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International Classification of Activities for Time-Use Statistics

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XIII. PROPOSED INTERNATIONAL CLASSIFICATION OF ACTIVITIES FOR TIME-USE STATISTICS

758. The present chapter discusses the purpose and nature of the proposed International Classification of Activities for Time-Use Statistics (ICATUS),⁹⁸ the principles used in constructing the classification and the structure and coding system adopted for it. It discusses major considerations in applying the classification, including guidance on how the classification can be adapted by countries for their use both in data collection and in tabulation and analysis. A comparison of the proposed ICATUS and the Eurostat classification is also discussed briefly. The detailed ICATUS appears in annex 21.

A. Purpose and nature of the classification

759. The proposed ICATUS is intended to be a standard classification of all activities that the general population may spend time on during the 24 hours of a day. Its main purpose is to provide a set of activity categories that can be utilized in producing meaningful statistics on time use. These have to be meaningful in relation to the broad range of objectives of national time-use studies as well as cross-national and cross-temporal comparative studies on time use.

760. The ICATUS is intended to serve as a standard activity classifications for time-use statistics applicable to both developing and developed countries. It builds on existing national and regional classifications and a consideration of the experiences of both

developed and developing countries in constructing and applying activity classifications for collecting and analysing time-use data.

761. A main objective in the development of the ICATUS is to enable statisticians and researchers to delineate more precisely the boundaries of economic and non-economic activities and productive and non-productive activities and to measure all forms of work including unremunerated work. Certain types of unremunerated work such as subsistence agriculture as well as work for small family enterprises are included in the System of National Accounts (SNA) and should not be considered as unpaid housework. While the ICATUS draws on the main existing classifications of time-use activities, it separates out into a cluster of categories the economic activities of households. Specifically, it distinguishes between the production of *goods* either for income or for own final use and the production of *services* for income. This permits a clear delineation of activities that are important in developing countries within a classification that covers the circumstances of both developed and developing countries.

762. The proposed ICATUS is designed to be consistent with existing standard classifications in labour and economic statistics; the underlying objective is the integration of time-use statistics with official social and economic statistics. The set of activity categories for productive activities are defined in relation to concepts of employment, economic activity and occupation; the ICATUS utilizes definitions and categories used in the SNA and the standard economic classifications—the International Clas-

⁹⁸ This is a draft classification for trial use. The classification will be placed on the web site of the United Nations Statistics Division for further discussion.

sification of Status in Employment (ICSE), the International Standard Industrial Classification of All Economic Activities (ISIC) and the International Standard Classification of Occupations (ISCO).

763. The ICATUS seeks to provide data that can be linked to official statistics emanating from the SNA and labour statistics frameworks. This is especially critical where time-use data are used in estimates of household production in satellite accounts that extend measurement of gross domestic product (GDP) to include non-SNA production. Furthermore, by giving relatively more weight to productive activities, it allows for an analytical framework that can generate indicators of welfare and quality of life with both economic and social dimensions.

764. The degree of detail required in the classification of type of daily human activity differs from country to country. Differences in the historical, cultural, economic and geographical circumstances result in differences in the degree of elaboration that various countries may find necessary or feasible to achieve for their data on time use. The level of detail required for purposes of international comparison is generally lower than that needed for national analysis. Section E of this chapter discusses how the proposed ICATUS can be used for national purposes.

B. Concepts and definitions

1. Production, productive activities and work

765. Daily activities can be categorized into those that are considered productive and those that are “not productive”, that is to say, *personal activities*. “Productive” activities are those that can be associated with the concept of “work”. In relation to the objectives of time-use data collection and an activity

classification, it is important to define what constitutes production, productive activities and work activities and to differentiate these from personal activities.

(a) Production boundaries

General production boundary

766. An activity is said to be productive or fall within the “general production boundary” if its performance can be delegated to another person and yield the same desired results; activities that fit this description are said to satisfy the “third-person criterion”. Production, in this context, is an activity carried out under the control and responsibility of an *institutional unit*⁹⁹ that uses input of labour, capital, and goods and services to produce output of goods and services. There must be an institutional unit that assumes responsibility for the process and owns any goods produced as outputs or is entitled to be paid, or otherwise compensated, for the services provided (Commission of the European Communities and others, 1993, para. 6.15).

767. Productive activities included in the SNA framework are a smaller set or subset of the general productive activities. The distinction is made between two main types of production:

- Within the SNA production boundary.
- Outside the SNA production boundary but within the general production boundary, or non-SNA production.

⁹⁹ An *institutional unit* is “an economic entity that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities” (Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank, 1993, para. 4.2).

SNA production boundary

768. Activities within the “SNA production boundary” comprise production of goods or services supplied or intended to be supplied to units other than their producers, own-account production of all goods retained by their producers (including all production and processing of primary products, whether for the market, for barter or for own consumption), own-account production of housing services by owner-occupiers and of domestic and personal services produced in a household by paid domestic staff (Commission of the European Communities and others, 1993, para. 6.18). SNA production *excludes* all household activities that produce domestic or personal services for own final consumption within the same household, except the services produced by employing paid domestic staff.

769. Non-SNA production within the general production boundary, on the other hand, include domestic and personal services produced and consumed *within* the same household (except those produced by paid domestic staff (Commission of the European Communities and others, 1993, paras. 6.17 and 6.20), including cleaning, servicing and repairs; preparation and serving of meals; care, training and instruction of children; care of the sick, infirm and elderly; transportation of members of the household or their goods etc.; as well as unpaid volunteer services to other households, community, neighbourhood associations and other associations.¹⁰⁰

(b) The concept of work

770. The term “work” has numerous interpretations and meanings depending on the

¹⁰⁰ Note that unpaid volunteer work in institutions producing goods and services with employed workers and community-organized major construction, inter alia, of roads, dams, wells etc., are, however, SNA activities.

context. In a general sense, work has been defined as “any conscious, purposeful activity which with satisfaction serves the material and spiritual needs of the individual and community” (Anderson, 1961). In the ICATUS, a person performing any kind of productive activity—whether within the SNA production boundary or not—is said to be “working” or spending time on “work” activities. The ICATUS, however, differentiates between work in relation to SNA production (*SNA work*) and work in relation to non-SNA production (*non-SNA work*).

