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UNITED NATIONS
DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS

STATISTICS DIVISION
TRADE STATISTICS BRANCH
INTERNATIONAL MERCHANDISE TRADE STATISTICS SECTION

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### Note on HS 2007 data conversion in UN Comtrade

### 1. UN Comtrade and the Harmonized System (HS)

Since several years essentially all countries report their detailed merchandise trade data to UN Comtrade according to the Harmonized Coding and Description System (Harmonized System or HS). The HS is regularly updated to accommodate the emergence of new and disappearance of previously existing products. The fourth edition, HS 2007 which is a substantial revision from previous versions came into effect 1.1.2007 and many countries provide their detailed trade data for the reporting year 2007 according to the HS 2007.

For the convenience of users UN Comtrade provides not only the data in the original classification in which it is submitted by countries but also converted to earlier HS versions (and other trade classifications). This allows easier use of data across countries and time periods such as for publications or other purposes. For some purposes users might decide to use exclusively originally reported data.

The data conversions from HS2007 to earlier HS versions developed by UNSD assign one single code (subheading) of an earlier HS edition to each HS 2007 subheading. Yet, users should be aware that the very nature of a revision of a classification does not allow establishing a clear 1:1 correspondence for all codes (subheadings) of a new to the codes of previous versions of a classification and should bear in mind the potential shortcomings (different contents than indicated, break in series) for certain subheadings when using converted instead of original data.

The data conversions have been developed based on the best judgment of the staff at the International Merchandise Trade Statistics Section (IMTSS) of the United Nations Statistics Division (UNSD) but have no binding character whatsoever. Data users are free to convert the original data provided by countries to different classifications according to their own criteria.

The purpose of this note is to describe the methodology that we used at the UNSD in developing these conversions/ conversion tables.

## 2. Correlation tables

When a new edition of the HS is issued, the World Customs Organization (WCO) provides correlation tables between the latest and the previous version of the HS which show the relationships between the codes of the two classifications.[1] From such correlation tables it is possible to build a correlation table between HS 2007 and any of the previous HS.

In the correlation table between HS 2007 and any previous HS edition, four types of relationships are possible:

- The HS2007 subheading is correlated with one and only one subheading in the previous HS. We refer to this as a 1:1 relationship.

- The HS2007 subheading is a result of a split of one subheading in the previous classification into several subheadings. We refer to these as n:1 relationship;

- The HS2007 subheading is the result of merging several subheadings in the previous classification. These are called 1:n relationship;

- The subheading is the result of a split and merge of several subheadings in the previous classification. These are n:n relationships.

Table 1 shows the structure of the correlation table between the HS 2007 and previous HS editions according to the type of relationship between subheadings. For details, see Annex 6.

**Table 1: Types of relationships between headings in the HS 2007 and previous HS versions**

| Relationship | HS 2002 | HS 1996 | HS 1992 |
|--------------|---------|---------|---------|
| 1:1 | 4471 | 4,080 | 3706 |
| n:1 | 293 | 569 | 790 |
| 1:n | 142 | 161 | 175 |
| n:n | 146 | 242 | 381 |

## 3. Conversion tables

The practice of IMTTS is to convert a subheading of the current classification (HS 2007) into one and only one subheading (code) of the earlier HS version.[2] This code is selected among his correlates (except in some very rare exceptions (see Annex 1). For all 1:1 and n:1 relationships no effort is required to assign the only available code. For all 1:n and n:n relationships, the best fitting subheading had to be selected. The selection is made sequentially using the following rules:

1. Rule 1 - quantitative method: The quantitative method consists in assigning the HS 2007 code to the correlate that accounts for 75 percent or more of the total trade in all the

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[1] Correlation tables between HS 2007 and the following previous HS versions: HS 2002, HS 1996 and HS 1992 is provided in annex 6. Some are also are available at:
http://www.wcoomd.org/home_wco_topics_hsoverviewboxes_tools_and_instruments_hsnomenclature.htm.
[2] An alternative is to split the trade value of a code into his correlates according to their trade share. Yet, this approach is problematic if the correlated code is in relationship with another code in the current classification.

