Distr.
GENERAL

CES/SEM.41/18
4 April 2000

ENGLISH ONLY

STATISTICAL COMMISSION and ECONOMIC COMMISSION FOR EUROPE

STATISTICAL OFFICE OF THE EUROPEAN COMMUNITIES (EUROSTAT)

CONFERENCE OF EUROPEAN STATISTICIANS

INTERNATIONAL LABOUR ORGANIZATION

Joint ECE-Eurostat-ILO Seminar on
Measurement of the Quality of Employment
(Geneva, 3-5 May 2000)

Topic 6

EUROPEAN OCCUPATIONAL DISEASES STATISTICS

« EUROPEAN HEALTH AND SAFETY AT WORK STATISTICS » - EUROSTAT

Supporting paper submitted by Eurostat*

I. Introduction

1. From 1990, Eurostat develops methodologies for European harmonised statistics in the field of Health and Safety at Work. The aim is to fulfil article 137 (ex-118 A) of the Treaty establishing the European Community that states that *« the Community shall support and complement the activities of the Member States (…) to protect workers' health and safety* ». Additionally, the Council Resolution 95/C 168/01[1] furthermore called upon the Commission*: "to complete the work in progress on harmonising statistics on accidents at the workplace, and to improve … the data available on occupational diseases* The Programme on Safety, Hygiene and Health at Work (1996-2000) also foresees the continuation of the implementation of this project. Furthermore, the European Community Statistical Programme 1998-2002[2] foresees the *« continuation of statistical projects on health and safety »* and that *« consistent series of data will be established to provide the means for the monitoring of health and safety at work and the efficiency of regulation in this field* ».

2. In a first time a project of European Statistics on accidents at Work (ESAW) has been implemented, with data collected from 1993 reference year. Later on, a project of European occupational

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[1] Resolution of 27.03.1995 on the transposition and application of Community social legislation, OJ C168, 4.07.1995.

[2] Council Decision 1999/126/EC of 28.12.1998 on the Community Statistical Programme 1998-2002, OJ L42, 16.02.1999.

diseases statistics (EODS) started with a pilot collection of data for 1995 reference year. Additionally a sub-project from ESAW has been set up on commuting accidents (accidents occurring on the journey between home and the place of work) for which 1996 was the first reference year. Finally an ad hoc module on « accidents at work and occupational diseases » has been introduced in the 1999 Community Labour Force Survey (LFS). All these activities are developed in close co-operation with Directorate General Employment and social affairs of the European Commission. They are also carried out in the framework of the Eurostat ESAW and EODS Working Groups which members are governmental delegates of the Member States, advised by corresponding Task Forces.

3. The current paper first shortly reminds the main elements of ESAW methodology and its sub-project on Commuting accidents. A second part informs on the 1995 EODS pilot project. Additionally, a third part describes the work in course for the implementation of an annual collection of EODS data from 2001 reference year. ***This third part of the current paper on EODS Phase 1 should be considered only as an informal draft proposal not yet adopted by EU Member States ; this is not an official Eurostat methodology.*** Finally a fourth part present the 1999 LFS module. All parts present the concepts, variables and main characteristics of the classifications used and describe the level of comparability achieve as well as the weaknesses still remaining. The two first parts also provide some main results.

II. European Statistics on accidents at Work (ESAW)

Background and aims

4. The Framework Directive on Health and Safety in the Workplace[3] specified in article 9 that " … the employer shall keep a list of occupational accidents resulting in a worker being unfit for work for more than three working days "and "draw up, for the responsible authorities and in accordance with national laws and/or practices, reports on occupational accidents suffered by his workers .".

5. On this basis, the ESAW project was launched in 1990, aiming at harmonised data on accidents at work for all accidents entailing more than three days 'absence from work.
Harmonisation of European Occupational Accident Statistics "was published in 1992 by Eurostat and an actualised "European Statistics on accidents at work –Methodology "has been published in 1999[4].

6. The aims of the ESAW project are to provide data on high-risk groups and sectors, and at a later stage indicators on both the causes and the social cost of accidents at work. Consistent series of data should be established to provide the means for the monitoring of health and safety at work and the efficiency of regulation in this field. It is also an aim of ESAW to develop a methodology which is as far as possible comparable with other international statistics and to participate in the co-ordination of such work. The ESAW methodology is in accordance with the ILO Resolution of 1998 concerning "Statistics of Occupational Injuries: resulting from Occupational Accidents "[5].

[3] Council Directive 89/391/EEC of 12.06.1989 on the introduction of measures to encourage improvements in the safety and health of workers at work, OJ L183, 29.06.1989. Hereinafter, Framework Directive (on health and safety at work).

[4] Office for Official Publications of the European Communities, Theme 3 Series Methods and Nomenclatures, 1998 Edition, Catalogue number CA-19-98-908-DE/EN/ES/FI/FR/IT/PT-C.

[5] Adopted by the Sixteenth International Conference of Labour Statisticians, Geneva, 6-15 October 1998.

Basic concepts and definitions

7. An accident at work is defined as "a discrete occurrence in the course of work which leads to physical or mental harm". The phrase "in the course of work" means "whilst engaged in an occupational activity or during the time spent at work". The reference period is defined as the year of notification of the accident.

Table 1- Types of accidents included / excluded in the ESAW methodology

Type of accidents	Included YES / NO
Acute poisoning	YES
wilful acts of other persons	YES
Accidents in public places or means of transport during a journey in the course of work:	YES
Road traffic accidents in the course of work (public highways, car parks, internal ways inside the premises of the enterprise)	YES
Other accidents (slips, falls, aggressions, etc.) in a public place (pavement, staircases, etc.) or in the arrival and starting points (station, port, airport, etc.) of any mean of transport, during a journey in the course of work	YES
Accidents on board of any mean of transport used in the course of work (underground railway, tram, train, boat, plane, etc.)	YES
Accidents occurred within the premises of another company than that which employs the victim, or in a private individual, in the course of work	YES
Deliberate self-inflicted injuries	NO
Accidents on the way to and from work (commuting accidents : separate collection of data)	NO
Accidents having only a medical origin in the course of work	NO
Members of public, outside any occupational activity	NO

8. All cases of accidents at work leading to an absence of more than three calendar days[6] are included in the ESAW data. In practice it means that an accident at work is included in ESAW if the person is unfit for work for more than 3 days even if these days include Saturdays, Sundays or other days where the person is not usually working.

