

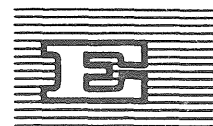
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Statistical Commission
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Item 12 of the provisional agenda

DRAFT RECOMMENDATIONS
FOR THE
1973 WORLD PROGRAMME OF INDUSTRIAL STATISTICS
PART I. GENERAL STATISTICAL OBJECTIVES

Report of the Secretary-General

1. The attached document (ST/STAT/44/Rev.1) replaces document ST/STAT/44 that was prepared in response to a request by the Commission at its fifteenth session. In view of the extent of the comments received from countries and the proposals of the Secretary-General for the preparation of the definitive edition of the document, it was considered preferable to present to the Commission a revised version of the full document, including the suggested modifications, rather than a separate summary of such comments and proposals.
2. This document is the first in a series of three documents intended to define the objectives of the 1973 World Programme of Industrial Statistics and to indicate appropriate methods of carrying out the related inquiries in each country. Parts II and III in the series (see E/CN.3/405 and E/CN.3/406) deal, respectively, with the individual commodity detail proposed for collection and with the organization and conduct of the national inquiries.
3. The three documents in the series were distributed to countries and to interested regional and international agencies for comments. Summaries of

the comments received and of the proposals of the Secretary-General for the preparation of definitive editions of parts II and III are before the Commission as E/CN.3/405/Add.1 and E/CN.3/406/Add.1.

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PART I. GENERAL STATISTICAL OBJECTIVES

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I. PREFACE

1. At its 15th session, in 1968, the United Nations Statistical Commission approved the proposal of the Secretary-General for the preparation of a 1973 World programme of Industrial Statistics. Following the action of the Statistical Commission, the Economic and Social Council adopted the following resolution on the subject at its 44th session:

"The Economic and Social Council,
Recognizing the need for data on the structure and activities of industry on a world-wide basis for purposes of economic and social development,
Noting that the Statistical Commission has made recommendations for a system of industrial statistics for use by Member States,
Recommends that States Members of the United Nations or members of the specialized agencies compile basic data on industry for 1973 or a year close to 1973, taking into account as far as possible the international recommendations on this subject." [Resolution 1305 (XLIV)]

2. The present document has been prepared by the United Nations Statistical Office with a view to defining the principal statistical objectives of the 1973 Programme. It outlines the character and content of a programme of national industrial inquiries developed from the existing international recommendations for work in this field. These recommendations have been adapted and supplemented in this document to provide countries with further precision and more specific guidance on various aspects of the form and content of the proposed inquiries.

~~3. Two other documents have been prepared in draft form as part of the over-all recommendations for the Programme. The first of these adds important detail to the general statistical objectives indicated in the present~~

1/ International Recommendations for Industrial Statistics (Statistical Papers, Series M, No. 48). United Nations publication, Sales No. E.68.XVII.10. These recommendations are subsequently referred to as IRIS.

document by specifying a standard list of selected products and materials for which production and consumption data should be compiled.^{2/} The second deals with the practical aspects of undertaking the inquiry, beginning with the tentative planning phase and ending with the publication of the final tables and the evaluation of the over-all results.^{3/}

4. The draft recommendations presented in these documents are intended for discussion on a world-wide basis. They are designed as a programme of data compilation which most of the countries can expect to complete with a satisfactory degree of accuracy and comparability. Since the majority of countries will wish to go beyond this programme to meet their own special requirements or to serve common regional needs, provision has been made both for modifications in the form and content of the inquiry on a national basis and for the development of standard regional adaptations of the Programme as a whole.

5. These documents will be submitted to the Statistical Commission at its sixteenth session, in October 1970, together with a summary of the comments on parts II and III of the draft recommendations received from countries and interested regional and international agencies. It is hoped that, after revision in the light of these comments and the Commission's discussion, the final recommendations for the 1973 Programme will be ready for publication in 1971.

^{2/} Document ST/STAT/45: List of Products and Materials.

^{3/} Document ST/STAT/46: Organization and Conduct of Industrial Censuses.

II. GENERAL CHARACTER OF THE PROGRAMME

a. Purpose

6. The 1973 World Programme of Industrial Statistics is the second programme of its kind sponsored by the United Nations Statistical Commission. It follows a similar programme sponsored by the Commission for the year 1963, in which about one hundred countries and territories participated. A record of participation in the 1963 Programme and of the results obtained has been published by the United Nations Statistical Office.^{1/}

7. The main function of these Programmes is to encourage the orderly development of national inquiries into the structure and activity of the industrial sector. Benchmark inquiries of this kind have been provided for in the international recommendations for the compilation of industrial statistics (IRIS), and a ten-year interval between such inquiries has been recommended by the Statistical Commission as an appropriate minimum frequency. In the international recommendations, such benchmark inquiries are regarded as an essential part of an integrated system of national industrial inquiries.

8. A second function of the 1973 Programme is to guide and co-ordinate national activity in industrial census-taking with a view to broadening the scope and improving the comparability of the statistical information on industry available on an international basis. Thus, provision is made in the Programme not only for the collection of information according to uniform procedures but also for the compilation of this information in a uniform manner and for its subsequent publication in standard form.

