

Amendment to the EU Prior Informed Consent Regulation – Short Impact Assessment

Explanatory note: identifying chemical substances

Chemical substances - i.e. 'chemical elements and their compounds' - are identified in a number of different ways internationally, using different names, numbers, descriptions and even formulae for the same substance.

The most commonly used identifiers are the 'CAS Number' and, in the EU, the 'EC number'. Amendments to the PIC Regulation include both CAS and EC numbers where available.

Customs codes are also relevant for this impact assessment, in order to analyse international trade data.

Substances are grouped under customs codes and identifiers principally because of their taxable status and how customs authorities need to interrogate their information repositories, rather than specific codes reflecting either hazards or risks posed by substances, or their regulatory status under regimes such as PIC.

The Combined Nomenclature (CN) is the eight-digit trade classification system used by the European Union for statistical and tariff purposes. CN codes and CAS and EC numbers do not match up exactly. CN codes can cover anything from one to thousands of different substances, a substance can be included under more than one CN code, and they are not always included based on CAS or EC numbers, although these are used as convenient identifiers where relevant.

Current proposal

The current proposal:

- A. Adds five chemicals to Part 1 of Annex I (Bifenthrin, Diphenylamine, Metam, Triazoxide and Triflumuron), meaning that notification to HSE will be required before exports can be made (this notification is required once per calendar year, upon the first export the company makes);
- B. Adds two chemicals to Part 2 of Annex I (Carbosulfan and Trifluralin) meaning that explicit consent from the importing country will be required before they can be exported;
- C. Adds one substance (Chlorthal-dimethyl) to both Part 1 and Part 2 of Annex I, meaning that both export notification and explicit consent from importing countries will be required; and
- D. Adds 11 substances (Chlordecone, Heptabromodiphenyl ether, Hexabromobiphenyl, Hexabromodiphenyl ether, several Hexachlorocyclohexanes, Lindane, Pentabromodiphenyl ether,

Pentachlorobenzene and Tetrabromodiphenyl ether) to Part 1 of Annex V, meaning that all exports of these substances will be banned.

- E. Adds substances (Metallic Mercury and several Mercury compounds) to Part 2 of Annex V, reflecting an existing ban on export from the EU but without additional regulatory effect.

Substances are added to Annex I to the PIC Regulation based on external factors, for example a ban being made against their use in biocidal products. Intra-EU trade in the chemical substance will therefore already be controlled for that specific use, but general trade is still permitted. We assume that these external factors have been applied pre-inclusion on the PIC list, so there will be no additional costs in terms of reduced intra-EU trade associated with the inclusion of a substance on Annex I.

Substances are added to Annex V of the PIC Regulation based on their inclusion on the UN Stockholm Convention or EU legislation banning their export. The marketing and use of substances that are proposed for listing on Annex V will already be banned or severely restricted within the EU under other EU legislation. Inclusion in Part 1 of Annex V establishes a total ban on export outside the EU. Inclusion in Part 2 of the Annex reflects an already existing ban on export from the EU.

UK industry have been asked to comment via i) a letter and questionnaire to concerned trade associations, and ii) an online version of the same question set, with accompanying request to provide information in the HSE-managed UK PIC e-bulletin.

No questionnaire responses have been received from either source. Unfortunately, the response time HSE has required of industry has necessarily been very short, and so the lack of response should not be taken to indicate indifference. However, in view of time constraints inherent in the comitology process, HSE are obliged to take forward this impact assessment with available information, and take account of this limitation in drawing policy conclusions.

The following cost calculations are analysed against a baseline assuming that no changes take place (a theoretical 'do nothing' scenario in which the *status quo* continues - i.e. no changes to the lists of chemical substances in the relevant Annexes to the PIC Regulation). It should be noted however that the policy outcome regarding this proposed amendment is expected to be adoption, regardless of the UK's actions.

The value of UK exports of the chemical substances proposed for inclusion in new PIC controls is calculated on the basis of CN codes as described above. However, each CN code covers a number of chemicals - for example, CN code 2932 99 00 contains 507 substances, of which only one (Carbosulfan) is relevant for this Short Impact Assessment.

