. In addition, on March 20, 2007, the EC rejected the application of a European company to export methyl bromide to Pakistan, as well as an application from a European company to export halons to Pakistan.

On March 16, 2007, the Chinese NOU requested UNEP to verify the status of three companies in the Philippines, Indonesia and Lebanon regarding the import of methyl bromide. The NOU of the Philippines verified that the importer was registered; the Indonesian NOU identified the importer as suspicious; and China reported that it
did not issue a licence to the said importer. The UNEP Regional Office for West Asia facilitated an inquiry into the Lebanese company. Lebanon identified that the prospective importer was not registered.

In October 2007, Indian Ozone Cell informed Indian ODS exporters that “All exporters of CFCs in India should ensure that the enterprises in the importing countries should/must be registered with the National Ozone Unit (NOU) of their respective countries. This is essential in order to ensure fair trade as per India’s commitment to the Montreal Protocol. It is advised that exporters must ask for the registration certificate or the permission from the NOU to import”.

In 2007, the implementation of iPIC successfully prevented more than 10 shipments of suspicious import and export of ODS.

UNEP ROAP requested that other regions adopt the voluntary PIC system. In East and Central Europe, the voluntary prior informed consent approach was presented during a recent network meeting and a recommendation to this effect was endorsed.

It would be useful for countries involved to report on the success of this initiative to the Parties to the Montreal Protocol.

It was recommended in the first meeting of the Regional Enforcement Networking on Multilateral Environment Agreements on November 8-10, 2007, in Bali, Indonesia, that:

(i) The producing/exporting countries should be required to share information according to the PIC procedure (Decision MOP VII/12).

(ii) In view of the recent strengthening of the control measures for HCFCs, the working group recommended the adoption of a mandatory PIC for HCFCs.

**Project Sky Hole Patching**

UNEP ROAP has worked closely with customs authorities in the region and this has led to a regional enforcement operation on curbing environmental crime called the “Project Sky Hole Patching”.
During the 11th World Customs Organisation (WCO) Asia Pacific Regional Conference of Heads of Customs Administrations in Beijing on April 3-6, 2006, it was unanimously agreed to initiate “Project Sky Hole Patching, an Operation on Combating Illegal Trade in ODS and Hazardous Waste”. The action plan of the project was adopted at the Fourth South Asia and South East Asia and Pacific Customs & Ozone Officers Cooperation Workshop (May 2006, Bangkok). The project was launched on September 1, 2006.

“Project Sky Hole Patching”, a joint operation of customs administrations and international organisations in the Asia Pacific region, was initiated by China Customs. It aims at establishing a monitoring and notification system among member administrations to keep track of the movement of suspicious shipments of ozone depleting substances and dangerous waste when they are imported, re-exported or trans-shipped across several customs territories. The Regional Intelligence Liaison Office (RILO A/P) and UNEP ROAP work in coordination for the operation in the region of Asia and the Pacific.

This proposal is a direct result of the cooperation between ozone and customs officers of countries in the region through implementation of the Swedish International Development Cooperation Agency (Sida) bilateral project under the Multilateral Fund (the Customs-Ozone Network) and the efforts of the Chinese Government to tackle illegal ODS trade through the development and implementation of a plan of action.
Twenty customs administrations from 18 countries have joined the operation. They include: Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Japan, the Republic of Korea, Maldives, Mongolia, New Zealand, the Philippines, Samoa, Sri Lanka, Thailand and Viet Nam.

It is encouraging that customs administrations in the Asia and Pacific region have prioritised environmental issues in their agenda. This initiative is a good example of how CAP has leveraged assistance from customs organisations and ministries of finance in the region by mainstreaming ozone issues into their agenda. This initiative is also in line with decisions taken at the Montreal Protocol Meeting of the Parties, notably MOP Decision XVII/16 (Para 7) and XIV/7 (Para 5):

**Decision XIV/: Monitoring of trade in ozone-depleting substances and preventing illegal trade in ozone-depleting substances (July 2003)**

Para 5. To encourage all Parties to exchange information and intensify joint efforts to improve means of identification of ODS and prevention of illegal ODS traffic. In particular those Parties concerned should make even greater use of the UNEP regional networks and other networks in order to increase cooperation on illegal trade issues and enforcement activities.
**Decision XVII/16: Preventing illegal trade in controlled ozone-depleting substances (December 2005)**

Para 7. To encourage further work on the Green Customs Initiative of the United Nations Environment Programme in combating illegal trade in controlled ozone-depleting substances as well as further networking and twinning activities in the framework of regional networks aimed at the exchange of information and experience on both licit and illicit trade in controlled ozone-depleting substances between the Parties, including enforcement agencies.

**Media’s attention**

The operation has also attracted a great deal of attention from the international media. It has been reported in Australia, Bangladesh (*The Independent*), China (*China International Radio*), France, Germany (*Deutsche Presse-Agentur*), the Republic of Korea, Singapore, Thailand (*Bangkok Post*), the U.K. (*Monsters and Critics*), the United States (*International Environment Reporter*) and several other countries. Twice, it has become the most visited story on UNEP’s website.

**Achievements**

The project has raised the awareness of regional customs authorities and enhanced a mutual understanding and cooperation among customs officers in the member countries. It has established stronger links with stakeholders and raised the awareness of frontline customs officers.