9. Both functions of the Programme are ultimately directed to the improvement of the flow of information on industrial activity and structure as a means of accelerating economic and social development. Requirements for this purpose are expressed at the national level both in terms of arrays of national data and in terms of compilations of comparative data for other countries, for regions and other groupings of countries, and for the world

^{1/} Bibliography of Industrial and Distributive-Trade Statistics (Statistical Papers, Series M, No. 36, Rev. 3). United Nations publication, Sales No.: 67.XVII.20.

as a whole. At the regional and international levels, similar needs are expressed by the various agencies concerned with general economic planning and development, as well as by those agencies such as the United Nations Industrial Development Organization (UNIDO) which are concerned more directly with the industrial sector.

b. Relationship to other industrial inquiries.

10. The sponsoring of such programmes on a decennial basis is not intended to imply any reduction in the importance of industrial inquiries on an annual or more frequent basis. The most recent view of the Statistical Commission on this matter is that an annual inquiry should be regarded as the central inquiry of a co-ordinated system for the collection of industrial data, and that a benchmark inquiry of the kind envisaged here should be regarded as a supplement to the annual inquiry. The distinctive functions of the benchmark inquiry are (i) to establish a detailed profile of the structure of the industrial sector, and (ii) to provide a broader and more accurate array of information on the activity of the sector than would normally be feasible on an annual basis. Given this detail, the benchmark inquiry can supply the framework needed for undertaking special surveys of the sector and can furnish the basic information required for the evaluation and adjustment of current indicators. In those countries where annual inquiries have not yet been instituted, an inquiry of the type envisaged here can provide an appropriate basis for their organization and development.

11. The 1973 inquiry is intended to be regarded in each country as an integral part of its national system of industrial inquiries. The degree of effort required to undertake the inquiry will vary from country to country: in some cases, a major new undertaking may be involved; in others, it may only be necessary to modify the existing pattern of inquiries or supplement the annual reporting system. In all cases, the inquiry should be fitted into the existing national system with the minimum of disturbance; where important modifications to the system are required, consideration should be given to introducing on a more permanent basis the changes needed to bring the system into line with the international recommendations for work in this field.

c. Nature of programme

12. The statistical objectives of the Programme outlined in the present document are drawn essentially from the international recommendations for benchmark inquiries into the industrial sector (IRIS). They are defined not only in terms of the items of information which should be collected and tabulated but also in terms of the scope and coverage of the inquiry, the nature of the statistical unit to be employed and the classifications that should be adopted. It is particularly important from the point of view of achieving international comparability that the recommendations should be observed in all these respects and not solely in terms of the collection of the recommended items of information. Past experience indicates that critical obstacles to the comparability of the information collected are frequently posed by divergences from country to country in the classifications used and in the nature of the coverage of the sector which has been achieved.

13. The remaining paragraphs of this part of the document are largely taken up with proposals relating to scope, coverage and classification. Part III of the document contains the proposals for the items of information which should be collected on each major topic and for the tables which should be prepared for international purposes.

14. The international recommendations for benchmark industrial inquiries (IRIS) provide a number of options with respect to the coverage and content of the inquiries. These options are expressed by the presentation of simplified recommendations for countries just beginning to develop their statistical systems and by the indication of priorities for the collection of individual items of information from large and small statistical units.

This flexibility has been largely preserved in the Programme proposed here.

d. Scope

15. The Programme proposed is intended to cover the industrial sector in each participating country. The sector is defined in accordance with the international recommendations to include all establishments within the territorial boundaries of the country engaged primarily in mining, manufacturing

and the production and distribution of electricity, gas and water. Industrial activities in international waters, such as the operation of petroleum and natural gas wells, or the processing of fish on vessels engaged solely in this activity, should be included if these activities have their land-base within the territorial boundaries of the participating country. These activities correspond to major divisions 2, 3 and 4 respectively of the International Standard Industrial Classification of All Economic Activities (ISIC).^{2/}

16. Industrial activity outside the industrial sector as defined above should normally be of very minor importance. However, where a significant amount of industrial activity is carried on in non-industrial establishments and these establishments can be readily identified, efforts should be made to isolate and measure their industrial activities, or a special survey might be made of these establishments as a supplement to the main inquiry.

17. Household units, i.e. units whose activities are carried on in household premises, should be included as part of the industrial sector and brought within the scope of the Programme if their activity involves the production of goods or services for sale or exchange. These units may be enumerated more easily within the framework of a census of population from which a measure of the extent of industrial activity outside the defined sector could be obtained.

18. The restriction of the Programme to the industrial sector is not intended to imply that inquiries may not be undertaken at the same time into other sectors of the economy, such as the construction sector or the distributive trades. There are advantages in a combined approach to these inquiries, particularly in the avoidance of overlapping in the enumeration of establishments and in the improved ability to obtain comprehensive estimates of the various kinds of economic activity. Nevertheless, the additional effort is so great and the strain on available resources likely to be so pronounced that a more comprehensive programme of this kind cannot be recommended for general implementation in the same year.