771. Persons are said to be engaged in SNA work if and only if “they contribute or are available to contribute to the production of goods and services falling within the SNA production boundary” (Hoffmann, 1990, p. 14); they are also said to be “economically active” or engaged in an economic activity.¹⁰¹ Production activities that are non-SNA, on the other hand, are referred to as “non-economic activities” or non-SNA work. As described above, these consist of the set of activities that are, in relation to national accounts and labour-force estimation, “unvalued” and “invisible” unpaid domestic and volunteer work; these are the object of measurement and valuation in satellite accounts on household production.

2. Non-productive or personal activities

772. For purposes of classifying activities, the ICATUS uses the dichotomy of productive and non-productive activities. The basic idea, drawn from the “third-party” criterion is that an activity is considered productive if it can be delegated to someone else or if it yields an output that is capable of being exchanged

¹⁰¹ This concept of economic activity is the basis for definitions of the economically active population, employment and unemployment in the international recommendations on labour-force statistics as well as estimates of production reflected in the GDP.

(Eurostat, 1999, p. 22); otherwise, it is considered non-productive.

773. Activities performed for personal maintenance and care such as eating, drinking, sleeping, exercising etc. are non-productive or *personal activities*: these cannot be delegated to a person other than the one benefiting from them. Similarly, activities associated with socializing, entertainment, participation in sports, hobbies and games, and use of mass media are considered non-productive activities.

774. Education or learning activities includes time spent in full-time and part-time classes, special lectures, laboratories, examinations, homework, leisure and special interest classes, travel related to education and all other forms of active study. Education, skills acquisition and related activities are considered personal activities: from the perspective of the student/pupil, studying is a consumption activity because it is not possible to delegate to someone else.¹⁰²

775. In general, the third-person criterion when applied yields the desired delineation between productive and personal activities. However, the following main issues and exceptions apply:

- Although it is also true that personal services provided to oneself such as washing, dressing, putting on make-up and shaving can be provided by a third party, these are also treated as non-productive activities. It has been argued that these are generally not bought from the market or that they

¹⁰² Educational activities are sometimes treated as productive activities because they lead to an accumulation of knowledge or skills and represent a part of time invested in human capital and thus have economic consequences. (Harvey and Olomi, 1997, pp. 8-9).

conform to normal adult behaviour and so are generally not delegated to others (Eurostat, 1999, p.22). On the other hand, bathing a child and dressing a disabled person are considered productive activities.

- Shopping for and availing oneself of services are generally considered productive. Exceptions are receiving medical and personal care services (for example, a haircut) which are considered non-productive activities, as these cannot be delegated to a person other than the one benefiting from them.
- Some activities that are productive are sometimes perceived as personal because of the attachment of emotional or subjective values to the activity. For instance, baking a cake is productive regardless of the purpose of doing so but baking a birthday cake for one's child may be perceived as a personal activity rather than a productive activity because of the symbolic personal value (love) attached to it. Both cases are productive activities, however, according to the third-person criterion (Eurostat, 1999, p. 22).
- An activity can be perceived as work by one individual but as leisure by another based on whether the person "likes" or enjoys performing the activity; fishing and hunting are examples of such activities. Whether the person doing the activity likes it or not or derives utility from it or not is irrelevant from the economic point of view.

776. In addition, travelling is classified according to the purpose of the trip. Travel in relation to performing a productive activity is seen as productive while travel in relation to personal activities is considered personal.

C. Principles used for constructing the classification

777. Underlying principles that guided the construction of the proposed ICATUS are the following: (a) it must be flexible enough to be applicable to the identified analytical objectives of time-use studies as well as other potential uses for statistics on time use; (b) it must have a balanced and comprehensive coverage of all groups of activities which reflects the structure of distribution of time over activities in the general population (for example, productive and personal; formal employment and informal employment); (c) it must be detailed enough to identify separately activities of important subpopulations (for example, women, children, elderly), yet not so detailed as to become operationally unwieldy (inter alia, by overburdening respondents and creating difficulty in coding); and (d) it should not deviate significantly from classification schemes of historic data sets and national and regional listings that have undergone cycles of testing, use and review.

778. The ICATUS groups activities into three hierarchic levels. Specific criteria used in defining the various categories of activities are described below.

1. Main categories

779. The first criterion for differentiating between activities is with respect to the relationship they bear to the production boundary of the SNA. On this basis, three types of activities are defined:

- Activities performed in relation to production within the SNA production boundary, that is to say “SNA work” activities.
- Activities performed in relation to production activities within the general production boundary but outside the

SNA production boundary, or “non-SNA work” activities.

- Activities that are not considered production activities, namely personal activities.

These three types of activities are allocated into main categories based on several criteria.

(a) “SNA work” activities

780. SNA work activities are first distinguished based on the institutional unit in which production takes place. All work-related activities in relation to a person’s employment in *corporations/quasi-corporations, non-profit institutions, or government* are combined into one main category, P1, representing all types of “formal sector” work.

P1. Formal employment or work in “formal enterprises” consists of provision of labour inputs to production of goods and production of services that are typically associated with working for pay or profit even though this pay or profit may not actually be realized in the given reference period, regardless of occupation, status in employment, contractual arrangements, economic activity etc., in corporations, quasi-corporations, cooperatives, commercial farms, and non-profit institutions.

781. Work activities in relation to *household production*¹⁰³ are delineated on the basis of the

¹⁰³ Usage of the term “household production” is as defined in the 1993 SNA and refers to production activities engaged in by members of household unincorporated market enterprises and household unincorporated enterprises producing for own final use. Informal sector enterprises are part of household unincorporated market enterprises. Household members engaged in production for own final use “work” in household enterprises. See also section E of this chapter.

character of the goods and services produced by the activities undertaken, as illustrated below:

P2. Production of goods by households for income or for own final use (either for consumption or for gross capital formation) or for both, including employment in the informal sector.¹⁰⁴

Primary production of goods

- Production of agricultural products and their subsequent storage; gathering of berries or other uncultivated crops; forestry; woodcutting and the collection of firewood; hunting and fishing.
- Production of other primary products such as salt; mining and quarrying; cutting peat; collecting and supply of water.

