

EIA Briefing to the 38<sup>th</sup> Meeting of the Open-Ended Working Group of  
the Parties to the Montreal Protocol

July 18-21 2016, Vienna, Austria

# UPDATE ON THE ILLEGAL TRADE IN OZONE-DEPLETING SUBSTANCES





## ABOUT EIA

EIA is an independent campaigning organisation committed to bringing about change that protects the natural world from environmental crime and abuse. As part of our work, we have undertaken groundbreaking investigations into the illegal trade in ozone depleting substances (ODS) and have been closely involved in the international ozone and climate negotiations for well over a decade.

## ACKNOWLEDGEMENTS

JULY 2016

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Report design: [www.designsolutions.me.uk](http://www.designsolutions.me.uk)

COVER IMAGE:

Earth © NASA Johnson 2016

OPPOSITE:

ODS cylinder dumping.

## INTRODUCTION

The ozone layer is a thin stratum of gas in the upper atmosphere which acts as a shield to protect the Earth's surface from about 99 per cent of harmful solar ultraviolet (UV) radiation.<sup>1</sup> So vital is the ozone layer that, without it, most of Earth's organisms could not have evolved, let alone be sustained.<sup>2</sup>

The human impacts of increased exposure to UV radiation are well documented and include suppression of the immune system, cataracts and skin cancers.<sup>3</sup> Plants and ecosystems are also at risk. Research has shown UV-B radiation can significantly impair the reproductive capacity and early developmental stages of aquatic organisms.<sup>4</sup> In addition, increased exposure to UV light in terrestrial plants results in reductions in height, decreased shoot mass and reductions in foliage area.<sup>5</sup>

The Montreal Protocol has been widely lauded as the world's most successful environmental treaty, having phased out 98 per cent of ozone-depleting substances (ODS) placed under its control.<sup>6</sup> However, illicit trade in ODS began following the first wave of chlorofluorocarbon (CFC) phase-outs and continues to this day, threatening to undermine this success.

Global demand for refrigerants has risen significantly in recent years, with peak hydrochlorofluorocarbon (HCFC) consumption approximately three times greater than CFC peak production. The scale of illegal HCFC trade could potentially be larger than that previously seen with CFCs.

This briefing provides an overview of ODS smuggling and actions to combat illegal ODS trade that can be taken by Parties to the Montreal Protocol.





“The scale of illegal HCFC trade could potentially be larger than that previously seen with CFCs.”





**ABOVE:**  
Indonesian customs officials  
seize falsely labelled CFCs.

## ILLEGAL TRADE IN OZONE-DEPLETING SUBSTANCES

High profit and low risk, the illegal trade in ODS has largely arisen due to the grace period between the phase-out schedules of Article 5 (A5, developing) and non-Article 5 (non-A5, developed) Parties which allows continued A5 production and use of chemicals that have been banned in non-A5 countries. Additionally, the need to service ODS-dependent equipment creates continued demand for banned chemicals, while the legal production of banned chemicals for feedstock creates a potential large-scale supply.

Seizures of illegal ODS indicate that the methods used to smuggle CFCs are now being used to trade illicit HCFCs. False labelling, mis-declaration of documents, concealment, fake recycled materials and transshipment fraud have all been identified as methods for smuggling HCFCs. Alarming, seizures of CFCs are still taking place, despite the chemicals being officially phased-out in 2010.

A key challenge is that commodity codes do not distinguish substitute refrigerants, in particular hydrofluorocarbons (HFCs), which are typically used as replacements to ODS. Decision XXVI/8: *Measures to facilitate the monitoring of trade in HCFCs and substituting substances* has started a

process of liaison between the Ozone Secretariat and the World Customs Organisation to examine the possibility of designating individual commodity codes for HFCs and also encourages Parties to establish domestic codes for key HFCs in the interim.

An additional issue is that some 50-70 per cent of ODS is thought to be shipped in larger tanks, e.g. ISO tanks; however, there is limited monitoring of this trade and most inspection and detection measures have focused on small cylinders.

### False Labelling

*Initially, CFCs were being packaged as HCFC-22. Later on, as ODS licensing came into force, illicit traders began to label these products as HFCs, in particular HFC-134a.*

**Example:** November 2014, Russia

Customs officers in Vyborg seized 15,640kg of HCFC-22 in 1,150 cylinders, disguised as HFC-134a. The consignment from China was unloaded at the seaport of Kotka (Finland) and then transported by lorry to Russia. The cylinders were declared in customs import documentation as HFC-134a and boxed in cartons marked as HFC-134a. Upon opening the boxes, however, the cylinders inside were found to be clearly labelled as HCFC-22. The shipment was valued at \$38,000. The cylinders were seized and a court case initiated.<sup>7</sup>

### Mis-declaration

ODS are disguised by putting the names of other similar, legal chemicals on shipping documents and invoices, or by forging licenses.