Project Sky Hole Patching is an excellent example of national, regional and international cooperation. RILO A/P facilitated intelligence dissemination among Hong Kong, Japan, Ecuador, Macau, Malaysia and customs administrations of many other countries. UNEP has provided an assessment report on the illegal trade in ODS. It has also produced lists of registered importers and exporters and their quotas, as well as producing a fact sheet for enforcement officers to RILO. The Environmental Investigation Agency collated a dossier of suspicious companies in China, which was provided to RILO. UNEP also supplied RILO with a list of suspicious companies engaging in the ODS smuggling in Malaysia. Information exchange among different regions is an ongoing exercise.
Since the initiative began, customs in Hong Kong, India and Thailand have played an active role in sharing information on ODS trade. Some countries such as Viet Nam and Cambodia now hold regular bilateral discussions on the illegal ODS trade. This timely information exchange among customs and environmental agencies in these countries has helped to monitor the movement of ODS in the region as well as other regions.

UNEP has also promoted capacity building for the Project Sky Hole Patching in cooperation with the United Nations Development Programme (UNDP). In a workshop organised by UNEP in Zhuhai, China, in October 2006, officers and experts from Hong Kong, India, Kyrgyzstan, Mongolia, Thailand, Environmental Investigation Agency and the United States were invited to share their experiences and to discuss regional implementation of the project. After the workshop, India started to report ODS seizures to RILO and UNEP.

Regular national training workshops are also included in the implementation of the project. For example, a national capacity building workshop for customs officers on Project Sky Hole Patching was held from May 30 to June 1, 2007, in Fiji. It caught the attention of Radio Australia and local media (Fiji Television and Fiji Times).

As Ms. L. Coppens, the Policy and Enforcement Officer of UNEP ROAP, stated: “Months after he attended a workshop in Wuxi, China, Mr. Ouyang Zhibin, a Chinese customs officer in Huanpu Port intercepted illegal ODS using methods he learned there”. It is encouraging that training efforts, involving customs and enforcement officers in the 18 participating countries, have begun to show positive results.
Main seizures

A number of cases of seizures have been reported by China, India, Japan, Singapore, Thailand and other countries since September 2006. Some of the main seizures are as follows:

(1) **China has detected three ODS cases and seized 8,232 kg of CFC-12 since September 2006. They include:**

   (i) On September 13, 2006, Shengzhen Customs, Guangdong Province, intercepted 752 kg of CFC-12 among goods declared as glass products. The offender was fined RMB 5,000 (equivalent of US$625).

   (ii) On November 27, 2006, Huangpu Customs, Guangdong Province, seized 7,480 kg of CFC-12 through its customs risk profiling system.

(2) **India Customs detected nine ODS cases, weighing 30,695 kg since September 2006. Among them are:**

   (i) On November 10, 2006, acting on specific information, the officers of Customs (Preventive), West Bengal, effected the seizure of 330 cylinders of HCFC-22 each weighing 13.6 kg.

   (ii) On March 9 and 13, 2007, on the basis of specific information, the officers of Customs (Preventive), West Bengal, effected a seizure of 306 cylinders of HCFC-22, each weighing 13.6 kg.

   (iii) On March 20, 2007, the officers of Directorate of Revenue Intelligence (DRI), Lucknow, recovered 4 gunny bags containing 16 cylinders of HCFC-22. The goods were suspected to have been smuggled into India through Indo-Bangladesh Border.
(iv) On April 14, 2007, a joint team of Directorate of Revenue Intelligence, Lucknow, and Nepal Trade Tax Officers intercepted 236 cylinders of HCFC-22 (each weighing 13.6 kg) at a check post on Indo-Nepal border.

(v) On April 22, 2007, the officers of DRI, Kolkata, intercepted one mini truck in West Bengal and seized 106 cylinders, each containing 13.6 kg of HCFC-22 of foreign origin. The goods were suspected to have entered India from Bangladesh.

(vi) During the period May 10-16, 2007, on the basis of specific intelligence, the officers of Directorate of Revenue Intelligence, Delhi and Mumbai, seized 963 cylinders of HCFC-22, each cylinder weighing 13.6 kg, at various places in Delhi and Mumbai. The cylinders, smuggled into India through India-Bangladesh border, were transported to Delhi and Mumbai by road.

(3) **Thailand seized 14 ODS cases, weighing 52,886 kg in 2007. They include:**

(i) On February 9, 2007, Thai Customs inspected a truck with an X-ray machine. The resulted image showed suspicious items, which suggested the need for further investigation. Upon physical inspection, Customs staff found 42 cylinders of CFC-12, whereas the goods declared were expandable polystyrene and sacks. The goods were being carried by a truck from the south of Thailand to Samutsakorn, Thailand.

(ii) On June 5, 2007, the Customs Department of the Kingdom of Thailand investigated a company in Chachoengsao Province. The company had declared that its four containers carried goods such as alarm clocks, photo frames, batteries, AM/FM radios, toys, etc. But, on investigation, it was found they carried many illegal items, including 200 cylinders of CFC-12, weighing 2,700 kg.
which were deceptively labelled as Genetron-12, cosmetics and watches. The goods were worth 40 million Thai Baht (equivalent to US$1,212,121).