Non-primary production of goods

- Processing of agricultural products; production of grain by threshing; production of flour by milling; tobacco preparing and curing; curing of skins and production of leather; production and preservation of meat and fish

¹⁰⁴ According to the definition in the resolution concerning statistics of employment in the informal sector of the 15th International Conference of Labour Statisticians, January 1993, the informal sector is “regarded as a group of production units which, according to the definitions and classifications provided in the United Nations System of National Accounts (Rev.4), form part of the household sector as household enterprises or, equivalently, unincorporated enterprises owned by households” (para. 6(1)). “The informal sector is defined irrespective of the kind of workplace where the productive activities are carried out, the extent of fixed capital assets used, the duration of the operation of the enterprise (perennial, seasonal or casual), and its operation as a main or secondary activity of the owner” (para. 6 (3)).

products; preservation of fruit by drying, bottling etc.; production of dairy products such as butter or cheese; production of beer, wine or spirits; production of baskets or mats.

- Weaving cloth; dressmaking and tailoring; production of footwear; production of pottery, utensils or durables; making furniture or furnishings; crafts-making; making bricks, tiles, hollow blocks.

P3. Paid construction activities and construction for own capital formation.

- Construction of own house.
- Major home improvements and repairs.
- Community-organized construction and major repairs of roads, buildings, dams, bridges.

P4. Providing services for income, including employment in the informal sector.

- Food vending and trading.
- Repairing, installing and maintaining durable goods.
- Providing business, professional, social, personal care services.
- Transporting goods and passengers.
- Providing paid domestic services (includes employment in households as domestic help: gardener, chauffeur, utility person, maid).

782. The resulting main divisions in the ICATUS for SNA work activities are as follows:

01. Work for corporations/quasi-corporations, non-profit institutions, and government.
02. Work for household unincorporated enterprises in primary production activities (activities carried out in

relation to agriculture, forestry, hunting, fishing, mining and quarrying).

- 03. Work for household unincorporated enterprises in non-primary production activities (activities carried out in manufacturing of goods).
- 04. Work for household unincorporated enterprises in construction activities (activities carried out in construction work).
- 05. Work for household unincorporated enterprises providing services for income (activities carried out in relation to providing services for income).

(b) “Non-SNA” work activities

783. Non-SNA work activities are delineated in terms of whether they are done for household members or for members of other households or the community. This differentiation identifies volunteer work activities that fall under non-SNA production separately.¹⁰⁵ Non-SNA work performed for one’s own household is part of household production in the general sense. An illustration of the main categories for classifying non-SNA work activities is given below.

P5. Providing unpaid services for own final use.

Domestic services for own final use within household

- Cleaning, decoration and maintenance of the dwelling occupied by the household, including small repairs.

¹⁰⁵ The term “volunteer work” is generally used to refer to unpaid work activities and can encompass SNA or non-SNA production as well as market or non-market.

- Cleaning, servicing and repair of household durables or other goods, including vehicles used for household purposes.
- Preparation and serving of meals.
- Transportation of members of the household or their goods.

Unpaid caregiving services to household members

- Care, training and instruction of children.
- Care of sick, infirm or old people.

P6. Providing unpaid domestic services, caregiving services and volunteer services to other households, community, non-profit institutions serving households (NPISH).

- Informal help to neighbours and relatives.
- “Informal/unorganized” volunteer and community work through; neighbourhood and informal community associations.
- “Formal/organized” volunteer and community work through the Red Cross, welfare organizations, professional organizations, churches, clubs and other non-profit institutions serving households (NPISH).

784. “Volunteer work” is the one category of work that can be either SNA or non-SNA. All volunteer work producing goods (including community-organized major construction, inter alia, of roads, dams, wells etc.) is classified as SNA work. Unpaid volunteer work in non-household institutions producing services with employed workers also comprises SNA work activities. On the other hand, unpaid volunteer services to other households, to the community (except organized major construction as noted above), to neighbourhood associations, and to other

informal associations are non-SNA work activities. The resulting major divisions in the ICATUS for non-SNA work are:

06. Work providing unpaid domestic services for own final use within household
07. Work providing unpaid caregiving services to household members.
08. Work providing community services and help to other households.

(c) Personal activities

785. Personal activities are distinguished according to: (a) the nature of the activity (for example, learning, socializing, meeting physiologic needs); and (b) participation of others (for example, watching sports versus participating in sports; attending a stage play versus acting or participating, as a hobby, in a stage play). Applying these criteria results in the following major divisions of activities:

09. Learning.
10. Socializing and community participation.
11. Attending/visiting cultural, entertainment and sports events/venues.
12. Engaging in hobbies, games and other pastime activities.
13. Indoor and outdoor sports participation.
14. Use of mass media.
15. Personal care and maintenance.

2. Divisions and groups

786. Activities within the broad categories are further distinguished by their allocation into *divisions*. In defining specific groups

under the divisions, the basic criterion is that of universality or frequency and regularity of occurrence; that is to say, if there are specific types of activities that are known to be typical for or prevalent in most countries, then these are listed at the most detailed level. In some divisions, no specific groups have been defined because it is recognized that there would be too much country variation if activities were listed at that level of detail.

787. Another consideration in forming separate divisions or groups is the importance of the particular set of activities in relation to the objectives of time-use surveys—in the case of this classification, a more comprehensive measurement of work. Thus, divisions pertaining to SNA work activities in households highlight those economic activities that are typically undertaken as part of own household production and those associated with the informal sector.

