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Grading Criteria for International Statistical Classifications

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Introduction

The purpose of this document is to provide guidelines for grading international statistical classifications to ascertain their status as international reference, derived or related classifications within the International Family of Statistical Classifications.

As a prerequisite, membership within the International Family of Statistical Classifications is contingent on the classification meeting best practice criteria and fulfilling the checklist of requirements listed in Appendix 1 of this paper.

This document should be read in conjunction with the supporting document 'Criteria to become a Member of the International Family of Classifications', and the 'Best Practice Guidelines for Developing International Statistical Classifications.'

Background

At the 2013 meeting of the UN Expert Group on International Statistical Classifications it was agreed that the concept of the International Family of Statistical Classifications should be maintained and its scope broadened to account for the wide variety of statistical domains that are in use in official statistics. The scope of the Family is to include all international statistical classifications that represent standards for a given statistical domain, and may include those classifications developed at a regional level that have become de facto international standards.

The purpose of expanding the Family is to provide a better overview of what statistical classifications countries are to follow, and will also enable an assessment of the quality and status of those classifications according to the definitions provided in this document. It is also intended that the expansion of the Family will allow for the better assessment of linkages between existing classifications. In addition all international statistical classifications will need to comply with best practice criteria and fulfil a checklist of requirements (refer to Appendix 1) to determine their suitability for membership of the international family.

Defining a statistical classification

For the purposes of this document the term 'statistical classification' is defined as follows:

"A statistical classification is a set of categories which may be assigned to one or more variables registered in statistical surveys or administrative files, and used in the production and dissemination of statistics. The categories are defined in terms of one or more characteristics of a particular population of units of observation. A statistical classification may have a flat, linear structure or may be hierarchically structured, such that all categories at lower levels are sub-categories of a category at the next level up. The categories at each level of the classification structure must be mutually exclusive and jointly exhaustive of all objects in the population of interest."

Types of Classification

This section provides guidelines on the criteria to be applied for grading an international statistical classification to determine its status within the Family.

(a) International Reference Classifications

An international reference classification is one developed by an international agency, examples of which are the United Nations Statistical Division (UNSD), International Standards Organisation (ISO), International Labour Organization (ILO), United Nations Educational, Scientific and Cultural Organisation (UNESCO), or World Health Organization (WHO).

The aim of international reference classifications is to provide a common framework for collecting and organising information about a particular statistical system, concept or variable. Their use, either directly or through national adaptations, facilitates the exchange and comparability of statistics and other information between countries. These classifications have generally been developed through extensive international consultation, and have achieved broad acceptance and official agreement for use.

(b) International Derived or Related Classifications

Derived or related classifications are based upon an international reference classification. They may be developed by:

- applying the concepts of the reference classification in a more rigid or alternative way to produce a different classification hierarchy or structure;
- adopting the reference classification structure and categories at the higher levels, and then adding additional lower level detail for regional or national purposes;
- rearranging or aggregating parts of one or more reference classifications to form a new variation of the reference classification.

National or regional classifications are often regarded as derived or related classifications.

Table 1: Classification Type Definitions

Type	Definition
Reference	A classification that has achieved broad acceptance and official agreement and is approved and recommended as a model for the development or revision of corresponding classifications, with respect to the structure and character and definition of the categories.
Derived	A classification based upon the corresponding reference classification. The classification may be prepared by the rearrangement or aggregation of items from one or more reference classifications.
Related	A classification that provides a set of organised categories for the same variable(s) as the corresponding reference classifications, but for which the categories may only partially refer to those defined in the reference classifications, or that may only be associated with the reference classification at specific levels of the structure.
Other¹	A classification that is not declared as either a derived or related and which shares the same variables/units or purpose of the reference classification, but is not harmonised with the reference classification. For example a national classification developed in isolation from the international standard

¹ This is a temporary label for discussion

In order to understand the degree of harmonisation or the relationships between the different classification types, a quality scale has been developed to assist (refer to Appendix 2). The scale has been developed based on analysis of the dominant types of links identified in correspondence tables between reference, derived and related classifications. Based upon the relationship to reference classifications, derived classifications have been given a higher score and related a lower score (for quality in terms of harmonisation to the reference classification).