(iii) On August 16, 2007, Thai Customs held a press conference on the seizure of 2,630 refrigerant and 98 air-conditioner compressors, valued at about eight million Thai Baht (equivalent to US$235,294).

Thai Customs investigated two premises in Bangkok and seized:
- 603 cylinders of HFC-134a, weighing 8,200 kg.
- 826 cylinders of CFC-12, weighing 11,233 kg.
- 1,201 cylinders of Genetron-12, weighing 16,333 kg.
- Five Fuji compressors.
- 90 Sunden compressors.
- Three other compressors.

The goods had not been declared to Thai Customs and originated from Mexico. The suspects avoided permits and tax on the goods.
In addition, the Philippines reported a seizure of 531 kg of carbon tetrachloride. Fiji, Japan and Pakistan also reported seizures of ODS.

(4) Hazardous Waste Seizure in Phase II of Project Sky Hole Patching

About three million kilogrammes of used batteries and computer monitors have been seized by member customs:

(i) Hong Kong Customs has reported 88 waste seizures from March to November 2007. The seizures have included such items as used computer monitors and vehicle batteries, used TV monitors, copper ash, electronic and telephone parts. They were commonly declared as metal scrap, computer parts, hardware materials, electric goods, etc.

(ii) China Customs has reported 95 waste seizures. The confiscated goods have included such used wares as computer monitors, batteries, clothing, tyres and wooden goods as well as electronic waste, waste oil, lead waste and plastic waste, etc.

Way forward

The project has been reviewed and discussed in UNEP’s workshops and meetings, i.e., the Green Customs Workshop for WCO Regional Training Centres (May 16-19, 2007, Shanghai), the Green Customs Workshop for Greater Mekong Subregion (September 5-7, 2007), meetings of Partners’ Forum on Combating Environmental Crime, etc. The 19th RILO A/P Administrative Meeting (November 21-23, 2007, Beijing) evaluated the project and distributed an evaluation report. It recommended:

(i) To convert the project into a routine operation from November 1, 2007;

(ii) To invite potential new members – Indonesia and Nepal:
(a) Indonesia has indicated its desire to join the project, pending formal confirmation and nomination of single contact point;

(b) Nepal Bureau of Standards and Meteorology is interested in the project. Liaison with Nepal Customs is in progress;

(iii) To build closer ties with enforcement agencies and international organisations in Europe, e.g., the Netherlands authorities and the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL).

The first meeting of the Regional Enforcement Networking on MEAs on November 8-10, 2007, in Bali also recommended:

(i) Closer cooperation among Environmental Protection Agencies (EPA), Customs and stakeholders through formalised agreements (Memorandum of Understanding – MoU);

(ii) Setting up of hotlines/contact points in Environmental Protection Agencies and Customs;

(iii) Information/intelligence exchange among EPA, Customs and stakeholders;

(iv) Reward scheme for informer/intelligence received;

(v) Cooperation among UNEP, RILO A/P, Basel Convention Secretariat, Non-Government Organisations (NGOs) and stakeholders; and

(vi) Training provided by EPA, NGOs and industry to Customs.
Awards

The US Environmental Protection Agency (EPA) presented its 2007 Stratospheric Ozone Protection Award to RILO A/P in recognition of its contribution to protect ozone layer.

China Customs also won the Implementer Award for its initiation of Project Sky Hole Patching, aimed at combating illegal trade in ODS, as part of the celebrations of the 20th anniversary of the Montreal Protocol.

Results and Conclusions Drawn from the Customs-Ozone Networking Project

The Customs-Ozone Networking Project was finalised in 2006. Participating countries considered many aspects of the project to be beneficial and here are examples they have cited:

(i) Improved coordination of national customs with national ODS units through Memorandum of Understanding.

(ii) Customs giving environmental issues a higher priority.

(iii) Increased bilateral, regional and inter-regional cooperation among countries in curbing illegal ODS trade.

(iv) Information sharing and reporting via international clearing houses.

(v) Greater control of ODS trade through increased efficiency and effectiveness of customs agencies.
(vi) The Sky Hole Patching Project is a very positive outcome of the Customs-Ozone Networking project.

(vii) Increased cooperation between the RILO A/P and China Customs and the Environmental Investigation Agency has strengthened national efforts to prevent and combat illegal trade.

(viii) The success of the project in establishing dynamic, interactive networks makes it possible to include other MEAs.

(ix) The project has grown and extended its reach by establishing complementary, cooperative relationships with customs, Interpol and other agencies and programmes addressing environmental issues at various levels.

Other Initiatives on Illegal Trade Prevention

Green Customs Initiative

In 2001, UNEP DTIE launched the Green Customs Initiative. It aims at encouraging coordinated intelligence gathering, information exchange, guidance (such as codes of best practice) and training amongst the partner organisations involved to counter illegal trade and environmental crime.