D. Structure and coding system of the classification

788. The proposed ICATUS has been developed to a detailed six-digit coding scheme following a hierarchy. The first level consists of 15 major divisions as indicated in the previous section. These 15 categories are given two-digit codes from 01 to 15. The second level consists of divisions within the major divisions; these are assigned three-digit codes. The third level consists of groups within divisions; these are assigned four-digit codes. The fourth level consists of classes within groups that are assigned five-digit codes, while the fifth level consists of subclasses that are assigned six-digit codes. Higher levels provide more detailed activities. Each major division consists of three or more divisions of which there are 54 in all. These divisions are further divided into a total of 92 groups. There are 200 classes and 363 subclasses.

789. Activities at the division level comprise: (a) core activities pertaining to the category; and (b) non-core or related activities. Travelling is uniformly treated as a “related activity” at the division level within a category. Some categories include divisions comprising additional “other related” activities.

790. A “not elsewhere classified (n.e.c.)” division is included in all major divisions to be used for specific activities that clearly fall within the major division but do not correspond to any of the pre-defined divisions of activities. In addition, each major division and division includes a “*not fully defined (n.f.d)*” code; these are for activities that have been described vaguely or in too general a sense so that there is not enough information to be able to classify them into any of the divisions.

791. The structure of the classification up to the division level is detailed in annex 20 and summarized below.

1. Major divisions 01 to 05

792. For the major divisions covering SNA work activities (01-05), core activities are defined as those activities that are engaged in as part of performing one’s job or as part of “working time”. Related activities are those that are conceptually related within the labour-force statistics framework (looking for work, training and studies at work) even though these are not SNA production activities.

793. Categories corresponding to SNA work activities (major divisions 01 to 05) are uniformly structured as follows:

- Core activities, consisting of work activities.

- Related activities, consisting of activities related to looking for work/setting up a business.
- Travel.

794. Work in “formal” sector enterprises (major division 01) covers work as part of both “main job” and “other jobs”. To be consistent with the definition of working hours used in the labour statistics framework, the work activities of apprentices, interns and those in related positions and activities performed during short breaks at work are also classified in this major division. Other activities that occur in the workplace in formal sector enterprises outside of the usual working time constitute another division in this major division. The desired result is for major division 01 to represent a complete coverage of activities that occur in the workplace.

795. Major division 01 also includes activities pertaining to “short breaks and interruptions from work” as part of working time and activities pertaining to “other breaks”. However, such activities are not separately identified for work carried out in household enterprises. The reason for this is that it is assumed that working time arrangements in household unincorporated enterprises are generally less structured or more flexible compared with those in the formal sector. Thus, activities associated with such breaks from work are classified in the corresponding divisions and not within the major division.

2. Major divisions 06 to 08

796. Major divisions corresponding to non-SNA work (Major divisions 06 to 08) have the following uniform structure:

- Core activities, consisting of work activities.

- Related activities (for major division 08 only).
- Travel.

Working time activities constitute the core activities for each of these categories. In addition, major division 08 (Providing community services and help to other households) allocates one division for non-core or related activities.

3. Major divisions 09 to 15

797. Major divisions corresponding to personal or non-productive activities have the following uniform structure:

- Core activities, consisting of activities specific to the category.
- Related activities (for major division 09 only).
- Travel.

Core activities constitute all divisions in these categories except for major division 09 (Learning) which allocates one division for non-core or related activities.

E. Application of the classification

1. Adapting the classification to country situations

798. The proposed ICATUS has been developed for use in planning and implementing data collection on time use as well as in the processing and analysis of the resulting data.

799. The character and definition of categories of the ICATUS can serve as a guide to countries developing an activity classification for the first time, or to those revising an existing one. A number of countries (see annex 2) have utilized the ICATUS in this way.

800. The proposed ICATUS does not supersede national classifications, but provides a framework for the international comparison of national statistics. Where national classifications differ from the international classification, this comparability may be achieved by regrouping figures obtained under national classifications, provided all the elements required for such a rearrangement are obtainable from the national statistics.

801. In order to attain international comparability, it is suggested to all countries that they adopt, to the extent that individual requirements permit, the same general principles and definitions in their activity classification schemes, as set out in this chapter. As a result, it should be feasible to rearrange national classifications to fit the requirements of the international standard by combining entire categories of the national classifications. This, however, is not always feasible because certain classes at the most detailed level may not be distinguished in the classifications of some countries.

802. While the ICATUS aims for international comparability, its main feature is its usefulness in developing a framework for a comprehensive measurement of work. The data obtained through this classification will be useful in: (a) the assessment of national labour inputs into production of goods and services, (b) the compilation of household satellite accounts and, (c) the analysis of time use within the framework of the SNA. This system is especially useful for developing countries that may lack labour-force or expenditure surveys and may need to use a single national survey to address many different research and policy issues.

803. The proposed ICATUS does not intend to fully break open the “black box” of time spent in paid employment (particularly in the formal sector), although it does provide more

detailed specifications of economic work activities based in the household. Thus, it can be applied only on a very limited basis for the purpose of generating statistics on working time and working time arrangements.

804. The detail required for an activity classification for time use such as the present one may differ from country to country and, in many cases, the focus may be on a subset of the divisions covered by this classification. Given differences in the scope of activities and interests, this classification serves as a framework from which varying levels of detail may be derived.

805. Most of the currently used activity classification systems have evolved from the original structure developed for the Multinational Time Use Project of the 1960s. These include both national classifications and the regional Eurostat activity classification. It is very likely that countries with years of experience with their own time-use coding schemes, as well as fully developed national statistical survey programmes to address specific research needs, will continue to use these. Since the proposed ICATUS maintains consistency with these schemes, they share many similarities. It is hoped that these countries review their classifications and suitably revise them to strive for even more harmonization with the ICATUS.

806. On the other hand, for countries that lack the infrastructure required to develop and maintain their own activity classification or who are venturing for the first time into the conduct of a national survey on time use, it is suggested that the ICATUS be adopted mainly with such minimal modifications as may be found suitable.

807. To make possible the conversion of a national activity classification to the proposed ICATUS, the categories at the most detailed

level of classification in the national scheme should coincide with, or be subdivisions or combinations of, the individual groups of the ICATUS. In other words, each most detailed category of the national classification should not, in general, cover portions of two or more divisions. Where the categories represent combinations of two or more entire groups, they should in general be part of the same division, as appropriate.