Additional requirements

Documentation

In addition to the application of the quality scale, custodians of international statistical classifications need to document:

- how a classification was developed and justify why a classification is designated as a particular type.
- that the classification is developed based on a recognised reference classification (and which reference classification it is).
- the rationale for rearranging or subdividing reference classification content to create a derived or related classification
- alignment with best practice principles

If the documentation is not available, the classification should not be considered as derived or related even if highly harmonised with the reference classification.

Prioritisation

Where a classification is derived from one reference classification and is related to another reference classification, then the derived takes priority over the related in terms of its status within the Family.

An international statistical classification cannot be derived and related to the same reference classification.

Approval process

In order for a classification to be included into the International Family of Statistical Classifications it must be reviewed against best practice principles and endorsed by the UN Expert Group on International Statistical Classifications before it is approved via the UN Statistical Commission or the custodian's own approval process.

Appendix 1: Criteria to become a member of the International Family of Economic and Social Classifications Checklist

The following table outlines whether the statistical classification presented to the Expert Group for comment meets the criteria for inclusion or not. To be considered for inclusion in the International Family an international statistical classification must, as a minimum, have answered **Yes** for all mandatory requirements listed in the following table.

Criteria	Y/N	Requirements
Custodian of the classification		There must be a custodian. Mandatory ie must be Yes
Primary use of the classification		The use of the classification in statistical and non-statistical environments should be documented. Discretionary ie can be Yes or No
Conceptual basis		The major concepts that are used for developing the classification must be clearly defined and documented. Mandatory ie must be Yes
Scope of the classification		The scope of the classification must be clearly documented. Mandatory ie must be Yes
Statistical Unit		The statistical units for the primary application of the classification have to be clearly identified. Mandatory ie must be Yes
Classification levels		The number of levels should be documented. Discretionary ie can be Yes or No
Classification categories		The classification categories must be precise and accurate, and mutually exclusive. Mandatory ie must be Yes
Format of Classification codes		The code structure of the classification must be easy to understand. Discretionary ie can be Yes or No
Statistical Balance		The classification should be statistically balanced. Discretionary ie can be Yes or No.
Consultation process		There should be full consultation with national users and national statistical offices Discretionary ie can be Yes or No
Testing of the classification		The classification has been widely tested by users for suitability Discretionary ie can be Yes or No
Concordances		There must be correspondences between old and new versions, and related reference classifications Mandatory ie must be Yes
Implementation Plan		A clear and timetabled implementation plan is required Mandatory ie must be Yes
Maintenance Schedule		There should be a documented maintenance strategy Discretionary ie can be Yes or No
Dissemination		Guides, tools and other supporting material should be available for users. Discretionary ie can be Yes or No

Appendix 2: Derived and related classifications: quality scale

		HIGHER LEVEL				
		1:1	1:m	m:1	m:m	
LOWEST LEVEL	1:1	0	5	6	7	DERIVED
	1:m	2	1	3	4	
	m:1	9	8	10	11	RELATED
	m:m	13	12	14	15	

IDENTITY

0 The derived classification is identical to the reference.

DERIVED: HIGH LEVEL OF HARMONIZATION WITH REFERENCE

Additional or the same level of detail as in the reference is ensured in the derived classification; even if a re-arrangement of items has occurred at higher level, it is always possible to reconstruct the aggregates as in the reference.

-- **More detail** than in the reference is provided at the lower level (1:m), and:

1 **more detail** at higher level (1:m)

2 **the same** detail at the higher level (1:1)

3 **less** detail at higher level (m:1)

4 **different** classification criteria are applied at the at higher level (m:m)

-- **The same** detail in the reference is provided at the lower level (1:1), and:

5 **more** detail at higher level (1:m)

6 **less** detail at higher level (m:1)

7 **different** classification criteria are applied at the at higher level (m:m)

RELATED: MEDIUM/LOW LEVEL OF HARMONIZATION

Less detail or different criteria than in the reference classification is provided in the related classification at the lower level or may only be associated with the reference classification at specific levels of the structure.

	-- Less detail than in the reference is provided at the lower level (m:1), and:
8	more detail at higher level (1:m)
9	the same detail at the higher level (1:1)
10	less detail at higher level (m:1)
11	different classification criteria are applied at the at higher level (m:m)
	-- Different classification criteria than in the reference are applied at the lower level (m:m), and:
12	more detail at higher level (1:m)
13	the same detail at the higher level (1:1)
14	less detail at higher level (m:1)
15	different classification criteria are applied at the at higher level (m:m)