The following organisations are cooperating on the Green Customs Initiative:

• The World Customs Organisation;
• Interpol;
• The Organisation for the Prohibition of Chemical Weapons;
• The Secretariats of the following Multilateral Environment Agreements (MEAs):
  – Montreal Protocol on Substances that Deplete the Ozone Layer;
– Basel Convention on the Trans-boundary Movements of Hazardous Wastes and Their Disposal;
– Stockholm Convention on Persistent Organic Pollutants;
– Rotterdam Convention on the Prior Informed Consent Procedure for certain hazardous chemicals and pesticides in international trade;
– Convention on International Trade in Endangered Species of Wild Flora and Fauna; and
– Cartagena Protocol on Biosafety.

• UNEP, especially its following divisions:
  – Division of Technology, Industry and Economics, OzonAction Branch (DTIE – GCI Secretariat) as well as its Chemicals Branch;
  – Division of Environmental Laws and Conventions (DELC); and
  – Division of Regional Coordination (DRC) and the Regional Offices.

The initiative offers information and training materials for customs officials to monitor legal trade and combat illegal trade in commodities of environmental concern.

UNEP has developed a work plan for the training of customs authorities in consultation with WCO, Interpol and the Convention Secretariats of the above MEAs. WCO and Interpol give overarching support to MEA activities through providing technical assistance, national customs authority contacts, commodity specific Harmonised Customs Codes, information exchange and investigative support to track environmental crime.

**Partners’ Forum on Combating Environmental Crime**

A Regional Partners’ Forum on Combating Environmental Crime was set up during a meeting of regional officers of concerned international organisations working to curb illegal trade in environmentally sensitive commodities. The meeting was

The first meeting of Partners’ Forum on Combating Environmental Crime was held in Bangkok on August 25, 2005.
held on August 25, 2005. It was agreed in the meeting that UNEP ROAP would begin to facilitate mutual consultation on policy matters of common interest among partners such as exchange of information, technical cooperation and coordination activities on combating environmental crimes in the region and regionalisation of Green Customs Initiative.

The second meeting of the Forum (July 28, 2006, Bangkok) discussed intelligence collection for the Project Sky Hole Patching. The third meeting of the Forum (February 2, 2007, Bangkok) reviewed the implementation of the project and discussed cooperation in Phase II of the project. The fourth meeting of the Forum (August 14, 2007, Bangkok) discussed the cooperation at national level on combating environmental crime.

**Regional Enforcement Network**

A project on Regional Enforcement Networking to improve compliance with Multilateral Environmental Agreements (MEAs) that include trade restrictions (Montreal Protocol, Basel, Rotterdam and Stockholm Conventions) started in June 2007. The project is funded by Sweden (outside of its contribution to the Multilateral Fund) and implemented by UNEP. It is a continuation of the Sweden-UNEP Customs-Ozone Networking project however with an expanded focus to include several MEAs. The project aims at initiating regional cooperation among countries in North East, South and South East Asia that will enable the participating countries to gain better control over their import and export of hazardous chemicals and waste by promoting further regional co-operation for the control of trans-boundary movement of

The first meeting of the Regional Enforcement Network on Multilateral Environmental Agreements was held on November 8-10, 2007, in Bali, Indonesia.
hazardous chemicals and waste. The project will establish improved communication channels for informal information exchange and develop common tools for data management and collaboration within the regional network.

**Private-Public Partnership**

Producers, industry and their distribution chains can play an important role in addressing illegal ODS trade issues. UNEP organised an interface of national stakeholders with the producers of the ODS in the region on February 26-27, 2004, in Hua Hin, Thailand. The workshop provided an understanding on the issues of illegal trade, including its sources, material flow path and destinations with the assistance of producers, harmonised regulatory scenario in different countries in the region. It also built private-public partnership to combat the illegal trade, and defined a road map for cooperation to control illegal trade with the assistance of the producers.

As a follow up to Hua-Hin workshop and promotion of public-private partnership, UNEP facilitated in organising a meeting on June 28-29, 2007, in Ulaan Baatar, Mongolia, for addressing ODS illegal trade issues.

The participants in the meeting, which also included producers of CFCs, formed a private-public partnership following the decision of CSD-11 (Commission on Sustainable Development) on partnership and agreed that:

(i) The ODS manufacturers will voluntarily track down the distribution to the sector level, through their distribution channels, and keep the National Ozone Unit (NOU) informed.
(ii) The ODS manufacturers will voluntarily label their products – both ODS and alternatives – in conformity with international standards that indicate, among other things, their chemical names, names of manufacturers and location of the factory.

(iii) Manufacturers of ODS will require their counterparts to provide the legally approved documents for the said importation before processing the contract, and submit such documents along with other required documents for endorsement/approval by the national authorities.

(iv) The ODS manufacturers will streamline record-keeping of their production, and make their production, package, sales log, etc., available for random on-site check conducted by the national authorities post 2010. The ODS manufacturers will submit quarterly reports of their production, stocks, sales, etc., to the national authorities.

(v) The NOUs will facilitate the exporting approval procedure and the information exchange on demand of ODS/alternatives, and keep the ODS manufacturers informed through an e-forum.

(vi) Similar partnership workshops would be organised annually to review the supply and demand and exchange information on the balance of ODS/alternatives.

(vii) The report of the workshop would be shared with all NOUs in this region through the forum of UNEP’s Regional Networks of ODS Officers.

(viii) UNEP would maintain an inventory of the ODS/alternatives manufacturers and share it with NOUs with regularly updated information provided by the manufacturers through the NOUs.
Illegal trade in the Asia and Pacific region is a considerable challenge for countries committed to achieving successful phase-out of ODS.