Retaining categories

808. An important phase in the process of further developing the proposed ICATUS is the accumulation and evaluation of country experiences in constructing activity classifications in general and in adapting the ICATUS in particular. Comparability at the main category levels is ideal in order to evaluate these results. It is also recommended that the three-digit divisions be retained to the extent possible.

Expansion or contraction

809. Since there may be few countries in the world in which all categories of the proposed ICATUS are equally important, it may be expanded or contracted, depending on the social, cultural and economic situation of the country.

810. Some countries will find that the ICATUS is much more elaborate or has much more detail than required in respect of the objectives of the survey. For example, the detailed categories for shopping activities may not be relevant either for the survey purpose or for actual situations in the country. Respondents, for example, may either not specify the goods and services being purchased or purchase them at the same time as other “general goods”. A related observation is that some activities that are considered important in the ICATUS may not

be important or even applicable to the country. For example, laws may prohibit or heavily restrict the manufacture, selling or drinking of alcoholic beverages; thus, corresponding activities will not be common or relevant in these countries.

811. The ICATUS may be contracted by combining the groups of selected divisions into fewer or less detailed groups or by entirely telescoping groups into divisions. It may be desirable or necessary to combine different groups of the ICATUS. This may be because the kinds of activity segregated by selected groups of ICATUS are not important enough in a given country. A related case is where an activity listed in the ICATUS at the six-digit level is considered important enough in a country to be elevated to the five-digit level. For example, a specific type of craft-making may be much more common than others listed at the six-digit level under ICATUS code 03114.

812. On the other hand, for some types of activities considered important to specific country situations, the ICATUS categories may be too aggregated. In such cases, countries can expand the groups of activities under the three-digit divisions to take into account the need for greater detail. In doing so, it is suggested that, to the extent possible, the three-digit levels of the ICATUS be maintained, although countries may add new groups, or even five-digit classes and six-digit sub-classes within groups, as may be needed.

813. In order to preserve comparability with the ICATUS, the more detailed classes should be delineated so that they may be aggregated to divisions or major divisions without changing the existing relationships.

814. There may be certain activities that very few people engage in or that are relatively unimportant to the analytical framework

representing the objectives of the data collection which do not fall under any other defined group. The creation of a “not elsewhere classified” (n.e.c.) division provides for capturing these activities without creating a separate subcategory. This solution can reduce the costs of developing and implementing the classification without any significant impact on its utility. Another reason for defining n.e.c. divisions is that, at the design stage, not all activities may have been taken into account or new activities may appear after the classification has been adapted.

815. It should be noted that n.e.c. divisions, when injudiciously applied at the coding stage, may result in loss of information on the nature of specific activities and in practical applications of the classification, and may be abused as “dump divisions” for inadequately described activities. For inadequately defined activities, the use of a “not fully defined” or n.f.d. division is recommended.

2. Need for contextual information

816. Some dimensions of the context in which activities are carried out are built into the classification. The need for supplementary questions in the data-collection instrument to capture the additional information should be considered. (See the discussion on contextual variables in part two.) The need for the various types of information may arise under the following circumstances:

- Categories of work activities are delineated in relation to the institutional type of the producer unit, that is to say, in relation to whether it is a household enterprise or non-household enterprises. Thus, there is a need for information on the institutional unit where production takes place.

- Categories of work activities are defined in terms of type of economic activities as defined in industrial classifications for economic activities. Thus, there is a need to obtain this information in order to be able to classify the activity.
- Category 01 activities are generally paid except possibly in the case of “unpaid” contributing family workers and apprentices. To determine whether work is paid or unpaid, additional information will need to be collected.
- Category 02 activities may be paid or unpaid but “Paid domestic services” is defined as a specific division.
- Unpaid domestic work and caregiving activities are categorized separately depending on “for whom” the activity is done—whether it is for own household members (major divisions 06 and 07) or for others (major division 08). A contextual variable on “for whom” may be needed to be able to accurately classify the activity.
- Activities generally associated with unpaid volunteer work are placed in major division 08. The divisions are delineated in relation to whether the volunteer work is informal help to other households or with a formal entity. A “for whom” context variable may be needed to make the distinction.
- Travel and waiting are classified according to the main purpose or activity for which they are needed, for example, whether they are in relation to work, to attending a sports event or to carrying out household maintenance activities. Thus, information on the purpose for travelling or waiting is needed.
- Computer technology is given some prominence with separate divisions (12133, 1414) defined. This is another implicit use of contextual information

(technology used) in defining divisions and groups.

3. Treatment of simultaneous and “pairs” of activities

817. The ICATUS list of activities describes single activities. However, two or more activities may be performed in parallel or simultaneously. Further, some pairs of activities may be intrinsically linked and for all practical purposes constitute a single activity. In applying the classification, countries will have to determine how these activities are to be recorded and coded.

818. When activities occur simultaneously, countries have a choice as to whether they will record only one (the main or primary activity) or whether they will record both. A basic consideration is the survey objective. If both activities are equally important in relation to the survey objectives, then information on both activities should be recorded and the survey instrument designed accordingly so as not to lose the information on both activities. Childcare is the classic example of an activity that commonly occurs simultaneously and is treated as a secondary activity. Interest in the activity is often the reason why surveys are designed to capture simultaneous activities.

819. If it is not important to be able to separately code both activities in the pair, such as eating and drinking, then coding rules would have to specify which activity will be coded. The rule may specify that the less disaggregated level into which both activities may fall should be used for coding, if applicable. Or, a prioritization rule will need to be specified. (Note that the draft classification includes “passive” childcare as a division to ensure that this activity is not automatically paired with any other activity; it can also be considered a primary activity in case simultaneous activities are recorded and a prioritization is made).