Table 2 - Concepts of "accidents with more than 3 days' absence from work" and of numbers of counted "days lost" in the ESAW methodology

Resumption of work the:	same day of the accident	First to fourth days after the accident	fifth day after the accident	Sixth day after the accident / or beyond
Accident included in ESAW	NO	NO	YES	YES
Number of days lost	not included	not included	4	5 / or more

[6] The Framework Directive speaks about *working days*. However, it has been decided for ESAW methodology to follow the most common practice in the Member States, which is to *use calendar days* in calculating the number of days with an absence from work.

Table 3 - Categories of non-fatal accidents at work reported in the European Union

Accidents are notifiable in case of:	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
No absence or resumption of work the same day of the accident([1])	Y	N	N	Y	Y	Y	N	N	Y	N	Y	Y	N	Y	N	-
Resumption of work the first, second or third day after the day of the accident([1])	Y	Y	N	Y	Y	Y	N	N	Y	N	Y	Y	N	Y	N	-
Resumption of work the fourth day after the day of the accident([1])	Y	Y	N	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	-
Resumption of work the fifth day or later after the day of the accident	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Other										([2])						

([1]) Not covered by the ESAW methodology.
([2]) NL: Only "serious injuries" are reported.

9. Fatal accidents are also covered by ESAW. A fatal accident is defined as an accident which leads to the death of a victim within one year of the accident. However, some countries only register accidents as fatal if the victim died within a certain time limit after the accidental injury : the same day of the accident (the Netherlands), within 30 days after the accident (Germany) or no time limit (B, GR, F, I, L and S).

Sources and comparability

10. Eurostat receives the ESAW data from the Member States 'national registers or other national bodies responsible for the collection of data on accidents at work. The ESAW data are occurrence-related and based on administrative sources in the Member States. All Member States provide ESAW case-by-case data to Eurostat except Germany and Portugal. Mainly, two types of reporting procedures can be identified in the various Member States of the European Union. The insurance based systems, which can be found in 10 Member States, have reporting procedures based on the declaration of the accidents to the insurer, public (Social Security) or private according to the case. On the other hand the reporting procedures of the five other Member States (Denmark, Ireland, the Netherlands, Sweden and the United Kingdom) are based on the legal obligation of the employer to notify the accidents to another national competent authority, in general the National Labour Inspection Service. Norway, which also provides data to Eurostat, belongs to the latter group.

11. In the insurance based systems, the supply or the refunding of care benefits and the payment of benefits in cash (daily subsistence allowances, rents where applicable, etc.) resulting from accidents at work, are conditioned in its report to the public or private insurer. Additionally, in a number of these countries, the benefits thus paid under the accidents at work insurance legislation are higher than in the case of non-occupational accidents. Thus, there is an economic incentive to notify an accident at work. Due to these various factors, the reporting levels for accidents at work are in general very high in the insurance based systems and considered to be about 100 percent.

12. In the five other Member States and Norway only a part of work accidents with more than 3 days ' absence are actually reported and the systems have only a medium reporting level usually ranging from 30 to 50 percent for all branches of economic activity taken together. The reporting levels are breakdown by branches of economic activity for these Member States. On this basis Eurostat corrects the submitted data on reported cases and deduce from it an estimate of the number of accidents at work occurred.

However the two sources, insurance data (10 Member States) or estimated data from non-insurance data as Labour Inspectorate sources (5 Member States and Norway) are not strictly comparable.

Indicators, methods of correction and standardisation of data

13. The incidence rate is defined as the number of accidents at work per 100 000 persons in employment. It can be calculated for Europe, a Member State, or any sub-population breakdown (economic activity, age, etc.). Separate incidence rates are calculated for fatal accidents and accidents leading to more than 3 days 'absence. Furthermore, an additional incidence rate is calculated for fatalities excluding road traffic accidents, in order to provide comparable incidence rates for all Member States. This is due to the fact that road traffic accidents in the course of work, which represent an important share of the number of fatalities, are not recorded as accidents at work in a few Member States. This applies also to accidents on board of any means of transport during a journey in the course of work, which are also excluded from this adjusted rate of fatalities. The standard formula is :

$$\text{Incidence rate} = \frac{\text{Number of accidents (fatal or non-fatal)}}{\text{Number of employed persons in the studied population}} \times 100\,000 .$$

14. For the countries where the accidents with more than 3 days 'absence are only partly reported, the estimated numbers are used instead of the reported numbers for calculation of incidence rates. Additionally "standardised "numbers of accidents at work per 100 000 persons in employment are calculated per Member State by giving each branch the same weight at national level as in the European Union total ("standardised "incidence rate).

15. The reference population of persons in employment (denominator) is established from the LFS and is adjusted to the actual national coverage of the ESAW data in each country.

Variables and classifications

16. The implementation of the various variables of ESAW has been divided in 3 phases. Phase 1 covered the basis information on the victim, its enterprise and the injury from 1993 reference year. From 1996 reference year, additional variables has been used for Phase 2, in particular days lost as a first indicator of the socio-economic costs of the accidents, and size of the local unit for analysis on small and medium sized enterprise (SME 's). Finally, in 2001, Phase 3 variables on the causes and the circumstances of the accidents will be implemented. They were developed by Institutions of 4 Member States (Denmark, France, Germany and Italy) and are in course of test in 6 other Member States (Belgium, Luxembourg, Portugal, Spain, Sweden and the United Kingdom).