Analysis of ODS trade data indicates that there are significant discrepancies in reported trade in CFCs among India, China and Viet Nam; China and the Philippines; China and Malaysia; India and the Philippines; India and Thailand; Singapore and Malaysia; and various other countries in the region.

Cases reported to the Ozone Secretariat and CEN show that Cambodia, Lao PDR and Viet Nam may have been, may still be used as transit countries for smuggling ODS.

Considering the variety and widespread nature of smuggling operations, it is clear that customs officers of many nations need more training and information on the issue.

Illegal trade in the Asia and Pacific region can be controlled by effective implementation of a suitable regulatory mechanism and appropriate awareness programmes targeting suppliers, trading intermediaries and users. Training for customs officers and licensing authorities and a regular and systematic exchange of information among the licensing authorities and customs authorities is absolutely necessary. In this endeavour, the customs department of each country will play a critical role in controlling inflow of material through its borders. This effort has been initiated and is an ongoing exercise in the Asia and Pacific region with the assistance of UNEP.
<table>
<thead>
<tr>
<th>Party</th>
<th>Date</th>
<th>Substances traded</th>
<th>Volume</th>
<th>Exporting country</th>
<th>Details of the illegal ODS trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>May 2001</td>
<td>CFC-12</td>
<td>5,400 kg Each 250 g x 21,600 cans</td>
<td>Thailand</td>
<td>Two men tried to smuggle out 21,600 cans of CFC-12 from Thailand by air cargo by making a false declaration to the Customs authorities that they were importing lubricants.</td>
</tr>
<tr>
<td>July 2001</td>
<td>CFC-12</td>
<td>11,745 kg Each 300 g x 39,150 cans</td>
<td>China</td>
<td></td>
<td>A firm tried to smuggle out 39,150 cans of CFC-12 from China by marine containers through a false declaration to the Customs that it was importing HFC-134a.</td>
</tr>
<tr>
<td>July 2001</td>
<td>CFC-12</td>
<td>123,300 kg Each 300 g x 411,000 cans</td>
<td>China</td>
<td></td>
<td>A company and its affiliated firm tried to import 411,000 cans of CFC-12 from China by marine containers. Instead, the firm made ten times a false declaration report of HFC-124a to the Customs authorities.</td>
</tr>
<tr>
<td>July 2001</td>
<td>CFC-12</td>
<td>11,160 kg Each 310 g x 35,999 cans</td>
<td>China</td>
<td></td>
<td>Four Japanese tried to smuggle out 35,999 cans of CFC-12 from China by marine containers. Instead, they made a false declaration of HFC-134a to the Customs authorities.</td>
</tr>
<tr>
<td>March 2002</td>
<td>CFC-12</td>
<td>1,975 kg Each 350 g x 5,644 cans</td>
<td>Egypt</td>
<td></td>
<td>An Egyptian, living in Japan, tried to import 5,644 cans of CFC-12 from Egypt by air cargo. Instead, he made a false declaration of HFC-134a to the Customs authorities.</td>
</tr>
<tr>
<td>June 2002</td>
<td>CFC-12</td>
<td>2,871 kg Each 250 g x 11,483 cans</td>
<td>China-Hong Kong</td>
<td></td>
<td>Four Japanese tried to smuggle out 11,483 cans of CFC-12 from China by marine containers by giving a false declaration to the Customs to the effect that they were importing HFC-134a.</td>
</tr>
<tr>
<td>Party</td>
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<tr>
<td></td>
<td>June 2002</td>
<td>CFC-12</td>
<td>2,708 kg Each 250 g x 10,830 cans</td>
<td>China- Hong Kong</td>
<td>Four Japanese tried to import 10,830 cans of CFC-12 from China by marine containers. Instead, they made a false declaration of HFC-134a to the Customs authorities.</td>
</tr>
<tr>
<td></td>
<td>July 2002</td>
<td>CFC-12</td>
<td>6,030 kg Each 250 g x 24,120 cans</td>
<td>Viet Nam</td>
<td>Two men tried to import 24,120 cans of CFC-12 from Viet Nam by marine containers. The cans were hidden behind the boxes containing paints in the container. Instead, they made a false declaration of paints to the Customs.</td>
</tr>
<tr>
<td></td>
<td>July 2001</td>
<td>CFC-12</td>
<td>31,112 kg Each 300 g x 103,705 cans</td>
<td>China</td>
<td>A firm purchased 103,705 cans of CFC-12 knowing the substance was illegal to import.</td>
</tr>
<tr>
<td></td>
<td>October 2002</td>
<td>CFC-13</td>
<td>4,536 kg Each 250 g x 18,142 cans</td>
<td>China</td>
<td>A firm tried to import 18,142 cans of CFC-12 from China. The firm falsely declared to the Customs authorities that the drums contained ethylene glycol.</td>
</tr>
<tr>
<td>Philippines</td>
<td>May 2003</td>
<td>CFC-12 &amp; HCFC-22</td>
<td>454 cylinders of 13.6 kg each</td>
<td>China</td>
<td>Using Neutron refrigerant identifier, the shipment was tested and found to be 30.7% HFC-134a, 9.9% CFC-12, 48.3% HCFC-22, and 11.1% hydrocarbon, instead of pure HFC-134a, as declared. If computed by percentage weight, CFC-12 amounted to 539 kilograms.</td>
</tr>
<tr>
<td></td>
<td>May 2003</td>
<td>CFC-12</td>
<td>1,140 cylinders of 13.6 kg each</td>
<td>China</td>
<td>The Government of the Philippines apprehended the shipment after which the investigation revealed that the importer applied for a license to import HFC-134a but instead illegally imported CFC-12. The shipment was packed and labelled as HFC-134a but without brand name and no</td>
</tr>
</tbody>
</table>
Annex: (continued)

