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# Taking Stock of Measures Restricting the Export of Raw Materials

## ANALYSIS OF OECD INVENTORY DATA

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JEL Classification: F1, F13, O24, Q3, Q37

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## ABSTRACT

## TAKING STOCK OF MEASURES RESTRICTING THE EXPORT OF RAW MATERIALS: ANALYSIS OF OECD INVENTORY DATA

Governments appear increasingly inclined to resort to border and domestic measures that restrict the export of raw materials. For industrial raw materials, the OECD is constructing an Inventory of measures that have been applied since 2009. The underlying survey covers some 100 countries, some 15 types of measures and most minerals, metals as well as wood. This paper analyses 2009-2010 data collected so far for the minerals and metals sector. It sets out with observations, based on the Inventory research, about policy transparency. What information about use of export restrictions do governments publish on their websites? The paper then proceeds with a descriptive statistical analysis of the Inventory data. What are the measures most frequently used? What are the most affected minerals and metals? What motivates governments to resort to export taxes or other measures? The analysis takes account of different stages of production and makes use of trade data to illustrate supply concentration patterns and trade affected by export restrictions.



**JEL Classification**: F1, F13, Q3, Q37, O24

**Key Words:** Export restrictions, export measures, inventory, raw materials, minerals, metals, waste and scrap, export tax, export quota, export licensing, export prohibition, transparency, international trade, export, iron ore, nickel, aluminium.


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# *Table of contents*



**Tables**



**Figures**



**Boxes**

# Executive Summary

The OECD Trade Committee decided in 2010 to build a factual inventory of border and domestic measures that restrict the export of industrial raw materials, as part of a larger effort to take stock of such measures in the raw materials sector. A key aim of the Inventory is to improve the transparency of governments' practises in this area. The Inventory can also serve as a data bank for empirical analysis advancing the understanding of the economic effects of export restrictions.

The data have been obtained from official government sources and from contacts with government officials. At this time gaps remain in the database and many governments engaged in the verification process have not yet supplied all the requested information. In the Inventory, data which have not yet verified, are marked as such; when governments provide information these data will be adjusted, if necessary.

This report describes how the data for the Inventory were collected and reports results from a statistical analysis of the information available. The main findings are:

Online search for national official information on the use of export restrictions for the Inventory finds that the amount and quality of information that is available on government websites varies across countries. Promoting transparency of export restrictions is an issue meriting more attention from policymakers.

- Export measures are pervasive in the minerals and metals sector. The practice of regulating exports of waste and scrap of metals (ferrous and non-ferrous) appears to be widespread. Export measures are also relatively common in the iron and steel sector and for certain materials needed for the production of steel, and for precious metals and stones.
- For minerals and metals excluding waste and scrap, inventory data currently available for 53 countries show that from 2009 to 2010 the total list of commodities affected by export measures hardly changed and the total number of countries applying measures in 2010 rose by five.
- Non-automatic export licensing, export taxes and export prohibitions were the leading measures used to regulate the export of waste and scrap metals. Export taxes and export licensing requirements were the primary instruments by which governments regulated the export of unprocessed and semi-processed minerals and metals. The countries represented in the Inventory also made use of other measures.
- Use of export taxes and other export measures is variable. During 2009-10, in a number of instances governments adjusted their policies from one year to the next or even within shorter periods of time.
- The scope of the policy objectives cited for export measures taken is broad. They include safeguarding domestic supply, control of illegal export behaviour, and protecting the local industry. There appears to be no consensus among user countries

with respect to the circumstances or reasons that justify taking such measures. This is especially the case of measures applied to the export of minerals and metals other than waste and scrap metals.

- Mapping export measures against the background of the actual flow of trade occurring between origin and destination countries highlights supply concentration and other structural characteristics of global markets; these characteristics would need to be examined in more detail if commodity-specific or country-specific economic impact assessments of existing or new export restrictions were carried out.

# Taking Stock of Measures Restricting the Export of Raw Materials: Analysis of OECD Inventory Data

## I. Introduction

In 2010 the OECD Trade Committee embarked on a project to construct an inventory of border and behind-the-border measures that impede exports of industrial raw materials, as part of a larger in-house effort to take stock of export restrictions in the raw materials sector, including agricultural commodities. The focus of the project is on measures applied by governments.

This report covers the work involving minerals and metals. It reports on the type of measures that have been introduced, and how information has been collected for the inventory. The report then presents a descriptive statistical analysis of the data gathered to date.

Most of the measures affecting exports in the industrial raw materials sector are not notified to the WTO under existing multilateral trade rules, and thus lack of consistent data represents a major challenge for stakeholders. A key aim of the OECD Inventory is to contribute to greater transparency of governments' practices.

The Inventory can also serve as a data bank for empirical analysis advancing the understanding of the economic effects of export restrictions. It represents an information base that is not only comprehensive but also accurate: the data have been obtained from national governments, compiled from their websites and subsequently verified by the countries surveyed.

The report is organised as follows. Section II describes the methodology used for collecting the data and provides a broad overview of the structure and content of the Inventory. It also offers some observations about the availability of information. In Section III, the incidence and other characteristics of use of export restrictions is analysed on the basis of the survey data for the 2009-2010 period. The analysis shows the potential of the database to serve as an information as well as research tool. The data pertain to all country and industrial raw materials data available except *wood*, for which information has not yet been entered in the Inventory. Section IV concludes.

## II. Constructing the Inventory

The industrial raw materials data gathered for the Inventory pertain to 75 mostly non-energy minerals and metals (information on wood is in the process of being added to the database). The research covers most commodities in their unprocessed as well as in their semi-processed form. Waste and scrap of metal is also included. Commodities covered belong mainly to Chapters 25-28, 44-46, 71-72, and 74-81 of the HS 2007 classification.

For each material, the five leading countries in terms of global production in 2009 (top 5 producers) represent the principal group of countries surveyed. This group is supplemented by a number of smaller producers (minor producers) for which the Secretariat had information that they applied an export measure during the period 2009-10. Altogether, the Inventory has been constructed through thorough research of a total of 100 countries that produce industrial raw materials. Annex 1 lists the countries and materials surveyed.

The database records export restrictions used in 2009-10. In some cases the collection of data took place in 2011, which made it possible to gather information also about measures applied in 2011.

Coverage of measures focuses on those known to actually restrain export activity. These measures typically increase the relative price of exported products, decrease the quantity of exports supplied or change the terms of competition among suppliers. The list of surveyed measures is comprehensive, ranging from export taxes, prohibitions and non-automatic licensing requirements, to price and tax measures (Box 1). Definitions are provided in Annex 2. Not included in the Inventory are regulatory measures which countries apply to honour multilateral conventions such as the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and Kimberley Process. These kinds of export controls are monitored and well documented by the respective regimes.

**Box 1. Types of measures surveyed and recorded by the Inventory**

| | |
|---|---|
| Export tax | Dual pricing scheme |
| Export surtax | VAT tax reduction/withdrawal |
| Fiscal tax on exports | Qualified exporters list |
| Export quota | Domestic market obligation |
| Export prohibition | Captive mining |
| Export licensing requirement | Restriction on customs clearance point for exports |
| Minimum export price/price reference for exports | Other measures |

The Inventory contains presently data for 53 countries. It offers information about the individual measures which these countries applied in the years 2009 and 2010, including qualitative information about the legal basis for the measure, introduction and ending dates (where applicable), the agency in charge, implementation procedures, and references with links to web-based sources of information about the measure. The Inventory's data fields are explained in Annex 3.

### *Collecting the data for the Inventory*

Construction of the Inventory has involved two phases: (1) collection of information that can be obtained online from official websites of the governments of the countries surveyed, followed by (2) verification of the information through requests for clarifications and further inputs addressed to officials of these governments.

### *1. Phase-I online search of government websites*

*Transparency* in its most basis sense means that stakeholders have open access to information about regulations, procedures and measures that affect their activities. Governments increasingly publish such information for easy access on the Internet. Whether governments make relevant information available on their official website, and how comprehensive and up to date this information is, gives an indication of how transparent the policy process is.