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correlates. For the method to be valid, this correlate cannot be in relation with another HS 2007 subheading (see Annex 4 for examples).

2. Rule 2 - retained code: The retained code rule consists in assigning the HS 2007 code based on the code itself. If one of the correlated subheadings has the same code as the HS 2007 subheading, we convert the HS 2007 subheading into that one. The retained code rule is based on the general WCO praxis to maintain the existing code only if there has been no substantial change of scope. Yet, the code assignments were reviewed as there are also exceptions to this practice (see Annex 2).

When none of the above rules applies, codes are assigned on a case-by-case basis. We compare product descriptions and combine it with one of the following methods/ considerations:

- If a "Others" is available, the HS 2007 subheading is assigned to that code;

- The HS 2007 code is assigned to the code that has a larger trade share;

- If there is only one correlated code that belongs to the same heading (4digits) or rarely, chapter, we convert the HS 2007 subheading into that product;

- The assignments to codes for which the correlation is considered controversial are reviewed (for more details see Annex 3);

- The results of the so called direct and cascading conversions are reviewed (see below under 4.) in order to make consistent decisions when there are no differences between the earlier HS version.

**Table 2. Decision rules applied for each conversion table of HS 2007 into previous HS versions**

| Decision | HS 2002 | HS 1996 | HS 1992 |
|---|---|---|---|
| Quantitative method | 131 | 128 | 128 |
| Retained code | 72 | 123 | 185 |
| Others | 85 | 152 | 243 |
| **Total** | **288** | **403** | **556** |

The conversion tables are available in Annex 6.

### 4. Direct vs. cascading conversion

All conversions from HS 2007 to earlier HS versions have been developed as direct conversions, meaning the HS 2007 codes have been directly compared with the codes of the earlier HS versions. This method is more accurate than the cascading conversion which uses only the relationships between two subsequent versions of the HS. For example, the HS 2007 to HS 2002 and HS 2002 to HS 1996 conversion can be used to automatically derive the conversion from HS 2007 to HS 1996.

The comparison of the results of the direct with the cascading conversion is useful to ensure making consistent decisions when there are no differences between the earlier HS version. As a result of this comparison some corrections to the earlier implemented HS 2007 to HS 2002 conversion were made (for details see Annex 5).

**5. References:**

1. Customs Co-operation Council. The Harmonized Commodity Description and Coding System (1992).

2. World Customs Union. Harmonized Commodity Description and Coding System, Second Edition (1996).

3. World Customs Union. Harmonized Commodity Description and Coding System, Third Edition (2002).

4. World Customs Union. Harmonized Commodity Description and Coding System. Fourth Edition (2007).

5. World Customs Union. Amendments to the Harmonized System Nomenclature Effective from 1 January 2007 (2006).

## Special cases

**Annex 1: Conversion outside the correlation:**

In some rare cases, we convert the HS 2007 code into a code that is outside the correlation because none of the correlates fits better. The list of these codes is provided in table 3.

**Table 3: List of conversions outside the correlation**

| HS 2007 | Converted into: | | |
|---|---|---|---|
| | HS 2002 | HS 1996 | HS 1992 |
| 844331 | 844359 | 844359 | 844350 |
| 844332 | 844359 | 844359 | 844350 |
| 844339 | 844359 | 844359 | 844350 |
| 330620 | N/A | N/A | 330690 |

**Annex 2: Preserved (retained) codes with modified scope**

In the revision of HS 2002 classification to HS 2007, some codes were preserved with modified scope. A list of these codes is available from the WCO (see World Customs Union (2006), Annex C). This happened especially in the high-tech area, where many changes were made to unify the classification of articles for which the pre-2007 classification had been controversial. In such cases, the retained code rule alone is not sufficient because the subheading might have been substantially modified.

**Annex 3: Controversial correlations**

In some cases there was no consensus on the 2002-2007 correlation. These controversial correlations are marked with the symbol * in the correlation tables (xxxx.xx*). There are 10 HS 2007 subheadings that are involved in such a situation. We reviewed our decision for all HS 2007 codes involved in a controversial correlation. In only three cases we initially converted a HS 2007 subheading into a correlate for which there is no consensus. For two cases (4418.72

and 4418.79), we change our decision to the other available code (4418.30). For the code 8486.20, we keep our decision (8479.89*) because no alternative code provides a better product description.