<table>
<thead>
<tr>
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<th>Volume</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>May 2003</td>
<td>CFC-12 &amp; HCFC-22</td>
<td>2,076 disposable cylinders of 13.6 kg each</td>
<td>China</td>
<td>The physical examination of the contents of two container vans revealed boxes of CFC-12 concealed behind layers of HCFC-22 boxes. The first two layers were HCFC-22, while the rest were CFC-12. The shipment was forfeited in favour of the government. In accord with the tariff and customs code of the Philippines, the forfeited shipment is sold through auction. Only registered importers are allowed to participate in the auction, and any ODS they purchase is deducted from their quota allocation. The importer was fined 50,000 pesos and suffered revocation of the certificate of registration and permits to import.</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>January 2003</td>
<td>CFC-12</td>
<td>26 cylinders of R-502 (mixtures of CFC and HCFC)</td>
<td>Not provided</td>
<td>Customs authorities detained these cylinders.</td>
</tr>
<tr>
<td></td>
<td>April 2003</td>
<td>CFC-12</td>
<td>200 cylinders of CFC-12 mislabelled as HFC-134a</td>
<td>China</td>
<td>Investigation revealed that a Chinese company manufactured the illegal consignment. The firm claimed it mistakenly filled the HFC-134a cylinders with CFC-12. The importer was fined. The consignment</td>
</tr>
</tbody>
</table>
### Annex: (continued)

<table>
<thead>
<tr>
<th>Party</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>was forfeited and sold at auction to a company with a valid quota to import ODS. The purchased amount was deducted from the company’s quota.</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>May 2003</td>
<td>CFC-12</td>
<td>1 cylinder of CFC-12 and 3 cylinders of R-502 (mixture of CFC &amp; HCFC) and 8 cylinders of CFC-11</td>
<td>Not provided</td>
<td>The Customs authorities detained the cylinders.</td>
</tr>
<tr>
<td></td>
<td>May 2004</td>
<td>CFC-12</td>
<td>Refrigerated container working with CFC-12</td>
<td>Not provided</td>
<td>This was directed for retrofitting.</td>
</tr>
<tr>
<td>Singapore</td>
<td>August 2001</td>
<td>CFC-12</td>
<td>80 cylinders of 13.6 kg each</td>
<td>Not provided</td>
<td>A company was apprehended and fined for ODS imports without license under the Environment Pollution Control Act.</td>
</tr>
<tr>
<td>Thailand</td>
<td>May 2003</td>
<td>CFC-12</td>
<td>680 kg of CFC-12 “Refron”</td>
<td>India</td>
<td>An informer alerted Customs officers.</td>
</tr>
<tr>
<td></td>
<td>June 2003</td>
<td>CFC-12</td>
<td>653 kg of CFC-12 “Refron”</td>
<td>Not provided</td>
<td></td>
</tr>
<tr>
<td></td>
<td>June 2003</td>
<td>CFC-12</td>
<td>454 kg of CFC-12 “Refron”</td>
<td>India</td>
<td>Seized by a special Khong River division during transport across the river from the Lao People’s Democratic Republic to Thailand. Prosecution of the case has not yet begun.</td>
</tr>
<tr>
<td></td>
<td>June 2003</td>
<td>CFC-12</td>
<td>2,978.7 kg of CFC-12 “Refron”</td>
<td>India</td>
<td></td>
</tr>
<tr>
<td>Party</td>
<td>Date</td>
<td>Substances traded</td>
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</tr>
<tr>
<td></td>
<td>July 2003</td>
<td>CFC-12</td>
<td>952 kg of CFC-12 “Refron”</td>
<td>India</td>
<td>Smuggling took place from Democratic Republic to the Lao People’s Thailand by crossing the Khong River and then transport by pick-up truck.</td>
</tr>
<tr>
<td></td>
<td>July 2003</td>
<td>CFC-12</td>
<td>680 kg of CFC-12 “Refron”</td>
<td>Not provided</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jul. 2003</td>
<td>CFC-12</td>
<td>4,923.2 kg of CFC-12 “Refron”</td>
<td>India</td>
<td></td>
</tr>
</tbody>
</table>
**Article 5 country** – A developing country that is a Party to the Montreal Protocol and whose annual consumption of ozone-depleting substances from Annex A (the five main CFCs and the halons) is less than 0.3 kg per capita. Such countries are considered to operate under Article 5 of the Montreal Protocol. These countries are given a 10-year grace period for most substances as compared with the phase-out schedule for developed countries.