^{2/} International Standard Industrial Classification of All Economic Activities (Statistical Papers, Series M, No. 4, Rev.2). United Nations publication, Sales No.: E.68.XVII.8.

e. Statistical unit

19. The recommended statistical unit for the 1973 Programme is the establishment. This is defined, ideally, in IRIS as the "economic unit which engages, under a single ownership or control, that is, under a single legal entity, in one, or predominantly one, kind of economic activity at a single physical location".^{3/} In practice, since the application of this definition has to be tied to the record-keeping practices of the producing units involved, it will frequently be necessary to accept the local unit, that is, all the economic activities carried on at a single location under a single ownership or control, as a first approximation to the recommended concept. Sub-division of the local unit might be considered subsequently if the various kinds of activity are substantial and usually carried on in distinct establishments and if the supplementary records required exist. In certain instances, particularly when there is no restriction in respect of geographic area or when the necessary records are available, the kind-of-activity unit may also be considered as a suitable alternative to the establishment.

20. Some modifications to this procedure are desirable in the case of units engaged in ancillary activities. These units work primarily or exclusively for a related establishment or a group of related establishments, and produce goods or services which do not become part of the output of these establishments and which are normally related to subsidiary and supporting activities which are an integral part of most establishments. Units of this kind serving a single establishment should be treated as an integral part of the main establishment, irrespective of separate location or of the existence of separate records. If, however, the units are located in areas which are distinguished in the area classification, it will be desirable to gather separate data for the items which are to be classified according to these areas. Central ancillary units, that is, ancillary units serving two or more establishments of a multi-establishment enterprise should, on the other hand, be treated as separate establishments and classified according to the predominant activity of the establishments served.

21. Own-account construction units which are of significant size should be treated as independent establishments if separate records are available

^{3/} Op.cit. para. 39.

or if suitable estimates can be made in respect of their operations. They should be classified in construction.

f. Coverage

22. The scope of the inquiries to be undertaken as part of the Programme has already been defined in terms of the kinds of activities to be enumerated and the individual establishments identified with these activities. The coverage of the inquiries relates to the nature of the restrictions placed on the universe of establishments defined in this way, normally for the purpose of trimming the inquiries to manageable proportions. These restrictions may relate to (i) the size of the establishment or (ii) other structural characteristics of the establishment, such as form of ownership, or type of legal or economic organization.

23. In principle, for the 1973 Programme, no restrictions should be placed on the coverage of the inquiries either in terms of the size of the establishment or in terms of its other structural characteristics. While this is not to say that a complete enumeration of establishments of all sizes is required, it does mean that the enumeration should be such that satisfactory estimates can be prepared for the universe as a whole. Similarly, it does not imply that the special inquiries prepared as part of the Programme have to be comprehensive inquiries, in the sense that establishments of all kinds have to be included: if government establishments, for example, normally report the required information on an annual basis, the coverage of the special inquiries instituted for the programme can be correspondingly reduced.

24. In practice, special inquiries for the Programme are likely to be the rule and the nature of their coverage in terms of establishment size is likely to be an important question. It is not possible to give specific advice on this matter since so much depends on the number, the activity and size distribution of the universe of establishments in each country and on the financial and man-power resources that can be allocated for the work. The general objectives of the inquiries should be kept in mind in making these decisions and the available resources applied so as to give the best possible return on the expenditure involved.

25. While complete coverage must remain the goal of the inquiries, it can generally be approached only in a series of successive approximations. These approximations are normally determined by means of different cut-offs in the size of establishments for different branches of industry. For international comparability, the cut-off must be defined in terms of a single and arbitrary measure of size so that in the case of those countries which do not extend their estimates to the full coverage recommended, the results will still be comparable.

26. The proposed cut-off is defined in terms of a coverage limited to establishments with five or more persons engaged. This type of coverage is often found in benchmark inquiries in countries at an early stage of statistical development and quite frequently in annual inquiries in the more advanced nations. It is generally satisfactory as a basis for estimating production, consumption and capital formation and for industrial commodity flows in general.

27. The two levels of coverage proposed for international comparability namely full coverage and coverage extending to all establishments engaging five or more persons, will normally be associated with differences in the reliability and level of detail in the information compiled as well as with the number of estimates that have to be made to arrive at the full coverage requested. This is particularly true for some of the items of data recommended for the 1973 Programme that have not been recommended with first priority or not recommended at all in the international recommendations (IRIS).

g. Classification by industry

28. Uniformity in the industrial classification employed and in the application of classification procedures is essential for internationally comparable results. In those countries now following United Nations standards in this matter for national purposes, it is recommended that the 1968 version of ISIC ^{4/} should be used and that full detail for the standard items should be shown to the industry-group (four-digit) level of the classification. In those countries not now following United Nations standards in their national

^{4/} Op. cit.

practice, it is recommended that industry detail in ISIC form should be provided as indicated in the subsequent proposals and that provision should be made for the ad hoc processing of all items of data in terms of the industry-group level.