820. Examples of “pairs” of activities that it is generally not practical to record separately are eating and drinking; talking/conversing in relation to work, in attending meetings, or at social events; watching video or listening to the radio strictly in relation to studying. Countries may consider including these types of pairs of activities in the classifications or defining priority rules for dealing with them.

821. Waiting for transport and the consequent travelling are a pair of activities that can be treated in two ways, again, depending on the objective of the survey. Specific objectives related to provision of public services, for example, would find a separate analysis of waiting time and travel time useful. Waiting time that goes with the use of various types of services, such as public-health services or other government services, can be treated similarly.

822. Another special “pair” of activities is related to lunch breaks at work. The ICATUS suggests that lunch breaks are to be classified under major division 01 (and would thus be reflected under “work”) if only primary activities are recorded. However, if the survey records simultaneous activities, then “lunch break at work” is to be treated as a secondary activity and the specific activities undertaken during the break (for example, eating, shopping, a business meeting) are to be recorded as the main activity.

823. Prioritization of activities can be carried out at the recording or data-collection stage or at the coding stage, depending on the design of the survey. When carried out at the data-collection stage, both interviewers and respondents (especially in the case of the “leave-behind” diary method) would need to know the prioritization rules. This is especially critical when the survey collects information on only one (primary) activity or when the survey collects information on

simultaneous activities where a primary activity and a secondary activity need to be specified. In survey designs where simultaneous activities are not delineated as primary or secondary at the recording stage, such a delineation would need to be achieved at the coding stage.

4. Implications for data collection

824. For countries conducting their first time-use survey, a compromise may need to be made between the degree of comprehensiveness and the ease in the use of the classification. As mentioned above, to be able to use the classification even at the most aggregate level, there would be a need to obtain additional information in the form of a contextual variable or through probing questions.

825. For some countries, especially those where labour-force statistics are still being developed and experience in collecting data on the informal sector may be limited, it may be difficult to distinguish the different types of SNA work for coding purposes even at the major division level. For example, respondents may not be able to tell whether they are engaged in the formal sector. It may be better to ask for information on individual’s place of work and use this as the basis for coding rather than leave the decision to either investigator or respondent.

826. On the other hand, countries requiring more detailed specification of the activities may adapt this classification for their purposes by adding groups or defining classes under groups using five-digit or six-digit codes. Countries should note, however, that, because of the complexities of collecting and analysing time-use data, too much detail may result in overburdening respondents, lengthening time spent in data collection, and complicating the coding process.

Table 19. Tabulation categories using the Ås framework

Types of time	ICATUS major divisions
Necessary time	15 Personal care and maintenance
Contracted time	Work for:
	01 Corporations, quasi-corporations, government, NPIs
	Work for household unincorporated enterprises in:
	02 Primary production activities
	03 Non-primary production activities
	04 Construction activities
Committed time	05 Providing services for income
	09 Learning
	Work:
	06 Providing unpaid domestic services for own final use within household
Free time	07 Providing unpaid caregiving services to household members
	08 Providing community services and help to other households
	10 Socializing and community participation
	11 Attending/visiting cultural, entertainment and sports events/venues
	12 Engaging in hobbies, games and other pastime activities
	13 Indoor and outdoor sports participation
	14 Use of mass media

827. Countries may also need to provide operational definitions for some of the concepts used in the classification. Important examples are: household unincorporated enterprise, community, and non-profit institutions including NPISH.

5. Applications to tabulation and analysis

828. The 15 major divisions of the classification are intended to serve as general tabulation categories for type of activity. These major divisions are meaningful for most analyses that look at patterns in the allocation of time by type of activities by sex, age group, and geographical location. Further disaggregation at the three- or four-digit levels provide sufficient detail for analyses focusing on specific types of activities within these major divisions.

829. In the other direction, it may be desirable to utilize less detailed categories for some types of analyses. By providing for three levels of classification (major divisions, divisions and groups), the proposed ICATUS furnishes a framework for comparable classifications of data at different levels of detail. The 15 major divisions can be meaningfully aggregated in relation to analyses such as those focused on indicators of free time, SNA and non-SNA work, and paid and unpaid work.

(a) Tabulation categories based on the Ås framework

830. An example of this is provided by the fourfold typology of time developed by Dagfinn Ås (1978), based on the ideas of V.D. Patrushev. This approach has been used in analysing and reporting the results of many time-use studies. The framework identifies all time as either: (a) *necessary time* serving basic physiologic needs, (b) explicitly *contracted time* related to gainful employment and school attendance, (c) *committed time* to which one is obligated, but for which a substitute service could be purchased or (d) *free time* which remains when the other three types have been accounted for. Table 19 illustrates how the

major divisions of the ICATUS can be further aggregated using this framework.

(b) Tabulation of major divisions based on the SNA framework

831. Analyses that focus on issues related to paid and unpaid work and valuation of unpaid work have used tabulation categories that show aggregates of SNA work activities, non-SNA work activities and non-productive activities. As already discussed earlier in this section, the ICATUS major divisions provide a structure that is consistent with the SNA framework and thus facilitate tabulation in this respect. A basic tabulation plan that reflects this is shown in table 20. It should be noted, however, that for SNA work categories (major divisions 01-05), some of the activities are not generally regarded as constituting productive time; these include time allocated to travel or waiting not directly related to the productive activity, looking for work, and long breaks. For purposes of general time-allocation analysis, the distinction need not be made; however, for purposes of valuation in satellite household accounts, countries may choose to subtract such time from estimates of productive time.

(c) Analysing household production

832. The structure of the ICATUS categorizes SNA work activities engaged in by individuals into two major groups in relation to the institutional unit that produces the output: activities performed by individuals as household members that input into household production, and activities performed by individuals that input into production of units belonging to sectors other than the household sector. Thus, the basic tabulation categories based on the SNA framework shown in table 20 can be further expanded for the purpose of analysing aspects of household production—differentiating, for example, between SNA and

non-SNA production or between market and non-market production. For this application, there would be a need to assess the activities in major divisions 02 to 05 at the three-digit levels and to combine them into the appropriate categories. Depending on the analysis required, additional information about the activities might be needed, for example, whether production is market or non-market. Relevant concepts are discussed below.