**Basic domestic needs** – ODS consumption in an Article 5 country which is used to cover the needs of that country (does not include the use of ODS to produce products for export).

**CAP** – Compliance Assistance Programme.

**CEITs** – countries with economies in transition. Eastern European countries of the former Soviet Bloc whose economies are transitioning from communism to a free-market structure.

**CFCs (chlorofluorocarbons)** – A family of chemicals that contain chlorine, fluorine and carbon. CFCs are used as refrigerants, aerosol propellants, cleaning solvents and in the manufacture of foam. These chemicals have potential to destroy ozone molecules and are one of the main causes of ozone depletion.

**Essential use** – A use of a controlled ODS that is allowed by a Meeting of the Parties to the Montreal Protocol because it is necessary either for health, safety, or the functioning of society and no acceptable alternative is available. Essential use exemptions must, in general, be specifically applied for and justified, on an annual basis, by the Party concerned.

**Halons** – Brominated chemicals related to CFCs that are primarily used in fire fighting. Halons are particularly destructive to the ozone layer.
**HCFCs (hydrochlorofluorocarbons)** – A family of chemicals related to CFCs, which contain hydrogen as well as chlorine, fluorine and carbon. The hydrogen reduces their atmospheric lifetime, making HCFCs less damaging than CFCs in the long term.

**HFCs** – A family of chemicals related to CFCs, which contain hydrogen, fluorine and carbon, but no chlorine and therefore do not deplete the ozone layer.

**Illegal trade** – Import or export of ODS in violation of the Montreal Protocol or the national legislation.

**Methyl Bromide** – A chemical composed of carbon, hydrogen and bromine, which is used mainly as an agricultural pesticide and fumigant, and has a significant ODP.

**Montreal Protocol on Substances that Deplete the Ozone Layer** – The Protocol to the Vienna Convention, signed in 1987, which commits the signatories to take concrete measures to protect the ozone layer by freezing, reducing or ending production and consumption of controlled substances.

**Multilateral Fund** – Part of the financial mechanism under the Protocol. This fund supports ODS phase-out policies, programmes and investment projects in Article 5 countries.

**Non-Article 5 country** – All other Parties to the Montreal Protocol, which are not Article 5 countries (mainly developed countries).

**ODS (ozone-depleting substances)** – Any chemical that can deplete the ozone layer. Most ODS are controlled substances under the Montreal Protocol.

**ODP Tonnes** – ODP tonnes are calculated by multiplying the relevant quantity in metric tonnes by the “ozone-depleting potential” (ODP) of each substance. ODP is a measure of a substance’s ability to destroy stratospheric ozone, based on its atmospheric lifetime, stability, reactivity and content of elements that can
attack ozone, such as chlorine and bromine. All ODPs are based on the acceptable reference measure of 1 for CFC-11.

**Ozone depletion** – The process by which stratospheric ozone molecules are destroyed by man-made chemicals, leading to a reduction in its concentration.

**Phase-out** – A gradual reduction of production and consumption of a controlled substance, which ultimately leads to zero production, and consumption. In this context, consumption means the national production plus imports and minus exports.

**Party** – A country that has signed and ratified the Montreal Protocol. A party which has ratified the Montreal Protocol but not one or more of its amendments is considered a “non-party” with regard to the ODS which were controlled for the first time by that or these amendments. For instance, a country which has not ratified the London Amendment is considered a “non-party” with regard to carbon tetrachloride, 1,1,1 – trichloroethane and ‘other CFCs’ (and any substance controlled by later amendments).

**Retrofitting** – The procedure of replacing CFC refrigerants in existing refrigeration, air-conditioning and heat pump plants with non-ODS refrigerants. This procedure usually requires modifications such as change of lubricant and replacement of expansion device or compressor.

**Smuggling** – The act of secretly or illegally bringing something in or taking something out of a country, in this case, ODS.

**Stratosphere** – A region of the upper atmosphere between the troposphere and the mesosphere, ranging from about 15 to 55 km above the Earth’s surface.

**Ultraviolet radiation** – Radiation from the Sun with wavelengths between visible light and X-rays. UV-B (280-320 nm) is one of three bands of UV radiation and increased exposure to UV-B radiation can cause damage to human health and the environment.
UNEP – The United Nations Environment Programme. Through the UNEP DTIE OzonAction Programme, UNEP is one of the Multilateral Fund’s implementing agencies.


UNEP ROAP – Regional Office for Asia and the Pacific Office, United Nations Environment Programme.
American Society of Heating, Refrigeration and Air-conditioning Engineers
http://www.ashrae.org

Basel Convention
http://www.basel.int

Environmental Investigation Agency
http://www.eia-international.org

Environment & security
http://www.envsec.org/

Economic Cooperation Organisation
http://www.ecosecretariat.org/

Green Customs
http://www.greencustoms.org

Interpol
http://www.interpol.int

ODS Customs Codes Discussion Group
http://www.unep.org/ozone/ods-customs-codes

OzonAction Programme
http://www.unep.fr/ozonaction

Ozone Secretariat
http://www.unep.org/ozone

SAICM
http://www.chem.unep.ch/saicm/default.htm

TRAFFIC
http://www.traffic.org/Home.action

UNEP DTIE
http://www.unep.fr/en/

United States Environmental Protection Agency’s Ozone Depletion Home Page
http://www.epa.gov/ozone

Workshop of Experts from Parties on Illegal Trade in ODS:
http://ozone.unep.org/Meeting_Documents/illegal-trade/index.asp

World Customs Organisation
http://www.wcoomd.org

World Conservation Union (IUCN)
http://www.iucn.org/

United Nations Commodity Trade Statistics Database, Department of Economic and Social Affairs/Statistics Division
http://comtrade.un.org/db/
References


6 Study on Monitoring of International Trade and Prevention of Illegal Trade in ODS, Mixtures and Products Containing ODS (Decision XIII/12), UNEP/OzL.Pro/WG.1/22/4, P. 2.