Table 4 - ESAW phase 1, 2 and 3 variables

PHASE	1	2	3	Classification used
		from:		(if specific for ESAW,
Reference year	1993	1996	2001	Classification = ESAW)
		number of digits:		
Information on the employer				
Economic Activity of the Employer	2	2	4	NACE
Size of the Enterprise		1	1	SME's
Information on the victim				
Occupation of the Victim	2	2	2	ISCO
Age of the Victim	2	2	2	
Sex of the Victim	1	1	1	
Nationality of the Victim		1	1	(Country - EU – other)
Employment Status of the Victim		1	3	From LFS + ILO
Information on the injury				
Type of Injury	2	3	3	ESAW (similar to ILO)
Part of Body Injured	2	2	2	ESAW (similar to ILO)
Days Lost		3	3	ESAW (includes permanent incapacity)
Information on circumstances				
Geographical Location	5	5	5	**NUTS**
Date of the Accident	6	8	8	
Time of the Accident	2	2	2	
Workstation			1	ESAW (similar to ILO)
Working Environment			2	ESAW - in development([1]
Working Process			2	ESAW - in development([1]
Causation detailed information				
Specific Physical Activity			2	ESAW - in development([1]
--> Material Agent of the Specific Physical Activity			2	ESAW - in development([1]
Deviation			2	ESAW - in development([1]
--> Material Agent of the Deviation			2	ESAW - in development([1]
Contact - Mode of Injury			2	ESAW - in development([1]
--> Material Agent of the Contact – Mode of Injury			2	ESAW - in development([1]
Case number	9	11	11	Year + 7 digits
Total number of digits	33	44	65	

([1]) On the basis of the system of codification of the causes and circumstances of the accidents at work elaborated by a gro of Institutions of 4 Member States (Denmark, France, Germany and Italy), led by Eurogip. The system is in course of te in 6 other Member States (Belgium, Luxembourg, Portugal, Spain, Sweden and the United Kingdom).

Commuting accidents

17. The term commuting accident means any accident which occurs during the normal journey between the home, the place of work and the usual place where meals are taken. This journey can include normal activities on the way to or from work, like for example picking one's children up from school.

18. The objective of the sub-project on commuting accidents is to cover more fully the field of accidents relating to work and to meet the demand for the development of harmonised data expressed in the Communication from the Commission, COM(97) 178 final of 14 May 1997, and the European Parliament and Council Decision concerning a Programme on Injury Prevention[7]. A similar Methodology is used for commuting accidents as that for accidents at work in the ESAW project (accidents with more than three days 'absence, same variables and classifications).

19. Only 9 Member States (Austria, Belgium, Finland, France, Germany, Italy, Luxembourg, Spain and Sweden), in which this information is available, have sent data to Eurostat on commuting accidents for the first reference year (1996). Portugal will also send data from 1997 reference year and Greece from 1998.

ESAW 1996 main results

20. The last available data from ESAW are related to 1996. The main indicators for the EU (related to 88% of persons in employment in the EU) are:

Table 5 - ESAW 1996 indicators

Accidents at work with more than 3 days' absence	4,8 million 4 229 per 100 000 persons in employment 146 million work days lost 30 days lost per accident
Fatal accidents at work	5 549 5.3 per 100 000 persons in employment
Commuting accidents	600 000 with more than 3 days' absence 2 900 fatalities

21. The detailed results are presented in the Eurostat publication in the Statistics in focus series : « Accidents at work in the EU in 1996 »[8].

[7] Decision 1999/372/EC of 8.02.99 of the European Parliament and Council, OJ L46, 20.02.1999

[8] Statistics in focus –Population and social conditions –Work - Theme 3 N° 4/2000 « Accidents at work in the EU in 1996 », Catalogue number CA-NK-00-004-DE/EN/FR-C, March 2000.

III. European Occupational Diseases Statistics (EODS) – 1995 Pilot Project

Background and aims

22. Two Commission Recommendations of 1962 and 1966[9] concerned the adoption of a European Schedule of occupational diseases. A further Resolution was passed in 1990[10] which recommended that Member States should "ensure as far as possible that all cases of occupational disease are reported and progressively make their statistics on occupational diseases compatible with the schedule in Annex 1 ..." This list, now referred to as the European Schedule, contains nearly 100 items considered to be the causal agents and/or diagnoses of occupational diseases.

23. On this basis, a draft project on European Occupational Disease Statistics was launched in 1991. An expert group carried out a detailed investigation of current practices in the 12 Member States in 1992 which revealed great differences in social security and compensation systems in Member States. The group concluded that a pilot study was needed to assess the comparability of the data drawn from the existing systems. The objective of the Pilot Project was to establish comparable data for selected variables with respect to 31 items taken from the European Schedule of Occupational Diseases. Data from the reference year 1995 on recognised occupational diseases was collected in the 15 Member States and delivered to Eurostat. Further information on the coverage and recognition criteria was collected with a questionnaire on the coverage of the national occupational diseases systems[11].

24. An evaluation of the 1995 pilot data was completed by the an external evaluation team from the Finnish Institute of Occupational Health (FIOH) in co-operation with a technical subcommittee (from the Eurostat EODS Working Group) and had the following aims :

1. To assess the degree of comparability of the pilot data.
2. To assess the strengths and weaknesses of the pilot data.
3. To propose changes to improve the available data.
4. To establish first draft results at EU level from the pilot data.

1995 pilot data specifications

25. The data contained 57 414 cases of occupational disease of 31 selected items of the European Schedule of Occupational Diseases for the year 1995. Case-by-case data were provided by 14 Member States and tabular data by P. The data covered 8 variables:

country
age
gender
reference number of the European Schedule (see below)

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[9] Recommendations of the Commission to the Member States concerning the adoption of a European schedule of occupational diseases, N°62/2188/EEC and 66/462/EEC, OJ 81 of 31.08.1962 and 147 of 9.08.1966.

[10] Recommendation 90/326/EEC of 22.05.1990 of the Commission to the Member States concerning the adoption of a European schedule of occupational diseases, N°90/326/EEC, OJ 160, 26/6/1990.

[11] An additional questionnaire addressed the inclusion criteria of mild and severe diseases in general, coding of the medical diagnosis, occupation and industry, and specific recognition and inclusion criteria of six selected, numerically important items of the European Schedule (skin diseases, respiratory allergies, asbestosis, mesothelioma, asbestos-related lung cancer, noise-induced hearing loss).

diagnosis (see below)
occupation according to ISCO
economic activity according to NACE
disability (degree of disability expressed as percentages).