Households as producers

833. Household production may be described as being inclusive of those activities that are “carried on, by and for the members, which activities might be replaced by market goods, or paid services, if circumstances such as income, market conditions, and personal inclinations permit the service being delegated to someone outside the household group” (Reid, 1934 as cited in Quizon, 1978). Activities performed by household members for household production are classified in the ICATUS into the two broad categories of SNA production or work and non-SNA production or work.

SNA household production

834. In the SNA, household production “takes place within enterprises that are directly owned and controlled by members of households, either individually or in partnership with others” (Commission of the European Communities and others, 1993, para. 4.139). An important distinction is that when “members of households work as employees for corporations, quasi-corporations or government, the production to which they contribute takes place outside the household sector” (ibid.) The concept of the household as a producer refers to production by “household unincorporated enterprises”. Such production can either be market production or non-market production.

Table 20. Tabulation of major divisions using the SNA framework

Type of activity	ICATUS major divisions
SNA work	Work for:
	01 Corporations, quasi-corporations, government, NPIs
	Work for household unincorporated enterprises in:
	02 Primary production activities
	03 Non-primary production activities
	04 Construction activities
Non-SNA work	Work:
	06 Providing unpaid domestic services for own final use within household
	07 Providing unpaid care-giving services to household members
	08 Providing community services and help to other households
Non-productive	09 Learning
	10 Socializing and community participation
	11 Attending/visiting cultural, entertainment and sports events/venues
	12 Engaging in hobbies, games and other pastime activities
	13 Indoor and outdoor sports participation
	14 Use of mass media
	15 Personal care and maintenance

835. *Household unincorporated market enterprises* produce goods or services for sale or barter on the market. “They can be engaged in virtually any kind of productive activity—agriculture, mining, manufacturing, construction, retail distribution or the production of other kinds of services. They can range from single persons working as

street traders or shoe cleaners with virtually no capital or premises of their own to large manufacturing, construction or service enterprises with many employees” (ibid., para. 4.144). They also include unincorporated partnerships engaged in producing goods or services. Some of the outputs of these market producers may be retained for consumption by members of the household to which the owner of the enterprise belongs. “Informal sector enterprises” are part of household unincorporated market enterprises.

836. When household members are engaged in the production of goods and services for own final use, they are said to be carrying it out for *household unincorporated enterprises producing for own final use*. Such enterprises are engaged in non-market production and may consist of the following (ibid., paras. 4.148-4.149):

- Subsistence farmers or others engaged in the production of agricultural goods for their own final consumption.
- Households engaged in the construction of their own dwellings or other structures for their own use, or on structural improvements or extensions to existing dwellings or structures.
- Households engaged in the production of other goods for their own consumption such as cloth, clothing, furniture, other household goods, foodstuffs (other than meals for immediate consumption).
- Households producing domestic services for their own consumption by employing paid staff.
- Households producing housing services for their own consumption.
- Households producing goods on a volunteer (unpaid) basis.
- Households producing services on a volunteer (unpaid) basis in non-household units such as NPIs, schools,

- hospitals that produce services with employed workers.
- Groups of households that engage in the communal construction of buildings, roads, bridges etc. for their own individual or community use for which services are not paid.

837. Enterprises producing goods may sell any output that is surplus to their own requirements, but if they regularly sell most of their output they should be treated as market producers.

Non-SNA household production

838. Non-SNA household production activities relate to two types of activities:

- Production of domestic services for own final use by household members without pay (see, for example, major divisions 06 and 07).
- Production of unpaid services by household members for other households or institutional units (see, for example, major division 08).

Market and non-market production

839. Production results in *outputs* of goods and services. An output can be classified as *market* or *non-market*. In the SNA framework, market output is “output that is sold at prices that are economically significant or otherwise disposed of on the market, or intended for sale or disposal on the market” (Commission of the European Communities and others, 1993, para 6.45).¹⁰⁶ Non-market output consists of output produced for own

¹⁰⁶ Prices are said to be *economically significant* when they have a significant influence on the amounts the producers are willing to supply and on the amounts purchasers wish to buy” (Commission of the European Communities and others, 1993, para. 6.45).

final use by household unincorporated enterprises (including subsistence production), goods produced for own gross fixed capital formation by enterprises, and “goods and individual or collective services produced by NPISHs or government that are supplied free, or at prices that are not economically significant, to other institutional units or the community as a whole.” (ibid., para. 6.49).

840. Depending on the type of output, producers can be classified as market or non-market producers; correspondingly, production can be either market or non-market. In terms of institutional units, market producers are financial and non-financial corporations, quasi-corporations, and unincorporated household enterprises. Non-market producers, on the other hand, are general government; households producing for own final use or for own fixed capital formation are also non-market producers. While NPISHs and NPIs mainly financed by government are non-market producers, other types of NPIs may be market or non-market producers depending on their purpose.

841. In the estimation of GDP, the SNA accounts for all market production and the non-market production of the government sector and non-profit institutions producing goods and services with employed workers. All other non-market production is not valued in the SNA.

(d) Analysing paid and unpaid work

842. The distinction between paid and unpaid work is important in many of the important analytical uses of time-use data discussed in part one of this *Guide*. This distinction is basic to characteristics of SNA work and non-SNA work activities and is thus made both explicitly (for example, paid domestic services) and implicitly in the major divisions of the ICATUS.

Table 21. Relationship between producers and work

Production/ Institutional unit	Market		Non-market				
	Corporation, quasi- corporation	Household Unincorporated enterprise	Household		NPI		Government
			Own- account, goods	Own- account, services	With employed worker	NPISH	General government, national and subnational
Work	SNA	SNA	SNA	Non- SNA	SNA	Non- SNA	SNA
Paid	Employment with compensation	Compensation as employee; mixed income*			Employment with compensation; volunteer with allowance		Employment with compensation; elective position
Unpaid (in GDP)		Incorporated in mixed income* of household	Incorporated in mixed income* of household				
Unpaid (not in GDP)				Equivalent to value of services	Free volunteer services	Free volunteer services	

Source: H. Arboleda "Time use data and valuation of unpaid work" unpublished document (2001).