As a result, in this Short Impact Assessment two estimates of export value are given. One constitutes a top-level estimate, assuming all exports within the CN code are of the substance of interest. This is unlikely, but this calculation will provide an estimate of the maximum possible impact. A second value

shows the costs pro rated, assuming that chemical substances included within the code are uniformly distributed in terms of export revenue (calculated by dividing the total value of exports by the number of substances).

The true value of exports could be anywhere between zero and the upper estimate, but is likely to be closer to the second, pro rated figure given by assuming uniform distribution.

A - Diphenylamine, Metam, Bifenthrin, Triazoxide and Triflumuron

These four substances are proposed to be placed on Part 1 of Annex I of the PIC list, meaning that firms wishing to export these substances outside of the EU will be required to notify the Designated National Authority upon the first export of each substance in each calendar year. This will result in a cost to firms. HSE estimates that this process will take approximately 2 hours of administrative resource. If we assume that this work is undertaken by a sales manager at an hourly cost of £32.77¹, this would result in a total cost per notification of £65.54. We do not know how many applications are likely to take place due to the changes proposed, so we cannot estimate a total cost to business.

Given the relatively low cost these changes will have for firms, we would not expect any to stop exporting. If they did, it is likely this would be a result of deciding that the expected profit from trade did not justify the cost associated with notifying the export under PIC.

There is also a cost to HSE associated with processing each notification. Evidence from the HSE work recording system suggests that each Part 1 notification takes 2.2 hours to process. This time is split between a Band 5 administrator and a Band 4 scientist, with respective full economic costs of £45 and £51 per hour². This gives a total cost per application of £100.

B - Carbosulfan and Trifluralin

These two substances, proposed for addition to Part 2 of Annex I, are already on Part 1. Firms are therefore already required to notify HSE upon the first export of each substance in each calendar year. If firms wish to continue exporting these chemicals outside the EU, they will be required to get consent from the importing country before they are allowed to do so.

Familiarisation costs for industry in applying for consent are expected to be insignificant, given the specialised nature of the industry and the fact that many of the firms will already export PIC listed chemicals. We have therefore not quantified these.

As firms use the same form for notification under Part 2 as under Part 1, there should be no additional cost to firms in terms of extra administrative effort.

There will be a cost to HSE from overseeing any requests for consent to export. One application takes approximately 5 hours to process. This time is

¹ Source: Annual Survey of House and Earnings (ASHE) 2009. mean hourly wage for Marketing and Sales Managers (code 1132), uprated by 30% to account for non-wage costs.

² Source: HSE Global 'Ready Reckoner' of staff resource costs 2009 - 2010

split between an administrator at HSE Band 6 pay grade (3 hours) an administrator at Band 5 (1 hour) and a scientist at Band 4 (1 hour). These have a full economic cost of £39, £45 and £51 per hour respectively³, giving a total cost per application of £213. We cannot quantify the total cost to HSE of additional applications, as we are unable to estimate how many additional applications we can expect to receive.

In the last 2 years, HSE has not received any export notifications for Trifluralin under Part 1 of Annex I. We therefore assume that there will be no costs to business from placing this substance on Part 2.

Based on export data^{4,5}, the value of UK exports for the CN code which includes Carbulsofan is presented in table 1 for the years 2000-2009

Table 1

Year	CN 29329900 (covers 507 substances, including Carbulsofan)	
	Total Exports (£)	Non-EU Exports (£)
2000	No data available	No data available
2001	No data available	No data available
2002	51,305,667	8,651,300
2003	51,025,779	8,632,043
2004	28,688,075	8,959,449
2005	45,331,279	12,447,571
2006	176,760,993	12,660,374
2007	282,553,226	13,265,089
2008	91,061,134	7,744,651
2009	102,126,468	17,926,129
Ave.	103,614,422	11,268,402

A firm may decide to stop exporting a substance if it is placed on Part 2 of the PIC list. Entire cessation of export of substances under this CN code to non-EU countries would result in a cost to the UK of £11.3 million in terms of lost exports. Over a ten-year period, the present value of the costs would be £97 million.

However, Carbosulfan is only one of 507 chemicals in the relevant CN code. Assuming that the substance represents an equal part of the export revenue for the CN code, these figures pro rated would constitute present value costs of £22 thousand and £191 thousand respectively.

In the last 2 years, only one UK firm has notified export of Carbosulfan (a shipment of 113kg to Ethiopia). We can therefore conclude that even the more conservative pro rated estimate above is likely to be significantly higher than the true value of exports of this substance.

