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**Supporting ISIC Rev.4 and CPC Ver.2 /
Preparing for future revisions of ISIC and CPC**

UNSD

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1. Introduction

The revisions of the International Standard Industrial Classification of All Economic Activities (ISIC) and the Central Product Classification (CPC) have been completed and a number of countries have started or are well on their way to implement ISIC Rev.4 and CPC Ver.2.

While this concludes one chapter in the work on these classifications, the Expert Group should look ahead and discuss how the current implementation can be facilitated, and how to prepare for the next revisions of these classifications. Some elements of these two processes may overlap.

Given the limited amount of resources for any such activities, the Expert Group may wish to set priorities and recommend a timeline for the work to be carried out.

2. Follow-up actions to support the implementation, use and acceptance of ISIC Rev.4 and CPC Ver.2

With the revised classifications ISIC Rev.4 and CPC Ver.2 available, support documents and tools for users need to be developed. The *Companion Guide to ISIC and CPC* and the *Implementation Guide to ISIC Rev.4* are two such documents that are already being prepared and are discussed separately in this meeting.

Additional tools, in particular for users of the classifications still need to be developed. At least three types of tools should be considered:

- classifications indexes and coding tools
- correspondence tables
- clarifications (case laws)

A. Classifications indexes

An alphabetical index for CPC Ver.2 has been developed and is available for search on the UNSD Classifications website. The index covers about 49,400 product descriptions. The work was based on the index that was developed for the previous version of the CPC, amended with new index items to reflect changes in the detail or concept of existing CPC subclasses. Follow-up work to improve the index is planned (focused on a few small areas), although the existing version of the index is already a fully functioning index.

An alphabetical index for ISIC Rev.4 is still under development. The first step of the work includes recoding of existing index items from the alphabetical index of ISIC Rev.3.

Alphabetical indexes are available with a search tool on the UNSD Classifications website. However, there are often requests for a stand-alone coding tool. The Expert Group may wish to discuss if the development of such a stand-alone coding tool for ISIC or CPC is a necessity. To make such a tool useful for users, other language versions may be necessary, and even in the case of English-speaking countries, modifications to the existing index may be necessary to account for national specifics. Such requirements may make the separate development of a stand-alone coding tool not efficient.

B. Correspondence tables

Correspondence tables have been one of the most requested tools for previous versions of ISIC and CPC, linking the latest versions of these two classifications with a variety of other classifications.

A number of such correspondences are already available, mostly as additional outputs of the development work of ISIC Rev.4 and CPC Ver.2. The existing correspondence tables include:

- ISIC Rev.4 – ISIC Rev.3.1
- ISIC Rev.4 – NACE Rev.2
- ISIC Rev.4 – NAICS (US) 2007
- CPC Ver.2 – ISIC Rev.4
- CPC Ver.2 – CPC Ver.1.1
- CPC Ver.2 – HS 2007
- CPC Ver.2 – SITC Rev.4

A number of other correspondence tables have been requested, either based on the fact that similar correspondences had been produced for earlier versions, reflecting needs of countries that still use older versions (e.g. ISIC Rev.2), reflecting user needs in comparing data sets based on different classifications, align data produced according to the new classifications with previous versions used in legal frameworks etc. The correspondences for which there seems to be a demand are listed below:

- ISIC Rev.4 – ISIC Rev.3 *
- ISIC Rev.4 – ISIC Rev.2
- ISIC Rev.4 - COFOG
- ISIC Rev.4 – HS 2007 *
- CPC Ver.2 – Provisional CPC
- CPC Ver.2 – COICOP
- CPC Ver.2 – COFOG
- CPC Ver.2 – EBOPS *
- CPC Ver.2 – CPA 2008
- CPC Ver.2 – BEC

For items marked with an asterisk (*), work is already being undertaken in UNSD.

The Expert Group may wish to discuss which of these correspondence tables should be given priority. Are there other correspondence tables that should be added to this list? Are there other resources that the Expert Group can mobilize to produce these correspondence tables?

Simplified correspondence tables

Data users often expect correspondence tables that allow for the direct conversion of data from one classification to the other. This requires some form of simplification of the correspondence in cases where one-to-many and many-to-many links are involved, which can be achieved by ignoring links between categories that are deemed insignificant (based on existing data or based on comparison of concepts). This loss of accuracy is usually accepted by users as the only means of dealing with a complex relationship between classifications.