Selected 31 items from the European Schedule of Occupational Diseases :

10403 Diseases caused by isocyanates
10500 Diseases caused by cadmium or compounds thereof
10600 Diseases caused by chromium or compounds thereof
10700 Diseases caused by mercury or compounds thereof
10800 Diseases caused by manganese or compounds thereof
11000 Diseases caused by nickel or compounds thereof
11200 Diseases caused by lead or compounds thereof
11303 Diseases caused by carbon disulphide
12601 Diseases caused by benzene or counterparts thereof (C_nH_{2n-6})
12700 Diseases caused by halogenated derivatives of the aromatic hydrocarbons
20109 Skin diseases and skin cancers caused by by-products of the distillation of coal
20200 Occupational skin ailments caused by scientifically recognised allergy provoking or irritative substances not included under other headings
30111 Silicosis
30121 Asbestosis
30122 Mesothelioma following the inhalation of asbestos dust
30131 Pneumoconioses caused by dusts of silicates
30200 Complication of asbestos in the form of bronchial cancer
30300 Bronco-pulmonary ailments caused by dusts from sintered metals
30403 Respiratory ailments of an allergic nature caused by the inhalation of substances consistently recognised as causing allergies and inherent to the type of work
30404 Respiratory ailments caused by the inhalation of dust from cobalt, tin, barium and graphite
40100 Infectious or parasitic diseases transmitted to man by animals or remains of animals
40300 Brucellosis
40400 Viral hepatitis
40500 Tuberculosis
50201 Cataracts caused by heat radiation
50300 Hypoacousis or deafness caused by noise
50501 Osteoarticular diseases of the hands and wrists caused by mechanical vibration
50502 Angioneurotic diseases caused by mechanical vibration
50610 Diseases of the periarticular sacs due to pressure
50640 Paralysis of the nerves due to pressure
50800 Diseases caused by ionising radiation

Diagnosis group :

100 Allergic effects
110 Cancer
120 Cardiovascular disorders
130 Dental disorders
140 Eye disorders
150 Gastrointestinal disorders
160 Haematological disorders
170 Hearing disorders
180 Hepatic disorders
190 Irritant effects of the skin or mucous membranes
200 Neurological disorders

210 Pulmonary disorders
220 Musculo-skeletal disorders
230 Infectious diseases
998 Diagnosis not elsewhere mentioned
999 Diagnosis unknown

26. To calculate incidence rates, data from the 1995 LFS were used to build reference populations that would correspond to the workforce covered by the compensation scheme from which the data on occupational diseases were retrieved.

Evaluation of the 1995 pilot data

27. The report of the evaluation of the 1995 pilot data work carried out by the FIOH in 1997-1998 was published in 1999 by Eurostat[12].

28. Among the total number of 57 414 recognised cases in 1995 in the EU for the 31 selected occupational diseases, the number of cases varied from 17 in Luxembourg to 20 216 in Germany. The ten most frequent occupational diseases were noise-induced hearing loss (18 419 cases), allergic or irritative skin disease (8 767), respiratory allergy (4 543), silicosis (4 381), asbestosis (3 894), paralysis of nerves due to pressure (3 392), osteoarticular diseases of the hand and wrist due to mechanical vibration (2 539), angioneurotic diseases due to mechanical vibration (2 454), diseases of the periarticular sacs due to pressure (2 305) and mesothelioma (1 446).

29. The main factors restricting comparability were : (1) Definition of the reference population, (2) Varying inclusion criteria, (3) The coding of the medical diagnosis and (4) Differences in the recognition of mild cases. Improvements were proposed.

(1) Definition of the reference population. Self-employed and family workers are not covered similarly by the national recognition systems. The proportion of such workers varies between industries and countries. For an accurate definition of the reference population, the Member States should estimate the coverage of their national system by industry and occupation. For diseases with a long latency time, it is difficult to build comparable industry-specific reference populations and the rates should preferably be calculated only for the total workforce.

(2) Inclusion criteria. There was variation in what types of diseases were included for many of the 31 items, e.g., the inclusion of asthma, rhinitis and alveolitis into respiratory allergies or pulmonary fibrosis and the various pleural abnormalities into asbestosis. These problems are mainly resolved by a more detailed coding of the medical diagnosis, but the inclusion criteria should also be clearly defined. For example, how the allergic and irritative bronchial responses are included in asthma under the general item of Respiratory allergies in the European Schedule of Occupational Diseases (ref. 304.03).

(3) Coding of the medical diagnosis. A detailed classification of the diagnosis according to ICD-10[13] is needed. A detailed coding with clearly defined inclusion criteria will enable comparison of the national statistics for those subcategories, which are similarly recognised in the Member States.

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[12] « European Occupational Disease Statistics - Evaluation of the 1995 pilot data » - Eurostat Working Papers –Population and social conditions - N° 3/1999/E/2.

[13] International Statistical Classification of Diseases and Related Health Problems, Tenth revision (ICD-10), WHO, 1992.

(4) Recognition of mild cases. To ensure effective prevention and adequate medical follow-up at individual level, some Member States recognise occupational diseases at an early stage, when they do not yet cause any disability in medical terms, while some countries only recognise cases with a certain minimum level of disability. It is not possible to directly compare the total incidence rates for most of the diseases. The future data set should contain both incident cases and cases which were recognised earlier but became more severe during the reference year. With an adequate coding of the nature of the case and the respective degree of disability, a higher degree of comparability would be achieved.

Strengths of the data : Data on recognised cases of occupational disease represent a high degree of causality. They also provide detailed information on exposure and on medical and social consequences. Such data can be used in prevention and evaluation of the impact of the problem. Finally most systems offer these data on a continuous and more or less nation-wide basis. If the effect of the varying inclusion criteria for severity and type of disease is eliminated by comparing the industry-specific incidence rates after adjustment for the national incidence rate in the pilot data, it can be concluded that the risk industries identified by the national systems and the incidence rate ratios are quite similar in the Member States for those items in which the number of cases allows for statistical comparisons.

Weaknesses of the data : After the above improvements, two general restrictions remain: (A) The data on recognised occupational diseases reflect not only the occurrence of such diseases, but inevitably also the way in which the concept of an occupational disease has been integrated into the social security system. Questionnaire data on the national recognition criteria of specific items proved to be informative in this regard. (B) The EODS pilot data indicate that underreporting is probable even for some classical occupational diseases, while it is quite clear that statistics on recognised cases do not rapidly identify new health problems.