Production of this substance will have a cost to business. Losses resulting from reduced exports would therefore be better represented by the smaller figure representing profit that accrued as a result of exports, rather than

³ Source: HSE Global 'Ready Reckoner' of staff resource costs 2009 - 2010

⁴ Source: UK Trade Info service HMRC

⁵ Source: Data for Carbulsofan from 2002 – 2008 taken from EU export help desk; http://exporthelp.europa.eu/index_en.html. Figures have been converted from Euro to Sterling using historic exchange rates.

revenue. Unfortunately, profit information is not available, so the real cost to business will be much lower than the figures given, which are based on revenue.

Were firms to cease exports of this substance, then we would assume that this would be because the application process for consent to export was more costly to them than the expected profit from continued trade. It may also have been the case that permission was not granted. This makes a fully quantified calculation of costs impossible.

There are possible economic transfer effects for these chemicals, should exports fall following this amendment, as firms who imported the chemicals switch to other chemicals with similar uses. This may result in an increase in exports for other chemicals produced in the UK, offsetting some of the costs.

C - Chlorathal-dimethyl

The substance 'Chlorathal-dimethyl' is proposed for addition to both Parts 1 and 2 of Annex I. Firms will therefore be required to seek prior informed consent to export, as well as having to notify HSE upon the first export in each year.

Familiarisation costs for industry in applying for consent are expected to be insignificant, given the specialised nature of the industry and the fact that many of the firms will already export PIC listed chemicals. We have therefore not quantified these.

The options for a firm wishing to export this substance outside the EU following the inclusion of this chemical substance on Parts 1 and 2 are either to stop exporting the chemical substance completely, or to notify export to the HSE and apply for consent to export from the importing country.

Were the firm to continue exporting, then there shall be a cost to industry from informing HSE of each export as well as seeking permission to export. Using the data presented above, we would expect there to be a cost to firms of £65.54 and a cost to HSE of £213 for each application processed.

The relevant CN code (2917 39 95) contains 107 substances. Unfortunately, data prior to 2009 is not available for this CN code, so the following figures may not be representative of the average over time.

Export data⁶ for 2009 against this CN code shows total exports of £1.2 million, with non-EU exports valued at £217 thousand. Entire cessation of export of all chemical substances under this CN would therefore represent a cost to the UK of £217 thousand in lost exports. Over a ten-year period, the present value of the costs would be £1.9 million.

If we assume however these are uniformly distributed, then the value of exports for Chlorathal-dimethyl is £2,000. Over a ten-year period, the present value of the costs would be £17,500.

Firms could stop exporting either because of the administrative costs associated with notification and seeking consent, or as a result of consent

⁶ Source: UK Trade Info service HMRC

being denied by the importing country. Given that we cannot predict whether and how often this would occur, we have not attempted to quantify the cost of lost exports resulting from this.

Production of these substances will have a cost to business. Losses resulting from reduced exports would therefore be better represented by the profits that would have accrued as a result of export sales, rather than revenue. Unfortunately, profit information is not available, so the real cost to business will be much lower than the figures given, which are based on revenue.

There are possible substitution effects for these chemicals were we to see a fall in exports following this amendment. This would result from firms who imported the chemicals switching to other chemicals with similar products that could be used to the same end. This may result in an increase in exports for other chemicals produced in the UK, offsetting some of the costs.

D - Chlordecone, Heptabromodiphenyl ether, Hexabromobiphenyl, Hexabromodiphenyl ether, Hexachlorocyclohexanes, Lindane, Pentabromodiphenyl ether, Pentachlorobenzene and Tetrabromodiphenyl ether

These substances are proposed for inclusion under Part 1 of Annex V of the PIC Regulation, which will result in an export ban on non-EU trade.

Five of these substances (Chlordecone, Hexabromobiphenyl, Hexachlorocyclohexanes, Lindane and Pentabromodiphenyl ether) have previously been listed on Part 1 of Annex I of the PIC Regulations. HSE has not received any export notifications in the last 2 years for these substances. We therefore assume there will be no cost to business from these chemicals being placed on Annex V.

Based on export data⁷, the value of UK exports for the two CN Codes which include the remaining 2 chemical substances where trade data is available are in Table 2 for the years 2000-2009.