Initially, the OECD Secretariat searched the official websites of the governments for information about export measures. The targets included the different ministries in charge of economy, trade, industry, mining, forestry or foreign affairs as well as customs agencies. The search for information included published legal acts, rules, regulations, public notices, circulars and notifications.

The information found was then entered into the database of the Inventory. Phase I of the Inventory was completed in mid 2011.

The online search finds that the amount and quality of information about export restrictions available on government websites varies across countries. Specific observations in this regard are:

- Although economic operators or the media have reported use of export restrictions, no information either confirming or refuting the existence of such measures was found on the websites of some of the governments concerned. In other instances only a general statement is published that mentions that export of minerals or other raw materials is regulated but does not specify the measure or the products affected.
- Forty-four surveyed countries reported nothing about export measures on their websites. Without further explanations provided by the governments concerned, it is unclear whether this is because restrictions are not in use or because measures exist but are not reported on government websites.
- The level of descriptive detail of information on export restrictions varies. It is particularly low in regard to some important policy details. The rationale for decisions introducing export restrictions in seldom explained. Administrative procedures by which export restrictions are enforced, including procedures that potential exporters must follow in order to get necessary approvals, are not always explained. Also, it is often not possible to determine the specific products affected. For example, the information provided may describe products only in very general terms (e.g. “copper”, “timber”, “all non-ferrous minerals”), without the codes of the Harmonised System (HS) or some other recognised standard for product identification. HS-based information is more frequently provided for export taxes than for other types of export restrictions.
- Information reported is not necessarily up to date. Where export restrictions have been introduced years ago, it is not always clear from the information available whether these measures are still in force.
- Most countries nowadays participate in one or more bilateral or regional free-trade agreements. However, countries that use export restrictions and report this on their official websites seldom clarify whether or not use of these measure is affected by commitments arising from the participation in the free-trade agreements (e.g. through exemptions for partners of free-trade agreements).

- At times, publication of information regarding export policies, including export restrictions is spread over multiple ministries/agencies. Centralised one-stop information points are very rare (for this reason the search of websites in Phase I may in some cases have not found information even though it is published).

There are also practices or tools of information policy that have facilitated the online search in Phase I:

- Some governments publish all legal documents and regulations in the official gazette, publish it in electronic format and archive older issues. Some archive them in a "public e-library" from where texts can be searched by year, reference number or title or search words;
- At times, information about export taxes and certain other types of export restrictions is provided in schedules that report import tariffs, or in other documents providing comprehensive customs related information.
- In some instances the legal documents published online offer an extensive description of the products to which export measures are being applied (full name and HS code) as well as detailed information about the policy context in which the regulatory framework was adopted.
- Some governments that do not make use of export restrictions state this explicitly in policy statements or other documents published on their websites.

### *2. Phase-II data verification*

The aim of the second phase has been to close existing data gaps in the Inventory and to generally verify whether the web-based research has captured, for each of the products for which a country is surveyed, all export restrictions in operation in 2009-10, and whether product information, such as HS codes, is accurate.

Towards this goal, the OECD Secretariat has contacted (via formal letters, emails, telephone calls) officials of the governments surveyed. Confirmation has been sought also in instances where the search of websites found no evidence of export measures being applied.

Verification has taken time, and responses to requests for additional information or clarifications have not yet been received from a number of governments contacted. In the case of some other countries the Secretariat has not been successful engaging the governments concerned in this exercise or in establishing contacts with officials able to provide answers.

The results from the Phase I research and the current status of Phase II verification are summarised in the table in Annex 4. Collecting information about export measures has been challenging, which confirms that the rationale for constructing the Inventory, i.e., making export regulation more transparent, is well taken and that availability and accessibility of information in this policy field is an issue meriting more attention from policymakers.

## III. What do we learn from the available Inventory data about export restrictions?

Users of the Inventory data must keep in mind that the Inventory represents a positive registry – it only records measures actually used. 20 of the 100 countries have confirmed that they have not made use of export restrictions for the commodities surveyed, in 2009 and subsequent years. For 25 other countries the official websites of governments did not report use of such measures, but this has not yet been verified.

Other important caveats on the method apply:

- Not all countries of the world are included in the survey. For each commodity, the top five producers were researched. These countries were supplemented by some smaller producers for which the Secretariat had information at hand indicating that they restricted export of one or more of the raw materials during 2009-10. Although not global, the survey and hence the Inventory covers a high share of global production and global trade of these raw materials. In fact, for many of the individual materials surveyed the top five producers alone accounted for a large share of global production and exports in 2009.
- Data are available currently for two years, which limits analysis. In order to be able to conclude that the rise observed in 2009 and 2010 in the incidence of export restrictions represents an enduring trend in policy, and to empirically assess the effect of restrictions on trade, a longer time series of policy data would be desirable.[1]
- While the database contains information at the most disaggregated level of product codes used by governments, government practices vary; therefore data have been entered using the HS6 digit level of product classification. When the value of a measure varies across products defined at the HS8 level, the same HS6 digit code is entered more than once for that type of measure. When a measure has been changed once or more often in the course of a given year, that measure is entered more than once for that year.

Statistical analysis of the data requires that the Inventory is supplemented by trade flow statistics. These statistics, at the 6-digit level of product classification, were obtained from the COMTRADE database.

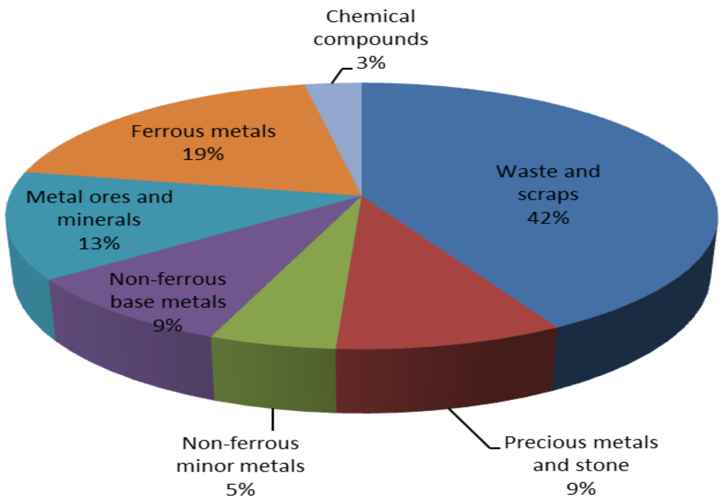
### *Incidence of export measures*

As of April 2012, the database was populated with 3 001 records for the years 2009 and 2010. It contained a total count of 1 396 measures, at the HS6 level of product classification, for 2009, and 1 605 measures for 2010. While these aggregate figures will change as more countries respond to verification requests, they attest to the prevalence of these measures.

Examination of the data by broadly defined product categories finds that a large share of the recorded export measures (42% of measures in 2009 and 46% in 2010) concern *waste and scrap of metal*. This is followed by metal ores and minerals, precious metals and stones, and ferrous metals, as shown in Figure 1.

1. Trade impact analysis covering these years would furthermore need to take account of the fallout resulting from the financial crisis.

**Figure 1. Incidence of export measures by subsector of minerals and metals (2009)**




*Source:* OECD Inventory as of 23 April 2012.

Because waste and scrap of metals dominates all other product categories in the dataset, the data for this sub-sector of materials are examined separately from the rest. Part of the explanation for the large number of records of export measures for waste and scrap stems from the fact that in the absence of production statistics the leading five producer countries could not be identified; therefore all 100 countries were surveyed for use of measures restricting export of waste and scrap of any type of metal.

### *Waste and scrap of metal*

The quality of trade statistics for waste and scrap metals is rather poor. For a large number of countries COMTRADE does not report export figures either at the aggregate level or for individual types of metals, even though the HS product classification system includes separate HS6 codes specifically dedicated to waste and scrap. Trade statistics are available for many countries as far as waste and scrap related to iron and steel and non-ferrous base metals is concerned. For other metals groups, however, the availability of trade statistics is much more limited, especially for non-OECD countries.