The European Schedule of Occupational Diseases is a mixture of categories defined by exposure and categories defined by disease. This causes problems for statistical comparison and use of the data. These can be solved if the medical diagnosis and the exposure are coded as separate variables in the future data collection. For many of the specific items of the European Schedule, the number of cases is low, while the bulk of the cases fall into non-specific categories. Some categories contain both cases due to old exposures (cancer) and recent exposures (allergy), which is not optimal for the evaluation of preventive needs.

30. Overall, the evaluation of the 1995 EODS pilot data identified many problems of comparability which can be avoided with improvements in the data collection. It also underlines, however, that alternative methods of data collection have to be explored to evaluate the work-related disease burden that is not identified by the recognition systems because of (1) underreporting of causal occupational diseases or (2) legal constraints regarding the degree of causality. This last point has been addressed by the ad hoc module on health and safety at work in the 1999 Community LFS (see below).

Table 6 - EODS 1995 pilot data - number of cases (31 items of the European Schedule)

European Schedule N°	Occupational disease	Number in the EU (15 countries)
10403 to 20109	Diseases caused by certain chemical agents	1 567
20200	Occupational skin ailments caused by scientifically recognised allergy provoking or irritative substances not included under other headings	8 767
30111 to 30404	Respiratory diseases	15 805
of which :		
30111	Silicosis	4 381
30121	Asbestosis	3 894
30122	Mesothelioma following the inhalation of asbestos dust	1 446
30131	Pneumoconioses caused by dusts of silicates	488
30200	Complication of asbestos in the form of bronchial cancer	987
30403	Respiratory ailments of an allergic nature caused by the inhalation of substances consistently recognised as causing allergies and inherent to the type of work	4 543
40100 to 40500	Infectious diseases	1 662
50201 to 50800	Diseases caused by physical agents	29 613
of which :		
50300	Hypoacousis or deafness caused by noise	18 419
50501	Osteoarticular diseases of the hands and wrists caused by mechanical vibration	2 539
50502	Angioneurotic diseases caused by mechanical vibration	2 454
50610	Diseases of the periarticular sacs due to pressure	2 305
50640	Paralysis of the nerves due to pressure	3 392
50800	Diseases caused by ionising radiation	482
Total		57 414

European Occupational Diseases Statistics (EODS) – Phase 1 (2001 - ***Draft***)

Background and aims

31. On the basis of the evaluation and conclusions of the 1995 EODS Pilot Project and the information collected with a questionnaire in December 1999, Eurostat is working with the FIOH in co-operation with Directorate General Employment and social affairs of the European Commission and the Member States, to implement an annual collection of Union wide data on occupational diseases from 2001 according to EODS Phase 1 methodology. The final project will be discussed during the September 2000 EODS Working Group meeting. The Working Group will decide on the implementation and specifications of Phase 1. Consequently, the methodology described below is a draft set of methodological tools and specifications subject to modifications and final approval from the EU Member States.

Data to be included in EODS Phase 1

Draft Inclusion criteria for recognised cases - Reference year 2001 (the same for the following years):

1. All cases of occupational diseases which are in accordance with the list of disease specific entities and which fulfil the disease specific inclusion criteria below in this document.

2. Incident data for the reference period, i.e., those occupational diseases *recognised* in the year 2001.

This *includes* all cases recognised as an occupational disease for the *first time* in year 2001 :

- as a temporary occupational disease with at least 4 days or more sick leave, i.e., cases which were compensated for sick-leave (> 3days) for the *first time* and where no *permanent* degree of disability has been settled during the reference year;
- as a permanent occupational disease, i.e. a permanent degree of disability was assigned for the *first time* in the reference year independent of the level of disability;
- only post-mortem, i.e., in case the person died because of an occupational disease which was recognised for the *first time* only post-mortem.

This *excludes* :

- temporary cases with less than 4 days 'sick-leave, which are not at all included in the EODS data;
- cases which were finally *not* recognised as an occupational disease, even they were reimbursed for cost under the health at work insurance scheme, e.g., in relation to medical examinations.

3. Prevalent cases which have changed status from a temporary to a permanent occupational disease during the reference period 2001. This concerns all those occupational diseases *previously* recognised as temporary diseases, i.e., before the year 2001, which are now settled with a *permanent* degree of disability level (if the change of status occurred in the same 2001 year, the case is directly considered as an incident permanent occupational disease under point 2).

4. Prevalent cases with a permanent disability where the status changed during the reference period 2001, i.e., those occupational diseases *previously* recognised with a permanent degree of disability, i.e., before the year 2001. This will then include all cases:

- Where the level of disability has been changed during the reference year;
- Where the person died because of the occupational disease which was previously recognised with a permanent disability.

As point 4 involves technical difficulties to collect the data in some current national schemes, it could be considered optional in Phase 1 and compulsory in a further Phase 2 of the EODS statistics. However, the collection of these complementary is a key political issue, in particular for the complete knowledge of fatal occupational diseases. Consequently point 4 should be implemented as soon as possible.

Comparability

The list of diagnostic to be covered as well as the other proposal below (classes for severity, exposure classifications) were established with the aim of limiting as much as possible comparability issues.

Variables (*draft*)

The following information should be recorded for each recognised case (case-by-case data):

Table 7 – *Draft proposal for* EODS variables

Variable	Number of digits	Classification proposed (if specific = EODS)
Phase 1 :		
Case number	10	Year + 6 digits
Country of emergence	2	
Age	2	
Sex	1	
Occupation at time of harmful exposure	2	ISCO
Economic activity of employer at time of harmful exposure	2	NACE
(European Schedule Reference No)	(5)	(EU Schedule – subject to revision of Schedule)
Diagnosis	**4**	**From ICD-10**
Exposure	**10**	**EODS** (Short or long list)
Exposure : Use categories	**3**	**EODS** (from EU Directives dangerous substances)
Severity	**3**	**EODS** (classes)
Phase 2 (optional in Phase1) :		
Year for the first Recognition	**4**	
Severity for first recognition	**3**	**EODS** (classes)

Classifications (*draft*)

European Schedule reference No

Notice! The inclusion of this variable will depend of the results of the activities of the Working Group lead by Direction General Employment and social affairs of the European Commission for the revision of the European Schedule of Occupational Diseases. The codification according to the 1990's Schedule is not relevant. The variable "European Schedule Reference N°" provides a reference to the information notices on occupational diseases, and thus explanatory notes for the various items in the Schedule.