8 An Unwelcome Encore-The Illegal Trade in HCFCs, Environment Investigation Agency, October 2006.


16 Information reported by the Parties to the Montreal Protocol on illegal trade in ozone-depleting substances (paragraph 7 of decision XIV/7), Fifteenth Meeting of the Parties to the Montreal Protocol, Nairobi, 10-14 November 2003, UNEP/OzL.Pro.15/INF/6.

17 Information reported by the Parties to the Montreal Protocol on illegal trade in ozone-depleting substances (paragraph 7 of decision XIV/7), Sixteenth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, Prague, 22–26 November 2004, UNEP/OzL.Pro.16/7.
In 2002, UNEP as an implementing agency of the Multilateral Fund of the Montreal Protocol made a conscious departure from the past in assisting developing countries to enable them to implement the Montreal Protocol. The new context of the compliance regime of the Protocol requires countries to achieve and sustain compliance, promote a greater sense of country ownership and implement the agreed Executive Committee framework for strategic planning.

In line with this re-orientation, UNEP proposed through the Compliance Assistance Programme to begin moving from a project management approach to a direct implementation approach through specialised staff. Active partnership with implementing agencies and bilateral agencies is the key element of such approach, which is expected to yield consistent and quality advice and support for countries. The Regional Office for Asia and Pacific (ROAP) CAP team is the centre for policy advice and compliance guidance and for giving training to refrigeration technicians, customs officers and other relevant stakeholders on compliance issues. It also promotes bilateral and multilateral cooperation and high-level awareness by utilising UNEP staff.

The regional vision of CAP is to draw from typical regional characteristics to forge priorities and a work plan. The region consists of 12 Parties from the South Asia Network, 11 Parties from the South East Asia Network and 14 from Pacific countries, and it accounts for more than 80 per cent of the global production and consumption of ODS. It is the region which has the largest as well as the smallest consumers in the world, has swing plants (that can produce both CFCs and HCFCs), which no other region has, and the Asia Pacific has taken the lead in designing national phase-out strategies and adopting innovative financing approaches.
These specific characteristics are built into CAP’s regional vision in consultation with the countries for 2003-2005, which has evolved multi-pronged strategies to analyse the demand-supply scenario and facilitate appropriate policy intervention by dialogue at high political levels, develop ways to deal with LVCs and non-LVCs, assist countries to promote leap-frogging of the transitional technologies away from HCFCs and HFCs and whenever applicable to focus efforts on on-line training and dissemination.

The programme implementation and delivery are organised through the Regional CAP Team.
About the UNEP Division of Technology, Industry and Economics

The UNEP Division of Technology, Industry and Economics (DTIE) helps governments, local authorities and decision-makers in business and industry to develop and implement policies and practices focusing on sustainable development.

The Division works to promote:
> sustainable consumption and production,
> the efficient use of renewable energy,
> adequate management of chemicals,
> the integration of environmental costs in development policies.

The Office of the Director, located in Paris, coordinates activities through:

> The International Environmental Technology Centre – IETC (Osaka, Shiga), which implements integrated waste, water and disaster management programmes, focusing in particular on Asia.
> Sustainable Consumption and Production (Paris), which promotes sustainable consumption and production patterns as a contribution to human development through global markets.
> Chemicals (Geneva), which catalyzes global actions to bring about the sound management of chemicals and the improvement of chemical safety worldwide.
> Energy (Paris), which fosters energy and transport policies for sustainable development and encourages investment in renewable energy and energy efficiency.
> OzonAction (Paris), which supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.
> Economics and Trade (Geneva), which helps countries to integrate environmental considerations into economic and trade policies, and works with the finance sector to incorporate sustainable development policies.

UNEP DTIE activities focus on raising awareness, improving the transfer of knowledge and information, fostering technological cooperation and partnerships, and implementing international conventions and agreements.

For more information, see www.unep.fr
Illegal trade has become one of the major obstacles in achieving efficient phase out of ozone depleting substances (ODS) in developing countries. Activities have been encouraged on a national, regional and global scale to improve the process of monitoring and control of ODS in order to prevent illegal trade. Enforcement of legislation dealing with ODS is needed through investment in customs resources, including training and equipment and emphasising the important role of cooperation between enforcement authorities at national and regional level.

This is an assessment report on Illegal Trade in Ozone Depleting Substances in Asia and Pacific region. It analyses the smuggling reasons, routes and trends of ODS, and also presents the outcome of a desk study on trans-boundary movement of ODS in the region. It could assist customs officers, ozone officers and other enforcement officers in their work to control trade in ODS.