**Example:** July 2016, Belarus

Minsk regional customs in Belarus seized about 20 tonnes of ODS, shipped in 80 drums. The shipment documents indicated that the chemicals were not ozone-depleting but chemical analysis showed the cylinders contained HCFC-141b and CFC-113. The chemicals, shipped from China via Lithuania, were intended for use in industrial refrigeration. The Minsk regional customs office initiated a criminal case.<sup>8</sup>

**Example:** August 2014, Uzbekistan

7,568kg of refrigerants, including 1,360kg of CFC-12, were seized by customs from the Andijan region in Uzbekistan from a railway container. The shipment was transiting on its way from the United Arab Emirates to Kyrgyzstan. Information in the shipment documents, including the type of refrigerants, quantity and customs codes, was found to be incorrect.<sup>9</sup>

### Fake recycled material

Smugglers claim the material is recycled on shipping documents and permits when in fact it comprises virgin chemicals. The suppliers may even deliberately add a small amount of contaminant to the virgin chemical to make it appear to have been used, should it be tested.

**Example:** November 2012, Spain

The Spanish Guardia Civil performed a number of raids on several companies in the Canary Islands. At least two were found to be illegally diverting HCFC-22 for re-export into the European market. The companies had created false export license applications, declaring higher amounts of traded goods than were actually traded. Some of the surplus virgin HCFC-22 was then sold to Spanish and Lithuanian companies, having been wrongly declared as a recycled substance.<sup>10</sup>

### Concealment

ODS are simply hidden in ships, cars or trucks and moved across porous borders or concealed through measures such as 'double layering'.

**Example:** January 2014, India

Directorate of Revenue Intelligence officers seized 1,200 cylinders of illegally imported HCFC-22 at Chennai port in a container from China. The cylinders were hidden behind crates of the declared cargo, calcium powder.<sup>11</sup>

### Transshipment Fraud

Consignments of ODS ostensibly destined for legitimate end markets are diverted onto black markets. This type of fraud often involves complex shipping routes, passing through transit ports and free-trade zones where customs procedures may be more relaxed.

**Example:** March 2013, India

Indian Directorate of Revenue Intelligence and Customs seized 182 tonnes of HCFC-22 stored in five ISO tanks as well as more than 350 disposable cylinders. The HCFCs were imported from China to the port of Nhava Sheva, near Mumbai, where they had been declared as being imported for re-export. However, the importing company illegally diverted the refrigerant onto the Indian market.<sup>12</sup>

## TRADE DATA ANALYSIS

Customs trade data based on the Harmonised Commodity Description and Coding System (HS codes) can reveal discrepancies indicative of potential illegal ODS trade flows. Codes relating to trade in HCFCs were revised in 2012 and HCFC-22 was given a unique code (290371). Comparison of China's reported HCFC-22 exports in 2013 and 2014 with reported imports from all trading partners reveals that, on average, reported imports of HCFC-22 are 28 per cent lower than China's reported exports. In many individual instances, the discrepancy is larger (see Figs 1-3).

**FIGURE 1:** COMPARISON OF REPORTED EXPORTS AND IMPORTS OF HCFC-22 BETWEEN CHINA AND THE REST OF THE WORLD

YEAR	China reported HCFC-22 exports to World (tonnes)	World reported HCFC-22 imports from China (tonnes)	% difference
2013	129,282	100,299	28.9
2014	132,665	103,615	28.0

Source: UN Comtrade database

**“The availability of cheap virgin HCFC-22 for feedstock uses creates opportunities to divert these chemicals onto illegal markets for emissive uses.”**

Possible explanations for these discrepancies are:

- lack of reporting of imports by partner countries;
- export/import dates fall in different calendar years;
- incorrect end destination reported by exporter (e.g. reporting transit country in place of end destination);
- importers/exporters may be using incorrect HS codes;
- indication of illegal ODS trade.