Diagnosis

32. Information on diagnosis is classified according to the ICD-10 nomenclature. A subset of diagnosis groups based on the ICD-10 is proposed below. In codes, where a subdivision below 3-digit level is either not needed or does not exist, the character X has been added to achieve a length of 4-digits.

33. Some of the diagnostic entities are mentioned as such in the national lists, but for many of them cases can occur also under the chemical, agent or exposure defined categories of the national list. It is

important to include and code also these cases. For example in asthma, both the cases recognised under the general item of asthma and the cases of asthma recognised under the agent defined categories of the national list should be coded as asthma. The differentiation according to causative factor will be made with the separate variable on exposure.

34. According to the analysis of the pilot data, some of the diagnostic entities require specific explanations which will be provided in the final specifications. Some of the diagnostic entities are such that the patient may be recognised for several closely related diseases at the same time. In that case, only the most severe one should be coded.

Table 8 – *Draft proposal for* EODS diagnostic codes from ICD-10

CANCERS

LIVER CANCER	C22X
CANCER OF THE NASAL CAVITY	C300
CANCER OF THE ACCESSORY SINUSES	C31X
LARYNGEAL CANCER	C32X
LUNG CANCER	C34X
SKIN CANCER	C44X
MESOTHELIOMA	C45X
BLADDER CANCER	C67X
LEUKAEMIA	C95X
PRECANCEROUS SKIN LESIONS	D04X

RESPIRATORY DISEASES

ASTHMA	J45X
ALLERGIC RHINITIS	J303
ALLERGIC ALVEOLITIS	J67X
NASAL ULCERATION	J340
NASAL PERFORATION	J348
CHRONIC BRONCHITIS	J44X
ASBESTOSIS	J61X
DIFFUSE THICKENING OF THE PLEURA	J948
PLEURAL PLAQUES	J92X
PLEURAL EFFUSION	J90X
COAL WORKER'S PNEUMOCONIOSIS	J60X
SILICOSIS	J62X
PNEUMOCONIOSIS ASSOCIATED WITH TUBERCULOSIS	J65X
PNEUMOCONIOSES DUE TO OTHER SILICATES	J638
BYSSINOSIS	J660
HARD METAL DISEASE (Hard metal disease includes cases of asthma, rhinitis or pulmonary fibrosis caused by dusts from hard metals. Cases of asthma should be coded as asthma (J45X), cases of rhinitis as allergic rhinitis (J303) and cases of fibrosis as J841 (other interstitial pulmonary fibrosis).)	

NEUROLOGICAL DISEASES

CARPAL TUNNEL SYNDROME	G560
TOXIC ENCEPHALOPATHY	G92X
POLYNEUROPATHY	G622

DISEASES OF THE SENSORY ORGANS

CATARACTS	H268
NOISE-INDUCED HEARING LOSS	H833

CARDIOVASCULAR DISEASES

RAYNAUD'S SYNDROME (secondary)	I730

SKIN DISEASES

ALLERGIC CONTACT DERMATITIS	L23X
IRRITANT CONTACT DERMATITIS	L24X
UNSPECIFIED CONTACT DERMATITIS	L25X
CONTACT URTICARI	L506
ACNE	L708

MUSCULOSKELETAL DISEASES

ARTHROSIS OF THE ELBOW	M192
ARTHROSIS OF THE WRIST	M931
DEGENERATIVE LESIONS OF THE MENISCUS (knee)	M232
BURSITIS OF ELBOW	M703
BURSITIS OF KNEE	M704
TENOSYNOVITIS OF THE HAND AND WRIST	M700
MEDIAL EPICONDYLITIS (elbow)	M770
LATERAL EPICONDYLITIS (elbow)	M771

INFECTIONS

35. A general exclusion for infectious diseases is that cases recognised just for immunity testing, preventive vaccination and any other cases without an infection should be excluded whatever reimbursement was associated. Below are listed 11 infections which probably are covered by most OD schemes. Many of the national lists, however, mention broad categories like "Infections transmitted from animals", "Infectious diseases in health care and related workers" and "Tropical diseases". Therefore it is not sure which entities are in practice covered. To collect more data on what is behind such categories, a further list of (probably) relevant codes follows.

TUBERCULOSIS	A15X
BRUCELLOSIS	A23X
ERYSIPELOID	A26X
LEPTOSPIROSIS	A27X
HEPATITIS A	B15X
HEPATITIS B	B16X
HEPATITIS C	B171
HEPATITIS E	B172
OTHER SPECIFIC HEPATITIS	B178
HIV	B24X
ANCYLOSTOMIASIS	B760

Possible additional codes for infectious diseases.

(CHOLERA, A00X - TYPHOID AND PARATYPHOID FEVER, A01X - SALMONELLOSIS, A02X - SHIGELLOSIS, A03X - OTHER BACTERIAL INTESTINAL INFECTION, A048 - AMOEBIASIS, A06X - TULARAEMIA, A21X - ANTHRAX, A22X - TETANUS, A35X - DIPHTERIA, A36X - ERYSIPELAS, A46X - BORRELIOSIS, A692 - ORNITHOSIS, A70X - Q FEVER, A78X - RICKETTSIOSIS, A79X - POLIOMYELITIS, A80X - RABIES, A82X - HAEMORRHAGIC FEVER, A988 - VARICELLA, B01X - MEASLES, B05X - RUBELLA, B06X - MUMPS, B26X - DERMATOPHYTOSIS, B358 - MALARIA, B54X)

CODING OF THE TOXIC AND IRRITANT EFFECTS

36. The coding of acute, subacute and chronic toxic and irritant effects of chemicals is complicated. Cancers, asthma, allergic rhinitis, chronic bronchitis, polyneuropathy, toxic encephalopathy and contact dermatitis have been explained above. The remaining disorders, i.e. haematological, some neurological, some respiratory, hepatic, gastrointestinal and nephrological effects could ideally be separated. According to the pilot data the number of such cases is probably not very high. The following codes could be used, but the questionnaire data indicate that it may prove difficult for many member states to distinguish between these outcomes as they are coded according to causative agent without too much classification according to the medical diagnosis. It needs to be discussed whether coding of any of these is feasible or whether a general code of toxic effect and a coding of causative agent would be enough.