The statistics show that the countries surveyed for the Inventory shipped a total of USD 57.4 billion in waste and scrap metals abroad in 2009, and that a handful of OECD countries dominate the export market.

The Inventory includes 580 entries for waste and scrap items in 2009 and 744 in 2010. Presently the data pertain to a total of 41 countries. Twenty-six other countries have confirmed that they do not restrict waste and scrap exports.

Licensing requirements, export taxes and export prohibitions lead the list of measures employed (Table 1). A significant increase in export prohibitions recorded for 2010 is mostly the result of concerted action by members of the East African Community to ban the export of many scrap metals.

**Table 1. Incidence of export measures of waste and scrap metals (2009 and 2010)**

| Type of measure | 2009 | Per cent | 2010 | Per cent |
|---|---|---|---|---|
| Export prohibition | 61 | 10% | 207 | 28% |
| Export quota | 4 | 1% | 14 | 2% |
| Export tax | 213 | 37% | 228 | 31% |
| Licensing requirements | 284 | 49% | 285 | 38% |
| Other export measures | 18 | 3% | 10 | 1% |
| **Grand Total** | **580** | **100%** | **744** | **100%** |

*Source:* OECD Inventory as of 23 April 2012.

Waste and scrap exports are restricted in many parts of the world. During the period 2009-10, these materials could be exported freely mostly from Europe and North America. In other parts of the world, governments applied export restrictions either to select products or to a wide range of metals.

This picture is corroborated by the available trade data: the bulk of global exports originate in countries with no restrictions. Waste and scrap trade involving iron and steel and non-ferrous base metals (copper, aluminium, lead and zinc) tends to be more regulated than trade involving other metals.

How much trade is affected? Table 2 shows that in 2009 at least 19% of waste and scrap of iron and steel, 14% of waste and scrap of copper and 4% of waste and scrap of aluminium, exported by a total of 34 countries, was subject to export restrictions. These countries have entries for at least one HS6 line of one of the three materials. The impact of the measures on trade is more significant than these figures suggest. Export restrictions dampen trade flows. In fact, some exports actually will not take place due to the very fact that export restrictions are in place. This means that the figures of restricted exports in the table are biased downward. Export activity would be higher if restrictions did not exist.

**Table 2. Share of trade affected by export taxes and other restrictions**

| | Waste and Scrap export value, billion USD, 2009 | | |
|---|---|---|---|
| | **Iron and steel** | **Copper** | **Aluminium** |
| Restricted exports | 4.9 (19%) | 1.6 (14%) | 0.2 (4%) |
| Free exports | 19.4 (76%) | 8.7 (77%) | 5.6 (89%) |
| Total exports | 25.4 | 11.3 | 6.3 |

*Note:* Data are for 2009. Percentages in brackets refer to the share of total export values. Total exports include also exports from unverified countries.

*Source*: OECD Inventory as of 23 April 2012 and COMTRADE trade statistics.

The rationales which governments cite most frequently as motivating use of the restrictions recorded for 2009-10 are safeguarding domestic supply (16 countries), the control of illegal export behaviour (seven countries), and protecting the local industry (four countries).

### *Minerals and metals other than waste and scrap*

Which materials other than waste and scrap are subject to export measures, and what types of measures are used?

The Inventory data show that measures restricting exports of minerals and metals are frequent. 29 countries in 2009 and 35 countries in 2010 *made use of at least one measure*. Iron and steel, copper, aluminium, molybdenum, diamonds and tungsten were among the leading materials affected by the measures applied by the top five producer countries.

Overall, the vast majority of the 75 minerals and metals surveyed were subject to at least one export restriction during the period 2009-10. In both years, iron and steel stand out as the product groups with the highest incidence of measures recorded at the HS6 level. Other materials subject to a relatively high number of measures in both years include copper, gold and other precious metals and stones, aluminium, molybdenum and tungsten.

Great caution must be exercised when interpreting frequency counts. Depending on the product, the number of Inventory entries at the HS6 level can give the misleading impression that a country imposes a lot of measures. For example, iron and steel or copper comprise many more HS6 product lines than zinc or gold. Without controlling for this difference, no inference should be made from simple frequency counts about the relative openness of countries' national export policies.

Calculating and comparing countries on the basis of frequency counts of HS product lines is inappropriate also because the number of measures recorded for a specific country may be closely related to the number of commodities for which the country is surveyed. Due to the design of the survey methodology, the number and types of commodities surveyed varies across countries. For countries like Australia, China, India and South Africa, which are leading producers of many different raw materials, the list of commodities surveyed is much longer than for countries producing only one or a few raw materials.

One way of avoiding these biases would be to calculate frequency counts for sets of countries that share the characteristic that they all export the same type of material (e.g. copper) and are all surveyed for use of export measures affecting that material (i.e. copper). For now, with the possible exception of Australia, China, India and South Africa with their long lists of often identical raw materials surveyed, the number of countries included in the survey sample that would meet these criteria is too small to carry out this type of work.

### *Types of measures*

As can be seen from Table 3, the most popular measures in 2009 were export taxes (64% of recorded measures at HS-6 product level) and licensing requirements (17%) They are followed by export quotas (6%), for which the Inventory currently shows entries only for China.

From 2009 to 2010, the overall incidence of export measures increased, reflecting mostly more use of licensing requirements and of certain other measures (VAT tax reduction or withdrawal, price-based measures). The list of commodities recorded as being affected by export measures remained stable, but the total number of countries applying measures rose by five in 2010.

**Table 3. Export measures applied to minerals and metals, by type and processing stage**

| Year | 2009 | | | | 2010 | | | |
|---|---|---|---|---|---|---|---|---|
| Type of measure | Primary | | Semi-processed | | Primary | | Semi-processed | |
| Freq. count by | HS6 | Country | HS6 | Country | HS6 | Country | HS6 | Country |
| Captive mining | 1 | (1) | 3 | (1) | 1 | (1) | 3 | (1) |
| Export prohibition | 1 | (1) | 2 | (2) | 1 | (1) | 4 | (2) |
| Export quota | 19 | (1) | 27 | (1) | 19 | (1) | 26 | (1) |
| Export surtax | 2 | (1) | - | - | - | - | - | - |
| Export tax | 83 | (12) | 422 | (11) | 78 | (13) | 429 | (13) |
| Fiscal tax on exports | 24 | (2) | 1 | (1) | 23 | (1) | 1 | (1) |
| Licensing requirements | 44 | (11) | 87 | (12) | 74 | (15) | 99 | (13) |
| Minimum export price / price reference for exports | - | - | - | - | - | - | 28 | (1) |
| Other export measures | 23 | (2) | 41 | (4) | 35 | (2) | 9 | (3) |
| Restriction on customs clearance point | - | - | 1 | (1) | - | - | - | - |
| VAT tax rebate reduction / withdrawal | - | - | 2 | (1) | - | - | 30 | (1) |
| **Grand Total** | **197** | **(20)** | **586** | **(20)** | **231** | **(24)** | **629** | **(23)** |

*Note*: The counts refer to measures, recorded at the HS6 level and either maintained from the previous period or newly introduced. Counts are not scaled to control for the differences in the number of HS6 lines for different commodities, at different processing stages (primary - referring to unprocessed raw materials, and semi-processed products). Waste and scrap metals records are excluded.

*Source:* OECD Inventory as of 23 April 2012.

The Inventory reports measures for materials in their raw (unprocessed) and their semi-processed forms[2]. Analysis by stage of production finds that twelve (or 34%) of the 35 countries with data in the Inventory applied measures to exports of both *raw* and *semi-processed* forms of the commodities in the period of 2009-10. Relatively more frequently affected by restrictions were: among the raw materials, iron ore (9 countries), aluminium ore (7 countries), manganese ore (7 countries), copper ore, lead, molybdenum (6 countries each); in their semi-processed forms, gold (7 countries), copper (6 countries), platinum, iron and steel, (5 countries each), aluminium, cobalt, silver (4 countries each).