h. Reference period

29. The period to which the information compiled on activity should relate is the calendar year 1973. For international comparisons, this may imply the application of some method of estimation in those cases where information of the kind sought is normally collected and compiled on a fiscal-year basis or in those cases where, for one reason or another, the institution of a benchmark inquiry for the calendar year 1973 is not feasible. The acceptability of financial years other than the calendar year 1973 for establishment reporting should be looked at in the light of the effects of this practice on the relevance and accuracy of the reported information.

i. List of items and priorities

30. The nature of the items of information which should be enumerated in the 1973 inquiries and the priorities accorded to them should be determined in the first place by national needs and circumstances. For the World Programme, the detail proposed is necessarily more limited than the detail required for national purposes, while the priorities are based on a projection of international requirements as well as on a general view of national requirements. The recommended items and the priorities accorded to them for collection as part of the Programme are indicated in part III of this document.

j. Tabulation of the results

31. The distinction between the system of tables proposed as part of the World Programme and the tables required for national purposes should be kept in mind. Apart from differences in the items tabulated and in the priorities accorded to the collection of information on these items, there will normally be important differences in the classification of the items in terms of the structural characteristics of the establishments. One of the most important of these differences will normally be the inclusion in the national tabulations of an extensive cross-classification of the items of data according to the location of the establishments.

k. Publication of results

32. A plan and time-table for the publication of the results of the 1973 inquiries should be an integral part of each national programme. For the World Programme, the reporting requirements are indicated by the list of tables in part III of this document. It is hoped that all the tables in this list, together with an inquiry description as outlined in paragraph 65 of IRIS, will be transmitted to the United Nations within three years from the completion of the inquiries and that the full results of the World Programme will be published by the United Nations Statistical Office by 1978.

III. CONTENT OF THE PROGRAMME

33. The essence of the 1973 Programme is the compilation of indicators on all major aspects of industrial activity, classified in detail according to branch of industry. Summary tables are added to give perspective to the complete system. These are supplemented by cross-classifications of the data according to size of establishment and other structural characteristics to show the main features of the structure of each branch and of industry as a whole.

34. The content of the Programme is indicated and discussed topic by topic in the sections which follow. In each case, after a brief introduction, the nature of the items of information to be compiled is given and a recommendation is made of the priority to be accorded in each case to the collection of the related information from the establishments with five or more persons engaged in countries with developed industrial statistics and in countries beginning to develop, or in the process of developing, their industrial statistics. The items are defined by references to specific paragraphs in the text of IRIS and are annotated where it is felt that some additional explanation or guidance is desirable.^{1/} Finally, the tabulation scheme is indicated.

35. The sections of the Programme are arranged and presented in the following order:

- Section 0. Summary of activity
- Section 1. Employment and earnings
- Section 2. Gross output, its composition and related items.
- Section 3. Input and related items
- Section 4. Measures of value added
- Section 5. Changes in stocks
- Section 6. Gross fixed capital formation
- Section 7. Production of selected individual products
- Section 8. Consumption of selected individual materials

^{1/} In the final version of these recommendations, the full text of the definitions will be included.

SECTION O. SUMMARY OF ACTIVITY

Introduction

36. The tables in this section of the Programme are intended to focus attention on the main results of the 1973 inquiries and to establish a framework for the more detailed tables in subsequent sections. Because of the importance of the items, it is recommended that all participating countries should provide estimates for all four tables.

Recommended items

37. The items recommended for inclusion in these summary tables and the references required for their definition are as follows:

<u>Item and reference number</u>	<u>Definition</u>
0.1 Number of establishments	IRIS paras. 76-78
0.2 Number of persons engaged	Section 1
0.3 Number of employees	Section 1
0.4 Number of operatives	Section 1
0.5 Wages and salaries of employees	Section 1
0.6 Wages and salaries of operatives	Section 1
0.7 Gross output in basic values	Section 2
0.8 Value added in basic values	Section 4
0.9 Changes in stocks	Section 5
0.10 Gross fixed capital formation	Section 6

Explanatory notes

38. The only item in these tables that does not appear in subsequent sections is number of establishments. This item and all other items of information in the tables should refer to the number of establishments to which the published data relate.

39. The treatment of homeworkers may cause problems for international comparisons because of the alternative recommendations on this subject in IRIS. It is proposed that, for the 1973 Programme, the gross remuneration paid to homeworkers should be included as part of the cost of contract and commission work done by others and the number of homeworkers, if available, should be shown separately only as a memorandum item to table 1.1.

Tabulation plan

40. The basic table in this section, table 0.1, should relate to all establishments without limitation as to size. Because of the difficulties which may be encountered in obtaining detailed information from the smaller establishments, it is recommended that the kind-of-activity classification should be in terms of the major-group (three-digit) level of the ISIC.

41. Supplementary tables 0.2 and 0.3 include cross-classifications of the basic items by size of establishment and by form of organization and ownership. These tables should also relate to all establishments but, to simplify such tabulations, it is recommended that the kind-of-activity classification should be limited to the division (two-digit) level of the ISIC.