HAEMOLYTIC ANAEMIA, D59X - ANAEMIA, 64X - SECONDARY THROMBOCYTOPENIA, D685 - AGRANYLOCTOSIS AND NEUTROPENIA, D70X - BRONCHITIS (ACUTE) OR PNEUMONITIS, J680 - PULMONARY OEDEMA, J681 - UPPER RESPIRATORY INFLAMMATION, J682 - REACTIVE AIRWAYS DYSFUNCTION SYNDROME, J683 - PULMONRAY FIBROSIS, J841 - TOXIC LIVER DISAESE, K71X - TUBULO-INTERSTITIAL KIDNEY DISEASES, N14X - CHRONIC RENAL FAILURE, N18X - COLIC AND OTHER GASTROINTESTINAL SYMPTOMS, R10X.

POSSIBLE EXTENSIONS OF THE CODE LIST

37. Other entities are either rare as occupational diseases or very heterogeneously dealt in the national lists. Their inclusion in the data collection should be discussed.

DISEASES NOT PRESENTED ABOVE

38. There are numerous diagnostic entities which are recognised as occupational diseases in some of the member states. The above list contains those entities which are recognised by most of them. The following exclusions have been made:

Some cancers.
Some infections.
Back pain and related disorders (open list only, not at all or as accidents in most member states)
Neck pain and related disorders (open list only, not at all or as accidents in most member states)
Shoulder pain and related disorders (open list only, not at all or as accidents in most member states)
Mental and behavioural disorders (not at all included in the recognition practice in most member states)

Exposure

39. Information on exposure is classified according a classification established by Eurostat. The basis to develop this classification was the analysis of national classifications used by the Member States and those of other international Organisations. The EC directives concerning certain exposure factors (e.g. the biological agents) and the European schedule of occupational diseases were also incorporated into this analysis. The French classification of exposure factors, which is very detailed and worked out, was taken as reference document to draw up the current classification, in particular with regard to the chemical, physical, biological and industrial exposure factors. For the group of biomechanical agents, the main elements result from the Danish classification. For the psychosocial exposure factors it was more difficult to establish a group since there was almost no classification for these factors. For all the groups, additional proposals were made by all the Member States, which has made it possible to supplement this new classification in the most exhaustive way possible and to increase its quality and consistency.

40. This classification of the exposure factors is relatively detailed and is articulated under 6 major groups of agents and exposure factors of occupational diseases. Exposure factors are identified in this classification by a code with 10 digits. From the 1st to the 8th digit the various regrouping levels are defined and the 9th and 10th digits identify each agent. The major groups are identified by the figures 1 to 6 at the first digit of the codes in the classification.

Table 9 – EODS exposure classification at 1 digit level

Code 1rst digit	Group of agents or factors
1	Chemical agents
2	Physical agents
3	Biological agents
4	Biomechanical exposure factors
5	Psychosocial exposure factors
6	Industrial exposure factors, materials and products.

41. Because of the high detail level of this classification, called "long list", several Member States suggested the development of a more aggregated list, called "short list", which can be used, at least initially, by the countries which could not use in practice the long list. In the short list, were considered only the exposure factors which presented more than 5 cases of occupational diseases at the national level in the last statistics available for several countries (Denmark, Finland and France in particular). This "short" version takes up again the same coding as the long list.

42. Eurostat will publish the final version (both long and short list) of this classification before the end of 2000.

Exposure : Use categories

43. The « use category » makes it possible, for the chemical or biological agents, to identify the type of industrial product or of living product which was used within the framework of the occupational activity of the victim and which contained the agent having caused the illness. For example: paintings, pesticides, cleaning agents, products for bacteriology or biology laboratories, etc. . This additional information is useful for prevention because it indicates in a practical way the type of product concerned in the work environment where the precise chemical or biological agent contained in the product is not always clearly known. The part of the list for products containing chemical agents results from a Danish adaptation to the list related to Council Directive 79/831/EEC of 18 September 1979 amending for the sixth time Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

Severity

Table 10 – *Draft proposal for* EODS severity classification

Code 1rst digit	Group of agents or factors
000	Severity of disease unknown
Temporary incapacity	(first recognition of temporary disability during the reference year and no permanent incapacity recognised during the reference year)
A00	Temporary occupational disease, unknown sick leave
A01	4-6 days lost
A02	7-13 days lost
A03	14-20 days lost
A04	At least 21 days lost, but less than 1 month
A05	At least 1 month but less than 3 months lost
A06	At least 3 months lost but less than 6 months lost
A07	6 months or more lost
Permanent incapacity	(for the reference year where the degree of permanent disability is settled, either the first degree in case only inclusion criteria 1 - 3 are used, or a new degree if inclusion criteria 1 - 4 are used)
B00	Permanent incapacity, level of disability unknown
B01	level of disability, 9% or less (mild cases)
B02	level of disability, from 10 % to 14%
B03	level of disability, from 15 % to 19%
B04	level of disability, from 20 % to 29%
B05	level of disability, from 30 % to 49%
B06	level of disability, from 50 % to 99%
B07	level of disability of 100% (or more)
Death	(cases which were recognised for the first time only post-mortem in case only inclusion criteria 1 - 3 are used; if inclusion criteria 1 - 4 are used, all fatalities due to an occupational disease are coded 998 for the reference year of the incidence of the death)
998	Death
999	Severity of disease, not elsewhere mentioned

Ad hoc module on Health and Safety at Work in the 1999 LFS

44. To have a broader view on Health and Safety at Work, it has been decided to insert an ad hoc module on Accidents at work and occupational diseases in the 1999 Labour Force Survey (LFS), as a complementary data source to ESAW and EODS. The LFS data enable Eurostat to link information on the accident with information on the situation of the persons on the labour market, the characteristics of their job, their working conditions or training. Additionally, it allows to compare figures between Member States on the basis of the same data source, contrary to the problems of comparability related to the two different types of sources (insurance and non-insurance based system) used for the ESAW data. Finally, it covers a broader field than ESAW and EODS data respectively : accidents at work with 3 days ' absence or less, diseases or health problems not recognised as occupational diseases but self-reported by the worker as being work-related.