The following section provides more detailed information about the measures most frequently recorded in the Inventory, namely export taxes and licensing requirements.

## *Export taxes*

Export taxes are by far the leading type of export restrictions. In 2009 they were used by 16 of the 29 countries (including 10 top-5 suppliers) with records for raw and

2. Raw forms of materials include metal ores and minerals (HS codes from the groups HS25 and HS26), Semi-processed forms belong to HS groups HS71-HS72, HS74-76, HS78-HS81, except diamonds.

processed minerals and metals combined (excluding waste and scrap) and in 2010 by 19 of the 35 countries (including 11 top-5 suppliers). At least 46 materials were affected and the measure often covered products at the semi-processed stage.

Table 4 lists the most frequently targeted products along with the user country(ies). Resort to export taxes decreased somewhat in 2010, mostly because China moved to eliminate some export taxes.

**Table 4. Leading products subject to export taxes (2009)**

| Product | Count (HS6 lines) | (Countries) | Countries applying the measure |
|---|---|---|---|
| Iron and steel | 252 | 5 | Argentina , China, India , Russia, Ukraine |
| Copper | 61 | 4 | Argentina ,China, Russia, Zambia, |
| Molybdenum | 19 | 3 | China, Russia, Viet Nam |
| Diamonds | 17 | 3 | Namibia, Sierra Leone, South Africa |
| Aluminium | 14 | 4 | China, Guinea, Russia, Viet Nam |
| Tungsten | 11 | 3 | China, Russia, Viet Nam |
| Nickel | 8 | 2 | Russia, Viet Nam |
| Cobalt | 8 | 4 | Argentina, China, Ukraine, Viet Nam |
| Antimony | 7 | 2 | China, Viet Nam |
| Borates | 7 | 1 | Argentina |
| Gold | 7 | 2 | Benin, Fiji |
| Tin | 7 | 3 | China, Russia, Viet Nam |
| Pig iron | 6 | 2 | China, India |

*Note:* Product coverage is all minerals and metals, excluding metal waste and scrap. Direction of change "elimination" is not counted. Other products are subject to export taxes but are not shown here, The ranking criteria for the Table are the number of Inventory entry counts at the HS6 level, but a comparison of counts would be misleading as not all products have the same number of HS6 lines. For example, Iron and steel and Copper, which head the Table, consist of many more HS6 product lines than Zinc or Gold.

*Source*: OECD Inventory as of 23 April 2012.

The taxes are applied either ad valorem (up to 30%) or as a specific tax per unit of volume (usually tonne). At times governments using export taxes also prescribe a minimum monetary amount which the exporter has to pay per tonne of material shipped. Where the Inventory contains information about governments' rationales for taxing exports, these have to do mostly with generation of revenue, followed by conservation of natural resources.

### *Licensing requirements*

Export licensing requirements are the second most often used type of export measure. In 2009, these measures were applied by 19 of the surveyed countries (including seven top-5 suppliers) and in 2010 by 22 countries (including eight top-5 suppliers). Around half of the requirements are confirmed non-automatic licenses: exporters must obtain prior approval, in form of a license, to export the commodity. Verification of the other records is under way.

Like for export taxes, the data in the Inventory show a high incidence of import licensing requirements covering not only primary materials but also semi-processed products. Overall, in 2009 export licensing requirements covered at least 36 types of minerals and metals. Table 5 lists the most frequently targeted products along with the user country(ies). The number of recorded measures increased in 2010, reflecting mostly adjustments occurring in the export regimes of Grenada and China.

**Table 5. Leading products subject to export licensing requirements (2009)**

| Product | Count (HS6 lines) | (Countries) | Countries applying the measure |
|---|---|---|---|
| Gold | 28 | 7 | Benin, Fiji, Indonesia, Mali, Senegal, Sierra Leone, South Africa |
| Iron and steel | 16 | 4 | Argentina, China, Malaysia, Philippines |
| Copper | 9 | 4 | Argentina, Paraguay, Philippines, South Africa |
| Lead | 7 | 2 | Philippines, South Africa |
| Cobalt | 6 | 3 | Argentina, China, Philippines |
| Diamonds | 6 | 3 | Australia, Namibia, Sierra Leone |
| Silver | 6 | 3 | Fiji, Indonesia, Philippines |

*Note*: Product coverage is all minerals and metals, excluding metal waste and scrap. The list of products is not exhaustive.

*Source:* OECD Inventory as of 23 April 2012.

Rationales given for licensing requirements differ from those provided for export taxes. According to the records of the Inventory, governments adopt these measures often in order to promote or protect further processing/value added or to control illegal exports or other activities.

*Ad hoc* changes of policy contribute to market uncertainties. According to the Inventory, it is common to find governments adjusting their policies from one year to the next and, in some cases, within an even shorter period of time. For example, in the case of India, one measure (a yet to be confirmed distance-based charge for iron ore traffic intended for other than domestic consumption) was changed five times in 2010. While there are still substantial gaps in the Inventory as far as information about the evolution of a measure over time is concerned, both years, 2009 and 2010, saw on balance more new measures being introduced or existing measures being tightened than existing measures eliminated or relaxed (Table 6).

**Table 6. Changes in restrictiveness, 2009 and 2010**

| Direction of change | 2009 | 2010 |
|---|---|---|
| Restrictiveness of measure decreased | 25 | 9 |
| Measure was eliminated | 33 | 1 |
| Restrictiveness of measure increased | 11 | 59 |
| Measure was introduced | 41 | 53 |
| Measure was left unchanged* | 452 | 598 |
| Information not available | 242 | 140 |

*Left unchanged, extended, or revised. Figures refer to frequency counts at HS-6 product level.

*Source*: OECD Inventory as of 23 April 2012.

In 2009, notably China but also Russia, Viet Nam and Zimbabwe took steps to either eliminate or relax some of the existing measures. In 2010, Argentina, China, India, Mauritius, Philippines and Zimbabwe either introduced new measures or tightened existing measures. In that year, China also eliminated one existing restriction and relaxed eight others, and Viet Nam relaxed one measure. Looking at commodities, copper, as well as iron and steel, are the leading product groups which, along with metals such as tin, magnesium, molybdenum and zinc, saw resort to restrictive export measures intensify in 2010, although only a few countries accounted for this change. This is, however, not a sector-wide trend, and for several other types of minerals and metals the total number of measures applied did not change or actually decreased in 2010.

The picture is more complex yet, because a substantial number (14) of countries represented in the Inventory appear to be making *use of more than one type of measure* in their regulation of export of the minerals and metals for which they were surveyed. Over the period 2009-10, India and China employed the widest range of different measures (5 types of measures, respectively), and twelve other countries applied two or three measures.

### *Information about the policy context*

The Inventory includes qualitative data explaining the policy context of the export measures. This includes the stated rationale for a measure, whether exemptions from an export measure are granted to specific trading partners or exporting entities, and whether a measure is intended to be temporary or permanent.

Governments introduce export measures for a variety of reasons. Very often government websites do not provide this type of information. In such cases officials contacted during the Phase-II verification process have been asked to explain what has motivated their government's resort to a measure. As of April 2012 this information was available for 23 of the 35 countries with measures recorded for minerals and metals (excluding waste and scrap) in the period 2009-10. Table 7 presents an overview of the recorded rationales of the measures taken by governments.

The scope of the motivations for export measures taken appears to be broad. Analysis of justifications by processing stage of the products does not reveal a sharp pattern:

Conservation of natural resources and promotion of domestic processing/value added appear to motivate somewhat more the regulation of exports of semi-processed commodities. Efforts to control illegal export activity are also relatively often cited, especially for measures applying to exported unprocessed raw materials.

Rationales provided do not appear to have been influenced by *type of commodity*. In other words, countries that apply restrictions to the same commodity cite different reasons for their actions.