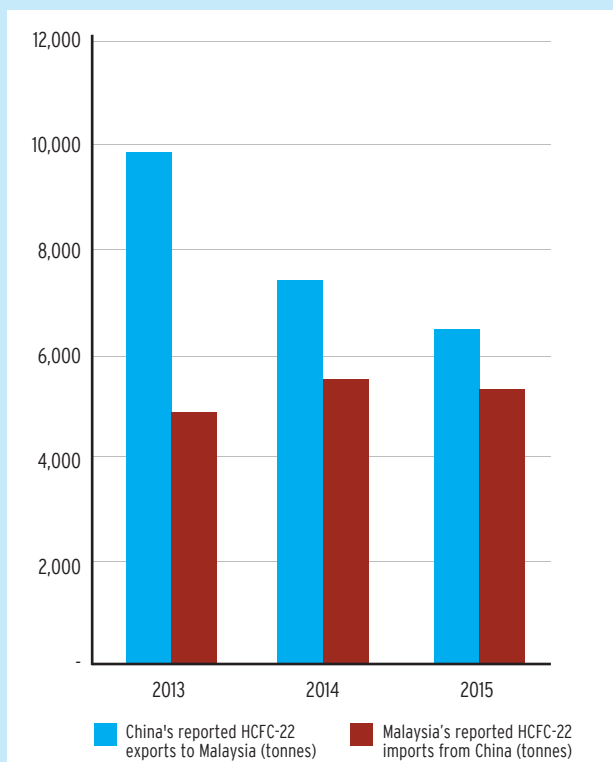
In an effort to obtain the necessary information to examine trade discrepancies, Decision XVII/16 (2005) revised the reporting format to include exports (and re-exports) of all controlled ODS and mixtures, while Decision XXIV/12 (2012) made further changes to allow importing countries to report the exporting party; however, the latter requirement was on a voluntary basis only. Compliance with Decision XVII/16 has been strong: 30 countries reported exports in 2013 and, of these, 98 per cent of the reports (by weight) included a destination country. In contrast, of 165 Parties reporting imports in 2013,

only 43 included information on source countries and 39 per cent (by weight) of the imports had their source countries specified.<sup>13</sup>

By providing additional data on export destinations and import sources, Parties are able to crosscheck trade discrepancies and resolve issues in order to eliminate suspicions of illegal trade.<sup>14</sup> EIA urges all Parties to comply with the voluntary requirements of Decisions taken to combat illegal ODS trade.

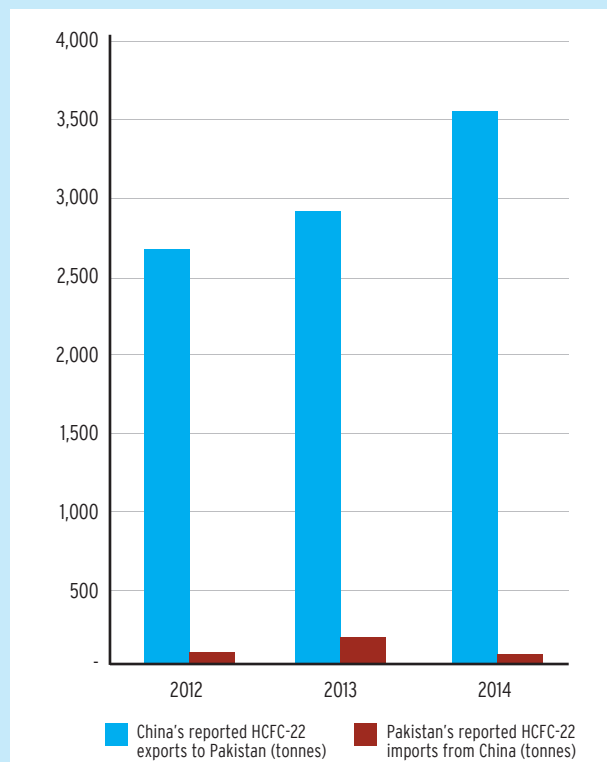
In addition to numerous decisions undertaken on illegal trade, the Montreal Protocol has also instigated measures designed to strengthen enforcement against illegal trade. One such initiative is the Informal Prior Informed Consent Mechanism (iPIC). iPIC was set up under the UNEP DTIE Ozone Action Compliance Assistance Programme to facilitate the voluntary, informal exchange of information on intended trade of ODS between Parties to the Montreal Protocol. By helping National Ozone Units (NOUs) and customs agencies responsible for issuing ODS import and export licenses to crosscheck licences or permits in both importing and exporting countries, iPIC has prevented numerous cases of illegal ODS trade.<sup>15</sup>