42. A detailed size-classification scheme, based on numbers engaged as the criterion of size, is given in paragraphs 81-82 of IRIS. For supplementary table 0.2, an abbreviated version of the general scheme is preferable. This should be limited to distinguishing between establishments with the following numbers of persons engaged: 1-4, 5-9, 10-19, 20-49, 50-99, 100-199 and 200 and over.

43. In similar fashion, an abbreviated version of the classifications by form of organization and ownership proposed in paragraphs 72 and 73 of IRIS should be used for a second cross-classification of the basic items. The categories recommended are the following:

- a. Type of organization
 - a.1 Establishments belonging to corporate enterprises
 - a.2 Establishments belonging to unincorporated enterprises
 - a.3 Establishments belonging to co-operatives
- b. Type of ownership
 - b.1 Privately-owned establishments
 - b.2 Publicly-owned establishments

44. Table 0.4 summarizes the basic items of information derived from the more detailed tables in subsequent sections. This table should provide estimates relating to establishments with five or more persons engaged. The kind-of-activity classification should be in terms of the ISIC group (four-digit) level.

Table 0.1 Principal indicators of industrial activity, classified by branch of industry, all establishments

Branch of industry	Number of establishments	Number of persons engaged	Employees		Operatives		Gross output in basic values	Value added in basic values	Changes in stocks	Gross fixed capital formation
			Number	Wages and salaries	Number	Wages and salaries				

Table 0.2 Principal indicators of industrial activity, classified by branch of industry and by size of establishment, all establishments

∟ boxhead as for table 0.1 ∟

Table 0.3 Principal indicators of industrial activity, classified by branch of industry and type of establishment, all establishments

∟ boxhead as for table 0.1 ∟

Table 0.4 Principal indicators of industrial activity, classified by branch of industry, establishments with five or more persons engaged

∟ boxhead as for table 0.1 ∟

SECTION 1. EMPLOYMENT AND EARNINGS

Introduction

45. This section of the Programme is concerned primarily with the nature and dimensions of the employment provided by each branch of industry and with the annual earnings of each kind of paid labour. It also provides for the reporting of man-hours worked by operatives as a more precise measure of labour input. Supplements to wages and salaries, a part of total labour remuneration of increasing significance, is included in the Programme as a second-priority item for collection.

Recommended items

46. The following table indicates the items recommended for compilation, their collection priority rating for establishments with five or more persons engaged in the statistically developed and developing countries and the paragraph reference for their definition in IRIS.

<u>Item and reference number</u>	<u>Priority</u>		<u>Definition</u> (para.ref.IRIS)
	<u>Developed</u>	<u>Developing</u>	
1.1 Number of persons engaged	1	1	83-84, 98
1.1.1 Working proprietors and unpaid family workers	1	1	85-88
1.1.2 Employees	1	1	89-90, 97
1.1.2.1 Operatives	1	1	91-93
1.1.2.2 Other	1	1	94
1.2 Man-hours worked by operatives	1	1	96
1.3 Wages and salaries of employees	1	1	99
1.3.1 Of operatives	1	1	99
1.3.2 Of other employees	1	1	99
1.4 Supplements to wages and salaries of employees	2	-	101

Tabulation plan

47. The tables in sections 1-6 should provide estimates relating to all establishments with five or more persons engaged. The kind-of-activity classification for these basic tables should generally be in terms of the industry group (four-digit) level of the ISIC.

48. In this section, a single table is recommended. The basic items should be classified by branch of industry in four-digit ISIC detail. Additional detail will normally be required for national purposes in the items in the boxhead, particularly breakdowns of employment and earnings according to sex. In some cases, breakdowns of employment and earnings according to age-group will also be required.

Table 1.1 Indicators of employment and earnings, classified by branch of industry, establishments with five or more persons engaged

Branch of industry	Number of persons engaged					Man-hours worked by operatives	Wages and salaries			Supplements to wages and salaries
	Total	Working proprietors and unpaid family workers	Employees				Total	Operatives	Other	
			Total	Operatives	Other					

SECTION 2. GROSS OUTPUT, ITS COMPOSITION AND RELATED ITEMS

Introduction

49. The table in this section relates to the measurement of gross output by branch of industry in terms of the major types of production contributing to the industrial output of the establishment. The table also provides for the separate statement of indirect taxes paid and subsidies received on commodities (i.e. proportional to the quantity or value of the commodities produced).

Recommended items

50. The items recommended for inclusion in the basic table of this section are as follows:

<u>Item and reference number</u>	<u>Priority</u>		<u>Definition</u> (para.ref.IRIS)
	<u>Developed</u>	<u>Developing</u>	
2.1 Gross output in producers' values	1	1	151-153
2.1.1 Finished products	1	1	147-148
2.1.2 Industrial services	1	2	150
2.1.3 Goods shipped as received	1	2	149
2.1.4 Electricity sold	1	1	116
2.1.5 Fixed assets produced for own account	1	1	120-121
2.1.6 Increase in work in progress	1	2	138-139
2.2 Indirect taxes	1	-	119
2.3 Subsidies received	1	-	119
2.4 Gross output in approximate basic values	1	1	151-153

Explanatory notes

51. The items in the table in this section should be in terms of values at current prices (goods and services produced) or in terms of related payments (indirect taxes and subsidies). Valuation of gross output and its components (item 2.1) should be in producers' values; valuation of item 2.4 should be in approximate basic values.