Examination of types of rationales by *type of measure* finds that typically export taxes and fiscal taxes on exports are used in order to generate revenue, but they are also motivated by the desire to conserve natural resources or to promote or protect further processing/value added at home. Licensing requirements have the widest range of cited objectives, with control of illegal export activity and promotion or protection of further processing/value added heading the list.

**Table 7. List of rationales by countries with entries in inventory (2009 and 2010)**

| | |
|---|---|
| **Conserve natural resources** | **Monitor/control export activity** |
| India | Argentina |
| Indonesia | Fiji |
| China | China |
| **Control foreign exchange** | South Africa |
| Senegal | Ghana |
| South Africa | **National security** |
| **Control illegal export activity** | Malaysia |
| Philippines | **Promote or protect further processing/value added** |
| India | South Africa |
| Colombia | India |
| **Generate revenue** | Zambia |
| Argentina | Zimbabwe |
| Philippines | **Safeguard domestic supply** |
| Sierra Leone | South Africa |
| Syria | India |
| Namibia | Malaysia |
| Colombia | Uruguay |
| Azerbaijan | Paraguay |
| India | **Production considered strategic for the economy** |
| **Protect heath and/or environment** | Mauritius |
| South Africa | Other* |
| China | India |
| Malaysia | South Africa |
| **Protect local industry** | Brazil |
| Malaysia | China |
| Paraguay | Australia |
| Rwanda | |

*Note:* * e.g. Congestion charge; Fiscalisation of chemicals that directly or indirectly may be designated to elaborate illicit narcotics, psychotropics or cause physical dependence, etc. Measures recorded as having been eliminated during 2009-10 are included.

*Source:* OECD Inventory as of 23 April 2012.

Where data are available in the Inventory as a result of the survey, in most cases no special exemptions from the measures are granted either to trading partners that are members of shared regional trade agreements (RTAs), or to specific firms. There are only a few cases where such exemptions are noted.

The Inventory also records whether a measure is intended to be temporary. From the available data, all entries for Kazakhstan consist of temporary measures and five other countries (Argentina, China, India, Indonesia, Zimbabwe) applied restrictions on that basis. More permanent measures were applied by a total of 29 countries.

### *Some analysis combining policy and trade data*

In this section the data available on export measures are further analysed using available trade statistics. The aim is to better understand the role which these measures play for international trade in different types of industrial raw materials.

How large is the effect of the export restrictions recorded so far by the Inventory on trade for raw and semi-processed products? The Inventory data were used to calculate ratios of exports subject to Inventory entries over the value of total exports. Depending on the magnitude of the share in total exports of flows that are restricted, the raw and semi-processed forms of materials were then classified as unrestricted, not much restricted or very restricted.

For 17 types of commodities (raw or semi-processed) the Inventory data indicate that no restrictions are in effect. The products classified as highly restricted because their ratio of restricted exports over total exports is high include: rare earth – semi-processed (99.6%), tungsten – semi-processed (98%), antimony – semi-processed (91%), titanium – semi-processed (69%), talc – raw (63%), magnesite – raw (61%), borates – raw (58%) and garnet – raw (54%).

**Table 8. Raw and semi-processed commodities and level of trade flows restricted (2009 and 2010)**

| Product | Level of flows restricted | | |
|---|---|---|---|
| | No | Low | High |
| Asbestos, bentonite, feldspar, gypsum, kaolin, pumice, perlite and vermiculite; vanadium; potash; stone | Raw | | |
| Sulfur | Raw; Semi | | |
| Arsenic; iodine; mercury; selenium; tellurium; thallium | Semi | | |
| Peat; salt; silica; thorium | | Raw | |
| Iron and steel; manganese; nickel; zirconium; | | Raw | Semi |
| Borates | | Semi | Raw |
| Talc; mica; garnet; magnesite | | | Raw |
| Diamonds | | | Raw, Semi |
| Cadmium | | Semi | |
| Bismuth; lithium; magnesium; rare earth; silicon; germanium and others | | | Semi |
| Limestones | | Raw* | |
| Lead; molybdenum; titanium; tungsten; precious metals | | Raw* | Semi |
| Phosphates | Semi | Raw* | |
| Zinc | | Raw*,Semi | |
| Tin | | Raw*, Semi* | |
| Beryllium; bromine; strontium and barium; | | Semi* | |

*Note:* Not restricted: no record of measure has been found for the products; Low restriction: the restricted trade value represents less than 15% of the world trade of this product; High restriction: the restricted value represents more than 15% of the world trade of this product. *: here the ratio is low (usually<6%) but at least one top-5 producer of the material was a user of export measures.

*Source*: *OECD Inventory* as of 23 April 2012 and COMTRADE trade statistics.

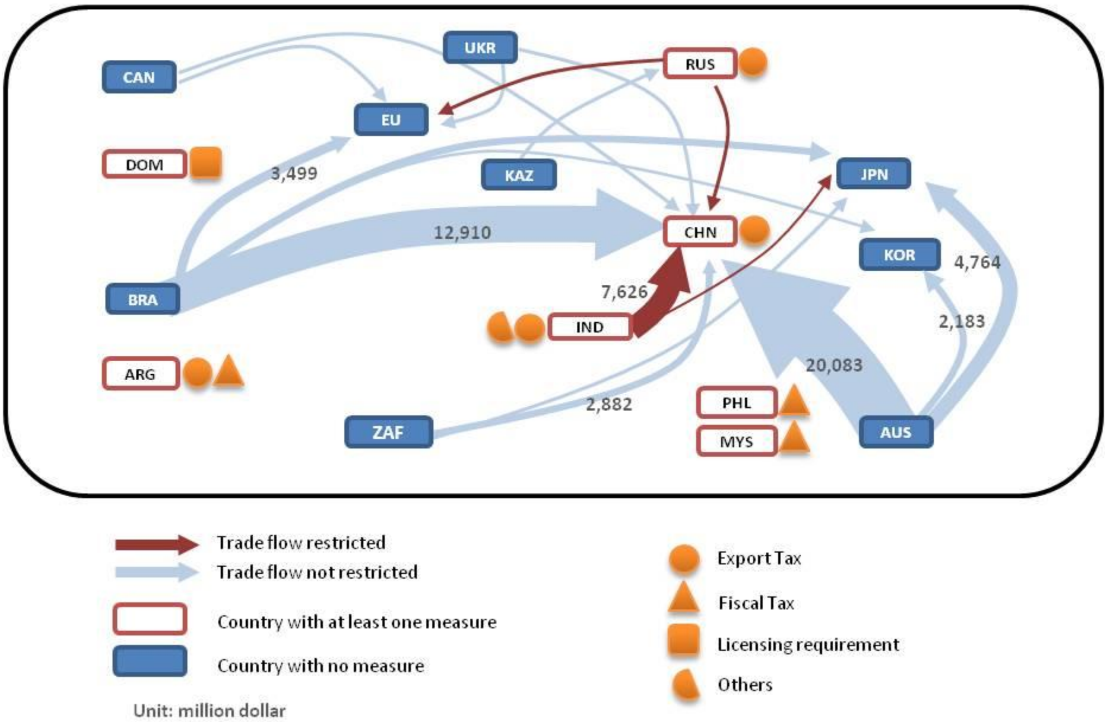
The incidence of export restrictions can also be analysed by way of mapping export policies against the background of the actual flow of trade occurring between origin and destination countries. This is illustrated using one raw material - iron ores and concentrates. Figure 2 identifies and shows cumulative top to bottom 2009 export flows for origin and destination country pairs accounting for 80% of global exports of iron ores and concentrates. Based on the survey results, the presence or absence of export restrictions was determined. Countries without trade flow arrows are those for which export restrictions have been recorded in the Inventory but which are minor players and fall outside the calculated cumulative threshold of 80% of world exports in iron ores and concentrates. As noted elsewhere in the paper, the value of trade flows subject to export restrictions suffers from a downward bias. It might be significantly higher if restrictions that suppress or discourage export activity would not exist. Some observations are:

In this sector, global trade originates mostly in two countries, Australia and Brazil, neither of which restricts exports. China on the other hand is by far the leading importer globally of iron ore and concentrates.