Such a simplified link may work well if a detailed classification (or detailed level thereof) is corresponded to a more aggregated classification (or more aggregated level thereof). For instance, such a simplified correspondence table has been developed between NAICS (US) 2007 and ISIC Rev.4. However, in other cases, such as between ISIC Rev.3 and ISIC Rev.4, such a method may not work well. Assigning weights to categories involved in one-to-many or many-to-many relationships is an option that would depend very much on country-specific circumstances and might not be suitable at the international level.

It is recognized, however, that the existing detailed correspondence tables are not always suitable for simple data conversions. On the other hand, publishing different types of correspondence tables might lead to confusion for users.

The Expert Group may wish to discuss if such simplified correspondence tables should be developed. If so, which correspondence tables should be given priority and which principles should be used for their development? In which format should such correspondence tables be developed, i.e. what kind of metadata should accompany such output?

C. Clarifications (case laws)

Since the publication of ISIC Rev.4, several questions have emerged that require clarifications to ensure a consistent interpretation and application of the classification. UNSD will continue to collect such information requests through the Classifications Hotline and provide responses in cooperation with other experts. The information collected and responses provided will also form an input into the decision making process for the work on the next round of revisions of ISIC and CPC (see below).

These questions have arisen during the actual implementation of the classification and do not represent any proposals for introduction of new concepts into the classifications. However, they may point out shortcomings in the existing classifications text, such as the lack of guidance on how to classify certain (old or new) operational arrangements, actual errors (inconsistencies) in the classifications text or similar problems. As such, their clarification would be of benefit to all ISIC users.

The Expert Group may wish to discuss how to formalize this process and recommend ways in which clarifications to the classification should be published.

3. Future revisions of ISIC and CPC

At its previous meetings the Expert Group has accepted a schedule for future updates of ISIC and CPC. It was agreed that revisions of ISIC should take place every ten years with smaller updates every five years, while revisions of the CPC should take place every five years, due to the faster changing nature of products. Given this cycle, we need to look at actions to be taken for a 2012 revision/update/review process.

A. Scope of revisions

The recommendation for the revision schedule was done with the understanding that the scope of these revisions and updates will depend on established needs and will not necessarily result in substantial changes to the classifications. Although the expressions “revision” and “update” have been used in this context, such as for ISIC Rev.3.1, no formal definition exists. It may be useful to adopt a clear terminology for any form of communication with the public, be it statistical offices or other users of the classifications.

Given the efforts spent by many countries on the recent/current classifications revision, any communication relating to future changes should be carefully worded and precisely describe the scope of the revision process.

ISIC

In the case of ISIC, it is not expected that any new concepts be introduced for a 2012 revision/update, nor that any major structural changes will take place. Of course, a final determination will be based on facts. Whether even the issuing of a new publication, like

an ISIC Rev.4.1 is necessary will need to be discussed. If there is no strong need for a change, it should probably be avoided at this stage.

Overall, it may be more appropriate to talk about a 2012 review of ISIC Rev.4 and not explicitly about an update or even a revision.

CPC

In the case of CPC, the situation is different. There is a general acceptance that product classifications may have to change more frequently than activity classifications, the Expert Group has previously agreed to a 5-year cycle for revisions of the CPC. However, as with ISIC, the scope of these “revisions” can vary widely.

In recent revisions, the scope of changes to the CPC was based on a sectoral review, i.e. certain sectors of the CPC have been reviewed to ensure that products are adequately defined, correspond to newly defined industries etc. This has essentially led to changes at the detailed level, while the overall structure of the CPC has remained unchanged. In fact, for the last revision of the CPC this had been an agreed goal. For changes to the sections 0-4 of the CPC, the revisions of the Harmonized System provide an additional input that is typically beyond our control, but needs to be incorporated to the extent possible.

A number of changes in the recent revision have added to long-standing questions about the overall structure of the CPC and the rationale for this structure. For the revision to CPC Ver.2, the overall structure of the CPC had been discussed, essentially focusing on two options – an industry-of-origin approach and a demand-based approach. Arguments for and against both approaches have been discussed. However, at that time, no experience in working with a demand-based approach existed and the decision was taken to accept the status quo for this revision.

Apart from a possible review of the overall structure of the CPC, what should be the main focus of a review, which could lead to an update or revision? Should again a sectoral review be undertaken? If so, what sectors of the CPC should be reviewed in detail? Should the structure of the CPC be modified at lower or higher levels to account for concepts separating goods, services and other products (e.g. intellectual property products)? Should a stricter approach be taken to link each CPC product to a single ISIC industry, even if the resulting products are “artificial” constructs?