52. Producers' values are the sales value of goods and services in the market at the establishment of the producer. Approximate basic values are producers' values less indirect (commodity) taxes reduced by subsidies proportional to the quantity or value of the commodities produced.

53. Approximate factor values are producers' values less all indirect taxes reduced by all subsidies levied on the production of goods and services. Producers' values and approximate factor values are equivalent to the former market-price and factor-cost values. Approximate basic values and approximate factor values are distinguished from the "pure" concept of these values in that they do not include a deduction from producers' values in respect of accumulated indirect taxes reduced by subsidies on the input of goods and services.

54. The items "indirect taxes" and "subsidies received", which are normally difficult to obtain at the establishment level, are given a priority rating for collection from establishments in the developed countries only. For the developing countries, it is proposed that estimates for these items for the alternative methods of valuation of gross output (producers' values and basic values) be based on special inquiries at the enterprise level.

55. The output of finished products (item 2.1.1) should relate to the total production of finished goods during the reference period, whether actually shipped or entered into stocks. In the case of estimates compiled on a "shipped" basis, this item is equivalent to the value of all goods shipped in the reference period plus the value of finished goods in stock at the end of the period, less the value of finished goods in stock at the beginning of the period.

56. The production of services is defined as taking place at the time the services are rendered. In the case of item 2.1.3 (goods shipped as received), where these goods were purchased expressly for resale in a previous period and included in stocks of finished goods at the beginning of the period, production is equivalent to the value of the stocks of these goods sold during the reference period.

57. Provision is made for the separate collection of the value of fixed assets produced by the establishment for its own use in item 2.1.5. If these data are not separately available, they should be included in item 2.1.1.

Tabulation plan

58. The tabulation plan for this section is essentially similar to the plan outlined for section 1. One table is proposed for the basic items, classified by branch of industry in four-digit ISIC detail, corresponding to all establishments with five or more persons engaged.

Table 2.1 Gross output, its composition and related items, classified by branch of industry, establishments with five or more persons engaged

Branch of industry	Gross output in producers' values							In- direct taxes paid	Sub- sidies received	Gross output in basic values
	Total	Finished products	Indus- trial services	Goods shipped as re- ceived	Elec- tricity sold	Fixed assets produced for own use	Increase in work-in- progress			

SECTION 3. INPUT AND RELATED ITEMS

Introduction

59. The tables in this section deal with the nature of the industrial input into each branch of industry, that is, the input into the productive process of goods and services. Input is itemized in terms of materials and supplies, fuels, electricity, and the services of other industrial establishments. Special provision is made for the compilation of estimates of total energy consumed.

Recommended items

60. The following items are recommended for inclusion in the tables in this section:

<u>Definition and item number</u>	<u>Priority</u>		<u>Definition</u>
	<u>Developed</u>	<u>Developing</u>	<u>para.ref. IRIS</u>
3.1 Goods consumed and industrial services rendered	1	1	104-105, 114
3.1.1 Materials and supplies	1	1	107-109
3.1.2 Fuels	1	1	110
3.1.3 Contract and commission work	1	2	112
3.1.4 Repair and maintenance work	1	2	113
3.1.5 Goods shipped as received	1	2	111
3.1.6 Electricity purchased (value)	1	1	114
3.2 Electricity purchased (kWh)	1	1	114
3.3 Electricity generated (kWh)	1	1	115
3.4 Electricity sold (kWh)	1	1	116
3.5 Total energy consumed (kWh)			-
3.5.1 Energy equivalent of fuels consumed (kWh)			132
3.5.2 Electricity consumed (kWh)			117

Explanatory notes

61. Valuation of item 3.1 and its components should be in terms of current purchasers' values. Purchasers' values are the cost in the market of goods

and services on delivery to the establishment. Purchasers' values are equivalent to producers' values (defined in section 2) plus the trade and transport charges in delivering the commodities from the producer to the purchaser.

62. The values required are in terms of the cost of input consumed during the reference period rather than purchased or delivered to the establishment. In the case of estimates compiled on a "received" basis, this is equivalent to the cost of materials, fuels and supplies delivered to the establishment during the reference period, adjusted for changes in stocks of materials, fuels and supplies by adding the value of these stocks at the end of the period and subtracting the value at the beginning of the period.

63. The estimates of total energy consumed and of the energy equivalent of fuels consumed should be in terms of kilowatt-hours and should be made at the national level on the basis of the details of the consumption of fuels and electricity provided by the reporting establishments.

Tabulation plan

64. The tables for this section, 3.1 and 3.2, should provide estimates for all establishments with five or more persons engaged. Table 3.1 should show the basic items classified by branch of industry in four-digit ISIC detail. Due to the amount of estimation involved, it is recommended that table 3.2 be tabulated at the three-digit ISIC level only.