Some countries apply export restrictions themselves but their imports from other countries face similar restrictions. An example shown in Figure 2 is China, which restricts the export of iron ore and concentrates. These exports are insignificant and hence no export arrow is shown. At the same time, China imports not only from Australia and Brazil, but also from countries using export restrictions (India, Russia).

Other countries using restrictions, such as Argentina, Malaysia, Philippines, also do not export much (usually less than 1% of world trade).

**Figure 2. Global trade for iron ores and concentrates, 2009**




*Source*: OECD Inventory as of 23 April 2012 and COMTRADE trade statistics.

The results of such mapping exercise for two other materials – nickel and aluminium – can be found in Annex 5. The exercise can be carried out for any commodity or even simultaneously for sets of different commodities. It makes apparent structural characteristics of global markets, such as the degree of concentration of exports or imports, or countries' interdependence as exporters of some types of materials and importers of other types of industrial raw materials. These are some of the factors that would need to be examined in more detail if material or country-specific economic impact assessments of existing or new export restrictions were carried out.

## IV. Conclusions

Gathering information about measures that restrict exports of raw materials is not an easy task. Based on the experience gained from the effort of collecting the data from national official sources for the OECD Inventory, approaches to transparency in this policy field vary across countries and there is considerable room for improvement of national information policies. Meanwhile the OECD Inventory seeks to fill a void at the international level, where systematic and comparable data are unavailable as far as export regulation is concerned.

Focusing on the minerals and metals sector, the Inventory documents that the range of instruments with which governments regulate exports is wide. It also shows that export taxes and licensing regimes are particularly often used and that 2009 and 2010 saw a tightening of export regulation, overall. As far as impact on trade is concerned, simple trade coverage ratios help gauge what is at stake; however, the actual distortion of trade flows created by export restrictions likely is much more significant. While it appears that there is hardly any mineral or metal that is freely traded, a somewhat surprising result of the survey is that export regulation extends beyond unprocessed raw materials. Semi-processed materials are also regulated. The reason for this is unclear and the phenomenon merits further study, not least because making exportation of semi-processed materials more difficult would appear at odds with the often stated desire of supplier countries to develop more local processing capacity. The Inventory's policy context data raises other questions for further analysis; in particular how effective are export measures in helping achieve any of the different policy objectives expressed by the implementing country?

A preliminary version of this paper was made available to participants at the *Workshop on Regulatory Transparency in Trade in Raw Materials* that took place at OECD headquarters on 10-11 May 2011. Participants from OECD and partner countries had an opportunity to preview the Inventory database during the Workshop.

Release of the public version of the Inventory, which will also include data for wood, is foreseen for late 2012. Data which have not yet undergone Phase II verification will be identified clearly as such in the database and will be adjusted, if necessary, when verifying information is received from the governments of the countries concerned.

# Annex 1.

## Countries and Commodities

| Countries | | | Minerals, metals and wood | | |
|---|---|---|---|---|---|
| **Algeria** | **India** | **Rwanda** | Aluminium | Lithium | Vermiculite |
| **Argentina** | **Indonesia** | Saudi Arabia | Antimony | Magnesite | Zinc |
| **Afghanistan** | **Iran** | Senegal | Arsenic | Magnesium | Zircon |
| **Australia** | **Ireland** | Sierra Leone | Asbestos | Manganese | |
| **Austria** | **Israel** | **Slovak Rep.** | Barytes | Mercury | *Rare earth elements:* |
| **Azerbaijan** | **Italy** | **South Africa** | Bauxite | Mica | Yttrium |
| **Belarus** | **Ivory Coast** | **South Korea** | Bentonite | Molybdenum | Scandium |
| **Belgium** | Jamaica | **Spain** | Beryllium | Nickel | Cerium |
| Benin | **Japan** | Sri Lanka | Bismuth | Niobium | Dysprosium |
| **Bolivia** | **Jordan** | Suriname | Borates | Palladium | Erbium |
| **Botswana** | **Kazakhstan** | **Sweden** | Bromine | Peat | Europium |
| **Brazil** | Kenya | **Syria** | Cadmium | Perlite | Gadolinium |
| **Canada** | Kuwait | **Tajikistan** | Chromium | Phosphates | Holmium |
| Cent. African Republic | **Kyrgyzstan** | Tanzania | Cobalt | Pig iron | Lanthanum |
| **Chile** | Lesotho | **Thailand** | Coke | Platinum | Lutetium |
| **China** | **Malaysia** | Trinidad and Tobago | Coking coal | Potash | Neodymium |
| **Chinese Taipei** | Mali | **Tunisia** | Copper | Pumice | Praseodymium |
| Colombia | Mauritius | **Turkey** | Diamonds | Rhenium | Promethium |
| **Czech Rep.** | **Mexico** | **Turkmenistan** | Feldspar | Rhodium | Samarium |
| **Dem. Rep. of Congo** | **Mongolia** | Uganda | Fluorspar | Ruthenium/Iri-dium/Osmium | Terbium |
| **Denmark** | **Morocco** | **United Kingdom** | Fuller's earth | Salt | Thulium |
| Dominican Rep. | **Mozambique** | **Ukraine** | Gallium | Selenium | Ytterbium |
| Egypt | **Namibia** | United Arab Emirates | Garnet | Silica | |
| Fiji | **New Caledonia** | Uruguay | Germanium | Silicon | |
| **Finland** | **New Zealand** | **United States** | Graphite | Silver | *Scrap and waste of metal:* |
| **France** | **Nigeria** | **Uzbekistan** | Gold | Stone | (Any type) |
| Gabon | **North Korea** | Venezuela | Guano | Strontium | |
| Gambia | **Norway** | Viet Nam | Gypsum | Sulphur | *Wood:* |
| **Germany** | Pakistan | **Zambia** | Indium | Talc | Trop. logs |
| **Ghana** | Paraguay | **Zimbabwe** | Iodine | Tantalum | Trop.sawnwood |
| **Greece** | **Peru** | | Iron | Tellurium | Trop. plywood |
| Grenada | Philippines | | Kaolin | Thallium | Trop. veneers |
| **Guinea** | **Poland** | | Kyanite | Tin | Non-trop. logs |
| Guyana | **Portugal** | | Lead | Titanium | Non-trop. sawnwood |
| **Hungary** | **Russia** | | Lime | Tungsten | Non-trop. plywood |
| | | | | Vanadium | Non-trop. veneer |

*Note:* **In bold** – country is among the top five producers for one or several of the raw materials (metals, minerals, wood) listed.

# Annex 2.

## Export Measures Defined

| Export restriction | Definition* |
|---|---|
| **Export tax** | A tax collected on goods or commodities at the time they leave a customs territory. This tax can be set either on a *per unit* basis or an *ad valorem* (value) basis. Other terminology equivalent to export tax: ***export tariff, export duty, export levy, export charge.*** In some countries the term ***"cess"*** is used. |
| **Fiscal tax on exports** | A tax not paid at the border, but which applies only or discriminates against goods or commodities intended for export. An example is when the *sales tax* which a government charges is higher for goods or commodities intended for export than when these goods or commodities are offered for sale in the domestic market. Other terminology equivalent to fiscal tax on exports: ***export royalty***. |
| **Export surtax** | A tax collected on goods or commodities at the time they leave a customs territory, and which is applied in addition to the normal export tax rate. They can be part of a progressive tax system or can be adapted to price trends and thus being of a temporary nature. Example: a USD 10 surcharge is applied on each tonne of a commodity exported when the world price of this commodity exceeds USD 1 800 a tonne. Other terminology equivalent to export surtax: ***export surcharge.*** |
| **Export quota** | A prescribed maximum volume of exports. |
| **Export prohibition** | An absolute restriction on exports, i.e. zero exports. Other terminology equivalent to export prohibition: ***export ban, export embargo***. |
| **Export license/Licensing requirement** | The requirement of obtaining prior approval, in the form of a license, to export a good or commodity. There are two types of licensing requirements: **(1) Non-automatic export licensing:** Exporters must obtain prior approval, in form of a license, to export a good or commodity. This practice requires submission of an application or other documentation as a condition for being authorised to export. Export licenses are often used in conjunction with export quotas. Besides for *economic* reasons, licensing can be applied for *non-economic* reasons: national security, protection of health, safety, the environment, morality, religion, intellectual property, or compliance with international obligations. Licensing schemes can operate on the basis of product lists of various types, usually lists of banned products or of restricted products that require licences, be applied to restrict exports by destination (e.g. specific countries) or have other conditions attached, such as a requirement that export may only be for a specified purpose. Other terminology equivalent to non-automatic licensing: ***export permit.***<br><br>**(2) Automatic export licensing:** Approval for export is granted in all cases, usually immediately upon a standardised application. This kind of measure usually only assists in the compilation of statistics, does not create burdens or extra transaction costs for exporters and *is not recorded in the Inventory.* |