**FIGURE 2:**  
COMPARISON OF CHINA'S REPORTED EXPORTS OF HCFC-22 TO MALAYSIA AND MALAYSIA'S REPORTED IMPORTS FROM CHINA (TONNES)



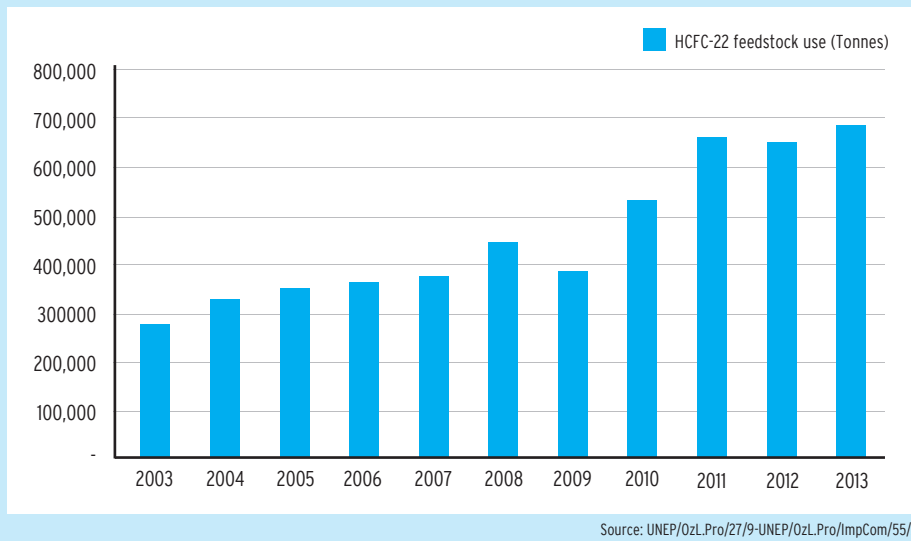
Source: UN Comtrade database

**FIGURE 3:**  
COMPARISON OF CHINA'S REPORTED HCFC-22 EXPORTS TO PAKISTAN AND PAKISTAN'S REPORTED IMPORTS FROM CHINA (TONNES)



Source: UN Comtrade database

**FIGURE 4:**  
REPORTED WORLD HCFC FEEDSTOCK USE (TONNES)



## FEEDSTOCKS

More than 1.17 million tonnes of ODS were used for feedstock applications in 2013, including 686,309 tonnes of HCFCs, 182,925 tonnes of CFCs and 188,872 tonnes of carbon tetrachloride.<sup>16</sup> EIA is concerned at the continued

growth in HCFC-22 production for feedstock applications at a time when developing countries are phasing out HCFC-22 consumption. The availability of cheap virgin HCFC-22 for feedstock uses creates opportunities to divert these chemicals into illegal markets for emissive uses.

## RECOMMENDATIONS

In addition to reporting and licensing requirements under Article 7 and Article 4B of the Montreal Protocol, a number of decisions have been taken aimed at combatting illegal ODS trade, including Decision XIV/7 which invites Parties to report cases of illegal ODS trade to the Ozone Secretariat and Decision XIX/12 which provides a series of recommendations to improve implementation and enforcement of licensing systems.<sup>17</sup> EIA urges Parties to make greater efforts to comply with these decisions; according to available information, very few countries have reported illegal ODS trade to the Ozone Secretariat and only one country has reported any cases since 2010, despite clear evidence of multiple cases since this time.<sup>18</sup>

### EIA recommends Parties:

- ensure that licensing systems include export, import as well as feedstock data;
- extend licensing systems to HFCs, HFC blends and hydrofluoro-olefins (HFOs);
- improve data reporting to the Ozone Secretariat (consumption, production, import, export, re-export including destination country, source country, feedstocks, recycled and reclaimed substances);
- join and proactively use iPIC - as of April 2016 there are 130 members, but active participation is required;
- ensure that customs officials are trained and incentivised to monitor large tanks of ODS;
- ban the use of non-refillable containers;
- apply penalties that will deter illegal trade, and publicise actions and penalties;
- support new HS Codes for HFCs and introduce domestic codes;
- support increased capacity building to address illegal trade and a point person within the Ozone Secretariat to proactively investigate potential illegal trade;
- Monitor feedstock use, licence feedstock users and verify end uses;
- Utilise EIA's training film "Combating the Illegal Trade in Ozone Depleting Substances" to raise awareness amongst enforcement agencies.



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