*Mixed income is the surplus or deficit accruing from production by unincorporated enterprises owned by households; it implicitly contains an element of remuneration for work done by the owner, or other members of the household, that cannot be separately identified from the return to the owner as entrepreneur but excludes the operating surplus coming from owner-occupied dwellings (Commission of the European Communities and others, 1993, para. 7.8).

843. An individual is said to be engaged in a paid work activity if the individual receives compensation or remuneration, in cash or in kind, for the work done. Labour input into activities within the SNA production boundary has corresponding compensation, regardless of whether the worker is actually paid or not. Labour input that is actually paid is valued and recorded in the SNA as compensation. Compensation may be in the form of wages and salaries, commission from sales, payments by piecerate, bonuses or in-kind payment such as food, housing or training.

844. *Unpaid work* activities can belong to one of five types:

- Work performed by an *unpaid family worker*.¹⁰⁷

- Unpaid work performed in the production of goods by households for own final use including subsistence production.
- Unpaid volunteer services for NPIs producing goods and services with employed workers.
- Unpaid work performed in the production of services by households for own final use.
- Unpaid volunteer services for NPISHs.

It is important to note that the first three types of unpaid work activities are SNA production activities. Further, the first two types of activities are theoretically included in the estimation of GDP although, in practice, they may be underestimated owing to lack of data;

¹⁰⁷ In the 1993 International Classification of Status in Employment (ICSE), unpaid family workers are referred to as *contributing family workers*. They engage

in SNA production activities for a household unincorporated enterprise owned by a household member but do not receive compensation.

the value of unpaid volunteer services for NPIs is not, however, included in GDP estimation.

845. Table 21 summarizes the relationships between producers and work that are relevant to the conceptual framework of the ICATUS and that have been discussed in this section. Work activities are performed by institutional units and the resulting outputs may be market or non-market. All market outputs are a result of SNA productive activities but there are work activities within the SNA production

boundary that result in non-market outputs. Non-SNA work results in non-market production. Value of all paid work (all paid work are SNA work) as well as unpaid SNA work is included in GDP estimates; households account for all unpaid SNA work and its value are imputed as part of mixed income of the household. All non-SNA work is excluded from GDP estimation; in addition, some volunteer work is included in the SNA production boundary but is not valued in GDP.

Table 22. Comparison of the main categories of the ICATUS and Eurostat classifications

ICATUS Major Divisions		EUROSTAT	
01	Work for corporations, quasi-corporations, government, NPIs	1	Employment
02	Primary production activities		
03	Non-primary production activities		
04	Construction activities		
05	Providing services for income		
09	Learning	2	Study
06	Work providing unpaid domestic services for own final use within household	3	Household and family care
07	Work providing unpaid care-giving services to household members		
08	Work providing community services and help to other households	4	Volunteer work and meetings
10	Socializing and community participation	5	Social life and entertainment
11	Attending/visiting cultural, entertainment and sports events/venues		
12	Engaging in hobbies, games and other pastime activities	7	Hobbies and games
13	Indoor and outdoor sports participation	6	Sports and outdoor activities
14	Use of mass media	8	Mass media
15	Personal care and maintenance	0	Personal care
<i>Incorporated in respective main categories</i>		9	Travel and unspecified time use

F. Relationship to the Eurostat Activity Coding List

846. The proposed ICATUS is intended to provide a means for cross-national comparative studies. Similarly, the Eurostat Activity Coding List was developed with the objective of increasing comparability of the time-use data collected in European Union member countries and Eastern European (PHARE) countries. Just as it benefited from previous experiences, the Multinational Comparative Time-Budget Research Project, and country modifications in Europe (18 countries tested the draft Eurostat), Canada and Australia, the proposed ICATUS has benefited from the experience in developing the Eurostat activity list. There is in fact a strong correspondence between the two classifications (see annex 22 for details). The correspondence at the major division level (one-digit code for Eurostat, two-digit code for the ICATUS) is shown in table 22.

847. In general, the major divisions of the ICATUS correspond to one of the one-digit codes of the Eurostat list. The ICATUS has more main categories corresponding to the one-digit Eurostat codes for employment, household and family care and social life and entertainment. Almost all of the activities at the division level and two-digit level of both lists are also similar; the major differences are the following:

- All activities regarded as work activities are classified in a single one-digit code in the Eurostat list: work is generally associated with formal employment; the ICATUS has five major divisions for work, with one major division associated with formal employment.
- The ICATUS classifies activities that could conceptually fall under either SNA or non-SNA work as SNA work;

some of these activities are classified as non-SNA work in the Eurostat classification and are placed under "Household and family care". Examples include: (a) collecting water and gathering firewood; (b) preserving and baking for household consumption; (c) producing handicraft and textiles; (d) gardening; and (e) tending of domestic animals.

- In both classifications, "Major construction for own final use" such as construction of a house and major repairs are treated as SNA work; however, this activity is classified under "Household and family care" in the Eurostat classification, with an accompanying explanation.
- "Hunting and fishing, picking berries, mushrooms and herbs" are classified under SNA work activities in the ICATUS but as "Productive exercise" under "Sports and outdoor activities" in the Eurostat list.
- All study or learning activities not related to paid study for work are classified as study, specifically free-time study, in the Eurostat list; courses in relation to sports and hobbies are classified in the ICATUS under their respective categories and not under the main category of learning.
- Religious activities related to individual practices are categorized under personal care in the ICATUS but are classified as participatory activities under volunteer work and meetings in the Eurostat list.
- Receiving personal and medical services are activities classified under personal care and maintenance in the ICATUS but are classified as shopping and services activities under "Household and family care" in the Eurostat list.

- “Resting” is classified under social life and entertainment in the Eurostat list but is classified under personal care in the ICATUS.
- Travel activities are listed as divisions within the associated main categories of the ICATUS; the Eurostat list has a one-digit code for travel, with travel activities classified by purpose.