| | |
|---|---|
| **Minimum export price/price reference for exports** | A minimum allowable price for a good being exported. This practice is often used in conjunction with export taxes because they can facilitate customs procedures by preventing under-invoicing and can be used as a base to calculate export taxes. In some cases, minimum export prices are *not binding* but are used as *reference prices*. Other terminology equivalent to minimum export price: ***administered pricing***. |
| **Dual pricing scheme** | The government applies different prices to a product when it is exported than when the same product is sold in the domestic market. |
| **VAT tax rebate reduction/withdrawal** | Most countries with a VAT system will rebate the VAT on exports. By denying VAT reimbursement in whole or part, it is less advantageous to export a product than to sell it domestically. This in turn encourages exports of products produced locally that use the input to produce downstream products. A variant is the removal or reduction of rebate from *other sales taxes* on exports of a product. |
| **Restriction on customs clearance point for exports** | The government specifies ports/entry points through which export of a good or commodity is to be channelled. |
| **Qualified exporters list** | The rights to export a certain commodity are allocated to specific companies by the government, through a process of application and registration. |
| **Domestic market obligation (DMO)** | The requirement for producers of coal and other minerals to allocate a proportion of their annual production output to the domestic market. (The term "domestic market obligation" appears to be specific to Indonesia, which introduced this measure as an inseparable part of production sharing contracts to ensure that foreign contractors were also held responsible to fulfilling domestic needs of its people.) |
| **Captive mining** | When a processing company is required to own the mine which produces its inputs, or has been awarded captive mining rights with the intent that the company will mine the commodity for use in its own domestic processes and not trade it. Captive mining is a form of government support for firms with access to captive supplies, as well as a means to control the price and availability of a commodity. When captive mining concessions increase (as a share of production), exports are likely to fall. |
| **Other export measures** | Measures not elsewhere specified, but which influence *de jure* or *de facto* the level or direction of exports of goods or commodities. |

***** Guidance for the definition of export measures has been provided by the following: OECD, Analysis of non-tariff measures: the case of export restrictions [TAD/TC/WP(2003)7/FINAL], April 4, 2003, p. 8; Joanna Bonarriva *et al.*, Export controls: An overview of their use, economic effects, and treatment in the global trading system, Office of Industries Working Paper No. ID-23, US International Trade Commission, August 2009, p. 2; Jeonghoi Kim, Recent trends in export restrictions on raw materials OECD Trade Policy Working Papers, No. 101, OECD Publishing, 2010, p. 6 and 12; Walter Goode, A Dictionary of Trade Policy Terms, Centre for International Economic Studies, University of Adelaide, 1998.

# Annex 3.

## Information Contained in the Inventory

| Field | Description |
|---|---|
| 1. Country | Name of the country applying the export measure |
| 2. Supplier status | 1, If country is a major supplier (top 5 in 2009); blank, if country is a minor supplier |
| 3. Stage of production | 1, If primary production; 2, if intermediate production and basic manufacturing; 3, if secondary production, waste and scrap; 4 if chemical compounds |
| 4. Sectors | A 7-way classification is applied:<br>Ferrous metals<br>Non ferrous base metals<br>Non ferrous minor metals<br>Precious metals and stones<br>Waste and scrap<br>Metal ores and minerals<br>Chemicals and compounds |
| 5. Product | Generic name of the product (e.g. aluminium, iron ore, wood) |
| 6. HS6 | The HS code of the product, either taken from the official data source or assigned by researcher |
| 7. HS8 or HS10 | Same as preceding item. Omitted if not available from an official source. Since there is no international harmonisation beyond HS6, if found for a product, the HS8 or HS10 is the one corresponding to the exporting country's own classification. |
| 8. Measure | A standardised label describing the type of restriction (see Box 1) |
| 9. Value | Where applicable, a value of the measure (e.g. rate of tax) |
| 10. Year | Values are 2009 or 2010. Refers to the year when the measure was applied (also if only part of the year). |
| 11. Direction of change | Whether the measure has been newly introduced, increased, decreased, extended without change, revised procedurally, eliminated, or left unchanged |
| 12. Date of introduction or change | The date when the measure was introduced, per law/regulation/decree. Date may be earlier than 2009 or 2010 |
| 13. Ending date | The date when the measure was ended, per law/regulation/decree. Applies only if measure is temporary or has been changed. |
| 14. Is measure temporary? | Yes, if a law/regulation/decree specifies that the measure is of a specified short duration, (e.g. six months, one year). Otherwise No. |
| 15. Are exemptions granted? | Yes, if specified countries or firms are exempted from the measure. Otherwise No. |
| 16. Agency hosting public information | Name of authority which has a notice or other information on the Internet. This authority may be the same or different from the authority in charge of the measure |
| 17. Title of document | Title of the notice/document providing information about the measure |
| 18. Link to notice/document | Electronic link to the notice/document about the measure |
| 19. Legal basis for measure | Title of law/regulation/decree authorising or mandating the measure |
| 20. Authority in charge of measure | Name of government authority responsible for the implementation and administration of the measure. This authority may be the same or different from the authority hosting information about the measure. |

*Annex 3 table continued*

| Field | Description |
|---|---|
| 21. Implementation procedures | Text providing details about procedural aspects of the measure (e.g. measure is renewable for a specified time, criteria that must be met for obtaining an export licence) |
| 22. Purpose of measure | The policy objective(s) of the measure as stated in an official document, or by a representative of the government or state-controlled enterprise during the data verification process. |
| 23. Additional information | For information not recordable elsewhere |
| 24. Date of verification | Date |
| 25. Status of verification | “V” if information collected in Phase 1 about measure, product, including HS6 code, and data in other data fields has been reviewed with officials of the government and confirmed. |

# Annex 4.

## Summary of Process of Collecting Data

| Country surveyed | Phase-I online search found no information on government website (x) | Status of Phase II verification | Entries exist in Inventory |
|---|---|---|---|
| Afghanistan | x | Not engaged | |
| Algeria | | Not engaged | Yes |
| Argentina | | Verification in progress | Yes |
| Australia | | Verification in progress | Yes |
| Austria | x | Completed | * |
| Azerbaijan | | Completed | Yes |
| Belarus | | Completed | Yes |
| Belgium | x | Completed | * |
| Benin | | Completed | Yes |
| Bolivia | | Verification in progress | Yes |
| Botswana | | Verification in progress | Yes |
| Brazil | | Verification in progress | Yes |
| Canada | | Verification in progress | Yes |
| Central African Republic | x | Not engaged | |
| Chile | x | Completed | No |
| China | | Verification in progress | Yes |
| Chinese Taipei | x | Not engaged | |
| Colombia | | Verification in progress | Yes |
| Czech Republic | x | Completed | * |
| Dem. Rep. of Congo | | Not engaged | |
| Denmark | x | Completed | * |
| Dominican Republic | | Verification in progress | Yes |
| Egypt | | Verification in progress | Yes |
| Fiji | | Completed | Yes |
| Finland | | Completed | * |
| France | x | Completed | * |
| Gabon | | Verification in progress | Yes |
| Gambia | | Verification in progress | Yes |
| Germany | x | Completed | * |
| Ghana | | Verification in progress | Yes |
| Greece | x | Not engaged | |
| Grenada | | Not engaged | Yes |
| Guinea | | Not engaged | Yes |
| Guyana | | Completed | Yes |
| Hungary | x | Completed | * |
| India | | Not engaged | Yes |