45. The Commission Regulation (EC) No 1571/98 of the 20/07/1998[14] indicates in its Annex III the detailed list of information to be collected in the 1999 ad hoc module on Health and Safety at Work ("Accidents at work and occupational diseases All Member States are covered except Belgium, France and Austria. The initial results will be available in the course of second half 2000. The variables are coded as follows :

Table 11 – 1999 LFS ad-hoc module on accidents at work and occupational diseases – list of variables

Column	Code	Description	Filters/remarks
		ACCIDENTS AT WORK HAPPENED TO PERSONS HAVING WORKED IN THE LAST 12 MONTHS	
209		*Accidental injury(ies), apart from illnesses, occurred during the past 12 months, at work or in the course of work*	(Col.24 = 1,2) or (Col.64 = 1 and Col.65/68 and Col.69/70 is not prior to one year before the date of the interview)
	0	None	
	1-8	Number of accidental injuries	
	9	Not applicable (Col.24 = 3-9 and (Col.64 ≠ 1 or (Col.65/68 and Col.69/70 is more than one year before the date of the interview, or is blank)))	
	blank	No answer	
210/211		*Month when the most recent accidental injury occurred*	Col.209 = 1-8
	00	Current month	
	01-12	Month - 2 digits (accidents occurred before the current month)	
	99	Not applicable (Col.209 = 0, 9, blank)	
	blank	No answer	
212		*Type of the injury caused by the most recent accident (code only the most serious type of injury)*	Col.209 = 1-8
	0	Contusion, bruising	
	1	Burn, scald, frostbite	
	2	Cut, laceration, severed nerves or tendons	
	3	Amputation	
	4	Broken bone	
	5	Sprain, strain, dislocation	
	6	Poisoning, gassing or asphyxiation	
	7	Infection by virus, bacteria or contact with infected materials	
	8	Other types of injury	
	9	Not applicable (Col.209 = 0, 9, blank)	
	blank	No answer	

[14] Commission Regulation (EC) No 1571/98 of the 20.07.1998 implementing the Council Regulation N°577/98 on the organisation of a labour force sample survey in the Community - OJ L 205 of 22.07.1998.

Column	Code	Description	Filters/remarks
213		*Work status after the most recent accidental injury*	Col.209 = 1-8
		Person has started work again	
	1	- Resumption of usual work activities	
	2	- Change of work or workplace because of the accidental injury	
	3	- Part time work or on reduced hours because of the accidental injury	
		Person has not started to work again	
	4	- Person has not yet recovered from the accidental injury and is not working at the date of the interview	
	5	- Person expects never to do paid work again because of the accidental injury	
	6	- Other reasons	
	9	Not applicable (Col.209 = 0, 9, blank)	
	blank	No answer	
214		*Date when the person was able to start to work again after the most recent accidental injury*	Col.213 = 1-3, 6, blank
	0	On the same day as the accident or on the first day after the accident	
	1	From the second to the fourth day after the accident	
	2	From the fifth to the seventh day after the accident	
	3	From one week but before two weeks after the accident	
	4	From two weeks but before one month after the accident	
	5	From one month but before three months after the accident	
	6	Three months or later after the accident	
	7	No time off work	
	9	Not applicable (Col.213 = 4, 5, 9)	
	blank	No answer	
215		*Job done when the accidental injury occurred (code first that applies)*	Col.209 = 1-8
	1	Main current (first) job	
	2	Second current job	
	3	Last job (person not in employment)	
	4	Job one year ago	
	5	Some other job	
	9	Not applicable (Col.209 = 0, 9, blank)	
	blank	No answer	
		WORK-RELATED HEALTH PROBLEMS SUFFERED DURING THE LAST 12 MONTHS (apart from accidental injuries)	
216		*Illness(es), disability(ies) or other physical or psychic health problem(s), apart from accidental injuries, suffered by the person during the past 12 months (from the date of the interview) and that was (were), caused or made worse by the work*	(Col.24 = 1,2 or Col.64 = 1)
	0	None	
	1-8	Number of different complaints	
	9	Not applicable (Col.24 = 3-9 and Col.64 ≠1)	
	blank	No answer	

Column	Code	Description	Filters/remarks
217		*Type of the most serious complaint caused or made worse by work*	Col.216 = 1-8
	0	Bone, joint or muscle problem	
	1	Breathing or lung problem	
	2	Skin problem	
	3	Hearing problem	
	4	Stress, depression or anxiety	
	5	Headache and/or eyestrain	
	6	Heart disease or attack, or other problems in the circulatory system	
	7	Infectious disease (virus, bacteria or other type of infection)	
	8	Other types of complaint	
	9	Not applicable (Col.216 = 0, 9, blank)	
	blank	No answer	
218		*Number of days off work due to the most serious complaint caused or made worse by work during the last 12 months*	Col.216 1-8
	0	Less than one day	
	1	One to three days	
	2	Four to six days	
	3	At least one week but less than two weeks	
	4	At least two weeks but less than one month	
	5	At least one month but less than three months	
	6	Three months or more	
	7	Expects never to do paid work again due to this illness	
	9	Not applicable (Col.216 =0, 9, blank)	
	blank	No answer	
219		*Job that caused or made worse the most serious complaint (code first that applies)*	Col.216= 1-8
	1	Main current (first) job	
	2	Second current job	
	3	Last job (person not in employment)	
	4	Job one year ago	
	5	Some other job	
	9	Not applicable (Col.216= 0, 9, blank)	
	blank	No answer	
220/221		*Economic activity of the local unit of the job that caused or made worse the most serious complaint (when not defined in another part of the survey)*	Col.219= 5, blank or (Col.219= 3 and the person did not work within the last 8 years)
		NACE Rev.1 (2 digits)	
	00	Not applicable (Col.219= 1-2, 4, 9 or (Col.219= 3 and the person last worked within the last 8 years))	
	blank	No answer	