Table 3.1 Goods consumed and industrial services rendered, classified by branch of industry, establishments with five or more persons engaged

Branch of industry	Total	Materials and supplies	Fuels	Contract and commission work	Repair and maintenance	Goods shipped as received	Electricity purchased
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Table 3.2 Energy equivalent of fuels and electricity consumed, classified by branch of industry, establishments with five or more persons engaged

Branch of industry	Total energy consumed (kWh)	Energy equivalent of fuels consumed (kWh)	Electricity consumed (kWh)			
			Total	Purchased	Generated	Sold

SECTION 4. MEASURES OF VALUE ADDED

Introduction

65. The table in this section is intended to present alternative measures of value added by branch of industry and to show the relationships between these measures. Attention is focussed on "census value added" in approximate basic values and in producers' values and on estimates of the national accounting measure of the contribution of each branch of industry to the gross domestic product.

Recommended items

66. The following items are recommended for inclusion in the table of this section:

<u>Item and reference number</u>	<u>Priority</u>		<u>Definition</u>
	<u>Developed</u>	<u>Developing</u>	(para.ref.IRIS)
4.1 Value added in approximate basic values			155-159
4.2 Net indirect taxes	1	-	119
4.3 Value added in producers' values			155-159
4.4 Receipts for non-industrial services	2	-	154
4.5 Payments for non-industrial services	2	-	118
4.6 Contribution to the gross domestic product in producers' values			158
4.7 Consumption of fixed capital	2	-	-

Explanatory notes

67. The items "receipts for non-industrial services", "payments for non-industrial services" and "consumption of fixed capital" are given second priority for establishments in the developed countries only. For these items, it is normally difficult to obtain satisfactory estimates at the establishment level. For this reason, it may be advisable to exclude these items from the main inquiry and to base estimates on the results of ad hoc inquiries conducted on a sample basis with the enterprise as the reporting unit.

68. Consumption of fixed capital refers to depreciation of fixed assets. This concept is discussed briefly in paragraph 158 of IRIS.

Tabulation plan

69. For the reasons given above, it is recommended that the table of this section show value added and related items by branch of industry at the division (two-digit) level of ISIC only.

Table 4.1 Value added and related items, classified by branch of industry, establishments with five or more persons engaged.

Branch of industry	Value added in basic values	Net indirect taxes	Value added in producers' values	Receipts for non-industrial services	Payments for non-industrial services	Contribution to the gross domestic product in producers' values	Consumption of fixed capital
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SECTION 5. CHANGES IN STOCKS

Introduction

70. The table in this section is designed to present the component elements of the over-all changes in stocks reported in the summary tables of section 0. Estimates should be shown, for each branch of industry, of the value of stocks at the beginning and end of the inquiry period in terms of (i) materials, fuels and supplies, (ii) work-in-progress and (iii) finished products.

Recommended items

71. Estimates should be compiled of the value, at the beginning and end of the inquiry period, of the following items:

<u>Item and reference number</u>	<u>Priority</u>		<u>Definition</u> (para.ref.IRIS)
	<u>Developed</u>	<u>Developing</u>	
5.1 Materials, fuels and supplies	1	1	134-137
5.2 Work-in-progress	1	2	138-139
5.3 Finished goods produced	1	1	140-142

Explanatory notes

72. In principle, inventories of materials, fuels and supplies should be valued at current replacement cost, based on purchasers' values at the reference date. Work-in-progress, ideally, should reflect an imputed valuation in producers' values including an imputed margin for overhead costs and profits as well as the cost of materials consumed and labour used. Inventories of finished products should be valued in the producers' values at which goods have been shipped immediately prior to the reference date.

Tabulation plan

73. The basic table of this section should show the value, by branch of industry, of each of the three main categories of stocks at the beginning and end of the inquiry period. The classification by branch of industry should be in terms of ISIC four-digit detail.

Table 5.1 Value of stocks at beginning and end of inquiry period, classified by branch of industry, establishments with five or more persons engaged

Branch of industry	Materials, fuels and supplies		Work-in-progress		Finished goods	
	Beginning of period	End of period	Beginning of period	End of period	Beginning of period	End of period

SECTION 6. GROSS FIXED CAPITAL FORMATION

Introduction

74. This section provides for the reporting of estimates of gross fixed capital formation for each branch of industry, classified according to type of asset. Provision is made for the separate reporting in each case of gross additions to fixed assets (acquisitions of new and used fixed assets less sales) and of acquisitions (purchases plus own account construction) of new fixed assets.

Recommended items

75. The following items are recommended for inclusion in the table in this section:

<u>Item and reference number</u>	<u>Priority</u>		<u>Definition</u> (para.ref.IRIS)
	<u>Developed</u>	<u>Developing</u>	
6.1 Gross additions to fixed assets	1	2	126
6.1.1 Land	2	-	-
6.1.2 Buildings and other construction	2	-	125
6.1.3 Transport equipment	2	-	125
6.1.4 Machinery and other equipment	2	-	125
6.2 Acquisitions of new fixed assets	1	1	120-124
6.2.1 Buildings, other construction and land improvements	1	1	125
6.2.2 Transport equipment	1	1	125
6.2.3 Machinery and other equipment	1	1	125

Explanatory notes

76. It should be noted that the items are defined to include the value of fixed assets constructed on own-account. Valuation should be in the purchasers' values of comparable assets, delivered to the establishment.