Table 2

Year	CN 2903 69 90 (covers 280 substances, including Pentachlorobenzene)	CN 2909 30 38 (covers 32 substances, including Tetrabromodiphenyl ether)
2000	£21,324,085	£841,461
2001	£15,667,418	£514,507
2002	£7,927,770	£490,554
2003	£8,028,549	£887,868
2004	£2,131,218	£778,428
2005	£4,052,194	£1,171,136
2006	£3,626,418	£1,366,853
2007	£3,151,434	£611,682
2008	£4,323,774	£377,612
2009	£2,107,053	£298,116
Ave.	£7,233,991	£733,822

⁷ Source: UK Trade Info service HMRC

The chemicals Hexabromodiphenyl ether and Heptabromodiphenyl ether have not been assigned a CN number, and therefore it has not been possible to gather any export data for these chemicals.

If we assume that each CN code contains within it only the substance being placed on Annex V of PIC, then the total value of exports would be £8 million a year. Over a ten-year period, the present value of exports would be approximately £68.6 million.

Pro rating these values to reflect an assumption that each substance represents an equal part of the export revenue for each CN code, these figures would be £50 thousand a year and £420 thousand over a ten-year period.

Production of these substances will have a cost to business. Losses resulting from reduced exports would therefore be better represented by the profits that would have accrued as a result of export sales, rather than revenue. Unfortunately, profit information is not available, so the real cost to business will be much lower than the figures given, which are based on revenue.

There may be substitution effects as firms who import these chemicals seek other ways of producing the same end product. This could result in increased exports of other UK chemical products, which may offset some of the costs.

Consideration of these figures should take account of the absence of data relating to Hexabromodiphenyl ether and Heptabromodiphenyl ether.

E – Metallic Mercury and Mercury Compounds

These substances are proposed for inclusion under Part 2 of Annex V of the PIC Regulation, reflecting an existing export ban on non-EU trade.

These substances are added to PIC to reflect a ban already established by the Regulation (EC) No 1102/2008 of the European Parliament and of the Council of 22 October 2008 on the banning of exports of metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury bans the export of metallic mercury and certain mercury compounds and mixtures from the European Union to third countries. This ban takes effect from 15 March 2011, independently of amendment to the PIC Regulation.

As a result, this aspect of the proposed amendment is procedural only, ensuring consistency across legal instruments controlling export of substances from the EU, and has no direct economic impact in its own right.

Benefits

As placing these chemical substances on Annex I and Annex V will result in controls on exports (and not imports), we have not identified monetary benefits for the UK. There could, potentially, be health and safety benefits in terms of decreased exposure for those companies producing these substances. There could also be occupational health and safety, public

health and environmental benefits from reduced exposure in recipient countries, but that is beyond the scope of these calculations.

Summary

In 2009, the size of the UK export market for the chemical industry (defined broadly as all chemicals falling under the CN codes 28 to 40) was £51.3⁸ billion.

The maximum cost to business of introduction of chemicals to Parts 1 and 2 of **Annex I** to the PIC Regulation (either separately or in conjunction) is estimated to be £11.5 million a year. However, this would only occur were all firms to cease exports, and/or all applications for consent be denied (for Part 2 substances only). As this is unlikely to be the case, total costs should be significantly lower.

Addition of substances to **Annex V** should result in a maximum cost to business of £8 million per year.

The expected total cost to business as a result of this amendment is estimated to range between a minimum £0 (no impact) and a maximum of £19.5 million per year, the latter representing 0.04% (or a twenty-fifth of 1%) of the overall market value.

A more realistic estimate reflecting pro rating of CN codes is £73 thousand, representing 0.00014% (or one seven thousandth of 1%) of the overall market value, although this figure is also expected to be a significant overestimate, as it is based on revenue figures not profit. Further, for any observed decrease in exports as a result of this amendment there is the possibility for an increase in exports for another chemical, resulting from transfer of activity by economic actors between substances.

Chief Economist's comments and recommendation:

That based on proportionality, a full impact assessment is not completed.

Signed: Alan Spence
HSE's Chief Economist

Date: 9 September 2010

⁸ This figure, which is based on export data using CN codes from 2009, is roughly £10 billion higher than the figure presented in a previous short impact assessment, which was based on SIC codes for 2008, the most accurate source available at the time