It should be noted that, in terms of workload, changes to the detailed level of the CPC may be more time consuming than an overall restructuring of existing detail of the CPC, if the structure is based on a known format (i.e. industry-of-origin).

The Expert Group may wish to discuss the approach to these classification reviews, in particular regarding the future structure of the CPC.

B. Actions to be taken

While conceptual consideration will play a part in any preparations for updates or revisions in 2012, the input provided by users should receive a higher priority. In particular, experiences in working with ISIC Rev.4 and CPC Ver.2 should be used to identify weaknesses in the classifications that need to be addressed.

UNSD continues to collect feedback on the classifications through the Classifications Hotline. Difficulties in working with / interpreting / implementing the classifications become visible through the type of clarifications sought. In general, such issues are not immediately identified as problems. However, if questions concentrate in few areas of ISIC or CPC, this can be taken as a sign for the existence of problems that need to be reviewed.

Eurostat has also started to collect information on difficulties in implementing NACE Rev.2. Due to the strong link between the NACE and ISIC, this information becomes useful for an ISIC review as well.

While additional information is being gathered in workshops and other meetings, these avenues typically do not provide a complete overview of existing problems.

The Expert group may wish to discuss if other options for collecting information on problems in ISIC and CPC should be explored, e.g. through a targeted survey.

Apart from the information on problems with the existing version of the classifications, gathered from classification users, requests for additional changes should be accepted. This can include requests for additional detail, regrouping of activities, or even the introduction of new concepts – the full scope of changes any classifications revision may consider.

The Expert Group may wish to discuss whether the collection of such requests should be done on a more passive basis, i.e. only driven by users, or if there should be an active seeking of input into this process, e.g. through a world-wide consultation via questionnaires. Care should be taken to ensure that this is not perceived as a determined effort to have a major revision, in particular in the case of ISIC.

Based on the information collected, a decision can be taken to determine the scope of changes to the classifications to be made in 2012. This can also take the form of amendments / clarifications without formally issuing a new version of the classification, in particular in the case of ISIC.

C. Timeline

Based on the actions described above, a timeline for the 2012 revision/update/review cycle could take the following form:

2009-2011

- Gathering of information on problem issues in the current version of the classifications (ISIC and CPC) (in ways to be decided yet – see above)
- Issuing of clarifications on an ongoing basis (through channels yet to be determined – see above)
- Expert Group discussion on future structure of CPC
 - o Reach agreement by mid-2010
 - o Develop new structure based on existing detail (if necessary)

2011 (next EG meeting)

- Review scope of clarifications given on ISIC and CPC
- Determine scope of changes to be made to ISIC and agree on format of revision document (amendment, formal Rev.4.1 or other)
 - o World-wide review of proposals (only if a larger change is required!)
- Determine scope of changes to CPC
 - o Taking into account agreements reached on overall structure
 - o Review of preliminary proposals for changes
- World-wide review of draft revised CPC (end of 2011, beginning 2012)

2012

- Final review by the Expert Group (via e-mail)
- Publication of documents (in previously agreed formats)

The Expert Group may wish to discuss this proposed timeline.

It should be noted that not all countries will have adopted ISIC Rev.4 or CPC Ver.2 in time to provide information about difficulties in its use. The Expert Group should take this into account in the discussion of actions and timelines.

Based on the expected amount of work and expertise required for this review, the Expert Group may wish to discuss how resources can be allocated for this. For instance, is the creation of a Technical Subgroup useful for this process?

4. Points for discussion

The following is a summary of the questions raised in this document.

The Expert Group may wish to discuss and provide guidance on the following issues:

- a. Should a stand-alone coding tool for ISIC or CPC be developed?
- b. Which correspondence tables should be developed for ISIC and CPC? Who can participate in their development?
- c. Should simplified correspondence tables be developed? If so, which principles should be used and how should priorities be set?
- d. How should clarifications to the classification be published?
- e. How should the classification reviews/updates/revisions for 2012 be approached, in particular regarding the future structure of the CPC?
- f. How should information on problems in ISIC and CPC be collected?
- g. How should information on new proposals for ISIC and CPC be collected?
- h. Is the suggested timeline appropriate?
- i. Is the creation of a Technical Subgroup useful for this review/update/revision process?