## Annex 4: Conversion from HS 2007 to HS 1992: examples

- Quantitative method:

| HS07 | HS92 | Relationship type | Imports share, 92-95 | assigned code |
|---|---|---|---|---|
| 080550 | 080530 | n:n | **95.67** | 080530 |
| | ex080590 | n:n | 4.33 | |

The HS 07 code 080550 is correlated to the codes 080530 and 080590 in the HS 92. It is assigned to 080530 because the subheading accounts for at least 95.67 percent of the trade share. In some situations, the quantitative method doesn't apply. Here is an example:

| HS07 | HS92 | Rel. type | Imports share, 92-95 | Converted |
|---|---|---|---|---|
| 070959 | ex070951 | n:n | 98 | |
| 070959 | 070952 | n:n | 2 | 070952 |

070951 accounts for 98 percent of the trade of products correlated with 070959. However, the quantitative method cannot be used because 070951 is also correlated with another code (hence the sign "ex"). We made our final decision by comparing product descriptions.

- Retained code:

Here is a situation where the retained code doesn't apply:

| HS07 | HS92 | Rel. type | Imports share, 92-95 | Converted |
|---|---|---|---|---|
| 293729 | ex291450 | n:n | 26 | |
| 293729 | **293729** | n:n | 26 | |
| 293729 | ex293799 | n:n | 49 | 293799 |

The original code 293729 is available in the previous classification (HS 92). However, we do not apply the retained code because the code description has changed. We made our final decision by comparing product descriptions.

**Annex 5: Corrections to the HS 2007 to HS 2002 conversion**

The data conversion from HS 2007 to HS 2002 had been established in February 2008. The development of the conversions from HS 2007 to HS 1996 and HS 1992 provided an opportunity to review this conversion and to make corrections where needed. The following code assignments have been corrected:

**Table 4: List of HS 2007 to HS 2002 corrections**

| HS 2007 | Assigned HS 2002 code | | Reason |
|---------|------|------------|--------|
|         | New  | Previously |        |
| 0105.94 | 0105.92 | 0105.99 | correction of error and assignment within correspondence |
| 3824.71 | 3824.90 | 3824.71 | retained code changed scope |
| 3824.79 | 3824.90 | 3824.79 | retained code changed scope |
| 4206.00 | 4206.90 | 4206.10 | result of comparison with H3-H1 conversion |
| 4411.12 | 4411.29 | 4411.99 | correction and to assignment within correspondence |
| 4411.13 | 4411.29 | 4411.99 | correction and to assignment within correspondence |
| 4411.14 | 4411.29 | 4411.99 | correction and to assignment within correspondence |
| 4418.72 | 4418.30 | 4418.90 | no consensus on code 4418.90* |
| 4418.79 | 4418.30 | 4418.90 | no consensus on code 4418.90* |
| 6811.40 | 6811.90 | 6811.20 | result of comparison with H3-H1 conversion |
| 8517.61 | 8517.50 | 8517.80 | correction and to assignment within correspondence |
| 8523.29 | 8523.20 | 8523.90 | correction and to assignment within correspondence |
| 8523.59 | 8523.90 | 8542.90 | correction of error and assignment within correspondence |
| 8523.80 | 8523.90 | 8542.90 | correction of error and assignment within correspondence |
| 8542.31 | 8542.29 | 8542.21 | result of comparison with H3-H1 conversion |
| 8542.32 | 8542.29 | 8542.21 | result of comparison with H3-H1 conversion |
| 8542.33 | 8542.29 | 8542.21 | result of comparison with H3-H1 conversion |
| 8542.39 | 8542.29 | 8542.21 | result of comparison with H3-H1 conversion |
| 8544.42 | 8544.41 | 8544.51 | result of comparison with H3-H1 conversion |
| 8544.49 | 8544.59 | 8544.49 | retained code changed scope |