Tabulation plan

77. The table of this section should show the value of each type of fixed asset by branch of industry at the four-digit level of ISIC for all establishments with five or more persons engaged.

Table 6.1 Gross fixed capital formation and its composition, classified by branch of industry, establishments with five or more persons engaged

Branch of industry	Gross additions to fixed assets	Total acquisitions of new fixed assets	Land	Buildings, other construction and land improvements		Transport equipment		Machinery and other equipment	
				Total	New	Total	New	Total	New

SECTION 7. PRODUCTION OF SELECTED INDIVIDUAL PRODUCTS

Introduction

78. This section of the Programme is designed for the reporting of information on the total production of selected individual commodities by industrial establishments, irrespective of the branch of industry in which these establishments are classified.

Recommended items

79. The items for which separate data on production should be compiled for international purposes are the industrial products listed in document ST/STAT/45: List of Products and Materials. In that document, a description is given of each commodity and of the unit of measurement which should be used in reporting. For convenience in reference, the list will be arranged in the final version according to (i) ISIC-based codes, (ii) SITC-based codes and (iii) the alphabetical sequence of commodity titles. It is recommended that information on the production of these commodities should be collected in all cases for the establishments with five or more persons engaged; the enumeration of production in the smaller establishments should normally be confined to cases where these establishments account for a significant proportion of total production.

Explanatory notes

80. Basic information on the requirements for reporting in this section will be found in document ST/STAT/45. The main objective is the uniform reporting of quantitative information on the total production of each commodity. Valuation of the final products in table 7.1 should be in terms of producers' values.

Tabulation plan

81. A single table (table 7.1) is recommended for this section, showing estimates of the total production of each industrial product, together with estimates in each case of the total quantity and value of shipments or sales. For national purposes, some further information will normally be desirable: for example, total production divided into (i) production by establishments classified in the branch of industry of which the commodity

is a principal product and (ii) production by establishments classified in other branches of industry.

82. For national purposes, a commodity classification linked with both the national industry classification and the national classification of foreign trade statistics should normally be used in the compilation of commodity production data. Guidance on the development of such a commodity classification will be found in the major national studies on industrial census methods mentioned in the bibliography to these recommendations and also in the studies prepared by the United Nations Statistical Office in the course of developing a generalized commodity classification for national accounting purposes.^{2/}

Table 7.1 Production of selected individual products, establishments with five or more persons engaged

Code	Name of product	Unit of measurement	Total quantity produced	Shipments or sales	
				Quantity	Value

^{2/} A comprehensive bibliography will be included in the final version of part III of these recommendations

SECTION 8. CONSUMPTION OF SELECTED INDIVIDUAL MATERIALS

Introduction

83. This section of the Programme is designed for the reporting of information on the total consumption of selected individual materials by industrial establishments, irrespective of the branch of industry in which these establishments are classified.

Recommended items

84. The items for which separate data on consumption should be compiled for international purposes are the materials listed in document ST/STAT/45 (List of Products and Materials) which are consumed in the process of producing industrial products. In that document, a description is given of each commodity and of the unit of measurement which should be used in reporting. For convenience in reference, the list will be arranged in the final version according to (i) ISIC-based codes, (ii) SITC-based codes and (iii) the alphabetical sequence of commodity titles. It is recommended that information on the consumption of these materials should be collected in all cases for the establishments with five or more persons engaged; the enumeration of consumption in the smaller establishments should be confined to cases where these establishments account for a significant proportion of total consumption.

Explanatory notes

85. Basic information on the requirements for reporting in this section will be found in document ST/STAT/45. The main objective is the uniform reporting of quantitative information on the industrial consumption of each commodity.

Tabulation plan

86. The basic table recommended for this section presents estimates of the industrial consumption of each commodity, together with estimates in each case of the total quantity and value of deliveries to the establishment. Valuation of deliveries in table 8.1 should be in terms of purchasers' values.

87. For national purposes, a commodity classification linked with both the national industry classification and the national classification of foreign trade statistics should normally be used in the compilation of commodity consumption data. In view of the interest in the preparation of commodity balances, this classification should also be closely articulated with the classification used on the production side. Guidance on the development of such a commodity classification will be found in the major national studies on industrial census methods mentioned in the bibliography to these recommendations and also in the studies prepared by the United Nations Statistical Office in the course of developing a generalized commodity classification for national accounting purposes.^{3/}

Table 8.1 Consumption of selected individual materials, establishments with five or more persons engaged.

Code	Name of material	Unit of measurement	Total quantity consumed	Deliveries	
				Quantity	Value

^{3/} A comprehensive bibliography will be included in the final version of part III of these recommendations.