| Country surveyed | Phase-I online search found no information on government website (x) | Status of Phase II verification | Entries exist in Inventory |
|---|---|---|---|
| Indonesia | | Verification in progress | Yes |
| Iran | x | Not engaged | |
| Ireland | x | Completed | * |
| Israel | x | Completed | * |
| Italy | x | Completed | * |
| Ivory Coast | x | Not engaged | |
| Jamaica | | Completed | Yes |
| Japan | | Completed | Yes |
| Jordan | x | Not engaged | |
| Kazakhstan | | Not engaged | Yes |
| Kenya | | Completed | Yes |
| Kuwait | | Not engaged | |
| Kyrgyz Republic | x | Not engaged | |
| Lesotho | x | Verification in progress | |
| Malaysia | | Verification in progress | Yes |
| Mali | | Completed | Yes |
| Mauritius | | Completed | Yes |
| Mexico | x | Completed | * |
| Mongolia | x | Not engaged | |
| Morocco | | Verification in progress | Yes |
| Mozambique | x | Verification in progress | |
| Namibia | | Verification in progress | Yes |
| New Caledonia | | Completed | * |
| New Zealand | | Completed | * |
| Nigeria | | Not engaged | Yes |
| North Korea | x | Not engaged | |
| Norway | x | Completed | * |
| Pakistan | | Completed | Yes |
| Paraguay | | Completed | Yes |
| Peru | x | Completed | * |
| Philippines | | Not engaged | Yes |
| Poland | x | Completed | * |
| Portugal | x | Completed | * |
| Republic of Korea | x | Completed | * |
| Russia | | Verification in progress | Yes |
| Rwanda | | Verification in progress | Yes |
| Saudi Arabia | x | Not engaged | |
| Senegal | | Verification in progress | Yes |
| Sierra Leone | | Completed | Yes |
| Slovak Republic | x | Completed | * |
| South Africa | | Verification in progress | Yes |
| Spain | x | Completed | * |

| Country surveyed | Phase-I online search found no information on government website (x) | Status of Phase II verification | Entries exist in Inventory |
|---|---|---|---|
| Sri Lanka | | Completed | Yes |
| Suriname | x | Not engaged | |
| Sweden | x | Completed | * |
| Syria | x | Not engaged | Yes |
| Tajikistan | x | Not engaged | |
| Tanzania | | Not engaged | Yes |
| Thailand | | Completed | Yes |
| Trinidad and Tobago | | Not engaged | Yes |
| Tunisia | | Not engaged | Yes |
| Turkey | x | Completed | * |
| Turkmenistan | x | Not engaged | |
| Uganda | | Verification in progress | Yes |
| Ukraine | | Not engaged | Yes |
| United Arab Emirates | | Not engaged | Yes |
| United Kingdom | x | Verification in progress | |
| United States | x | Verification in progress | |
| Uruguay | | Completed | Yes |
| Uzbekistan | x | Not engaged | |
| Venezuela | | Completed | Yes |
| Viet Nam | x | Verification in progress | Yes |
| Zambia | | Completed | Yes |
| Zimbabwe | | Verification in progress | Yes |

*Notes:*

As of 23 April 2012. The table shows the status of data collection and verification for the survey of minerals, metals and wood.

x No information in regard to export restrictions was found on the official website of the government.

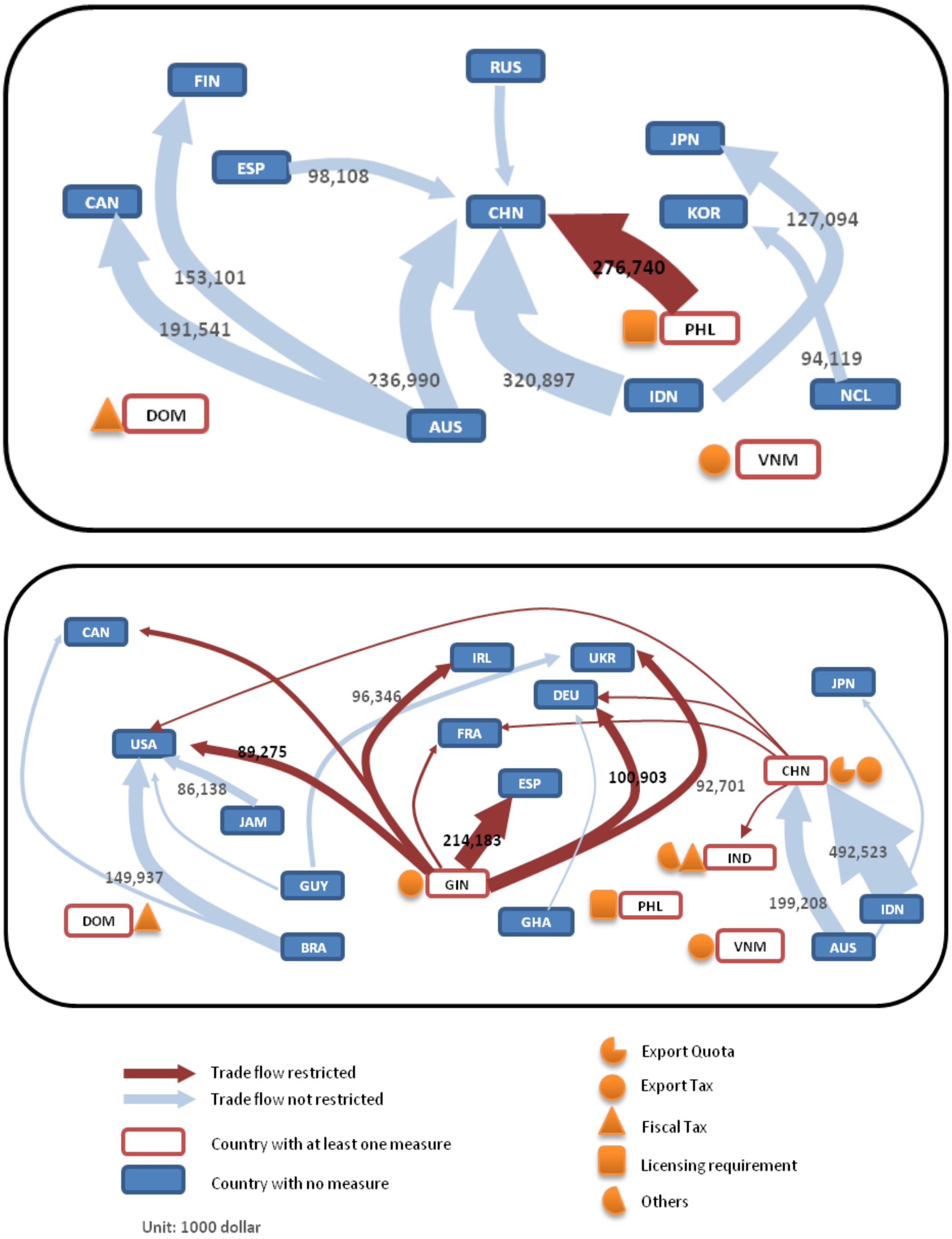
* Verification has confirmed non-use of export restrictions.

“Not engaged” refers to governments who so far have not responded to the Secretariat’s request for data verification, and to governments who the Secretariat has not yet contacted (for some of these governments, the Secretariat lacks contact information).

In the Inventory, data collected from the official website of a government that has not yet undergone Phase II verification are marked as such until the time when information confirming their accuracy and completeness has been received from the government .

# Annex 5.

## Global Trade for Nickel (top) and Aluminium (bottom) Ores and Concentrates, 2009




*Source*: OECD Inventory as of 23 April 2012 and COMTRADE trade statistics.