European Foundation
for the Improvement of Living and
Working Conditions

SYSTEMS FOR THE MONITORING OF WORKING CONDITIONS RELATING TO HEALTH AND SAFETY: EXTENSIVE DESCRIPTIONS

Spain
Portugal

by
Ignacio Fernandez de Pinedo
Alejo Fraile Cantalejo
Instituto Nacional de Seguridad e Higiéne en el Trabajo

Working Paper No.: WP/91/13/EN

CONTENTS

Systems for Monitoring Working Conditions

relating to Health and Safety

SPAIN

Extensive Descriptions

Ignacio Fernández de Pinedo
Alejo Fraile Cantalejo

Instituto Nacional de Seguridad
e Higiene en el Trabajo

13 July 1990

INTRODUCTION

The information available in Spain concerning working conditions as these relate to health originates from various sources and is constantly growing thanks to the setting up of systems specifically designed for its acquisition.

Of the existing systems a clear distinction can be made, broadly speaking, between those controlled by bodies engaged in statistical activities and those with a direct concern in promoting activities relating to the health of the labour force. One of the bodies with statistical duties providing information on working conditions is the National Institute of Statistics, which conducts continuous research to determine the status and evolution of the labour force with a special emphasis on jobs. Its instrument is the Survey of labour-market trends.

Particularly important in this connection is the information supplied by the Directorate General for Information Technology and Statistics of the Ministry of Labour and Social Security. This information concerns accidents at work and occupational diseases and is based on the mandatory notification of these under the current law.

With the exception of the occasional specific study such as the Survey of living and working conditions carried out by the Sociological Research Centre, the remainder of the information systems are set up and run by the National Institute of Health and Safety at Work, an autonomous organ of the Ministry of Labour and Social Security whose activities are directed towards safeguards against occupational hazards. It is controlled by a tripartite general council encompassing the government, the trade-union organizations and the employers, and under the heading of Investigative Research its 1990 action programme contains national projects in the following categories:

- **Sectoral studies:** with a special emphasis on compiling hazard maps

- **Research through agents:** Most of these specific activities are covered in the accompanying report, although the following should be cited in addition to these:
  . Benzene: extent of use, assessment and numbers exposed
  . Cellosolves: extent of use, assessment and numbers exposed
  . Pesticides: formulation, manufacture and extent and methods of application

- **Epidemiological studies:** details given in the report

- **Other research:** Here it is important to mention the anthropometric research aimed at establishing the basic parameters of the Spanish labour force.

Very important to the National Institute of Health and Safety at Work (INSHT) are the activities aimed at obtaining information about current hazards and working conditions, since it is this information which underpins the other technical functions of the Institute in offering technical back-up, research and training facilities, the dissemination of knowledge and the provision of expert advice.

Statistics on accidents at work

0. Introduction

This technical report outlines the features of Spain's present system of reporting and processing statistics on accidents at work.

I. General and structural context

1.1 Identification

Estadísticas de accidentes de trabajo
Directorate General for Information Technology and Statistics
Subdirectorate for Statistics
C/Agustín de Bethencourt, 11
28003 Madrid
Spain

Telephone: 535.20.00
Telefax: 253.70.65

1.2 Institutional context

The Directorate General for Information Technology and Statistics analyses labour statistics and carries out research under the Ministry of Labour and Social Security. Its activities are funded out of the national budget.

1.3 General profile

692 633 accidents at work occurred in 1989. As required by law, these were reported to the labour authorities, which undertook the processing and analysis of the data for later circulation.

1.4 Origin and history

The law requires companies to report accidents affecting their workforce by completing and submitting an accident report in accordance with the official model.

With effect from 1 January 1988 and after consultation with the trade-union and employers' organizations, the management and joint organs and the National Institute of Statistics, it was considered expedient to modify the relevant statistics and introduce new models and instructions for completing and handling accident reports.

II. Aims

2.1 General aim

The new models and instructions for reporting accidents at work aim to:
- assist enterprises in the reporting of accidents,
- facilitate the handling procedures, which in this case are in the hands of management or joint organs,
- make the statistical data more meaningful,
- rationalize and cut down the costs of processing statistical data,
- render the figures more comparable at international level.

2.2 Users and listed recipients

Government organs concerned with labour, employers' and trade-union organizations and social research projects.

III. Description

3.1 Frequency

An accident-at-work report has to be completed for all those accidents or relapses necessitating the absence from work of the person affected for at least one day (not counting the day on which the accident occurred) subject to a medical certificate.

3.2 Methodology

3.2.1 Field

These arrangements relate to all employees of companies as well as to those self-employed persons who are covered by Special Schemes offering protection extending to accidents at work.

3.2.2 Organization

The accident reports are to be completed in part by the companies or self-employed persons affected and are to be submitted to the management or joint organ responsible for safeguards against accidents at work not later than 5 working days after the date of the accident or of the medical certificate. These organs are in turn obliged to complete certain parts of the report form.

The original of this document, duly completed, is retained by the management or joint organ, while four copies are distributed to the Directorate General for Information Technology and Statistics of the Ministry of Labour and Social Security, the labour authority, the employer and the worker who has suffered the accident.

The data gathered are processed and analysed by the Directorate General for Information Technology and Statistics.

3.2.3 Procedure

The system encompasses 3 types of document:
- accident-at-work report (with medical certificate)
- return on accidents at work without medical certificate
- report on the discharge or decease of those who have suffered an accident

3.3 Data

3.3.1 List of data

Accident-at-work report
Contains the following details:

. Concerning the worker
- surname and given names
- Social Security number
- registration number
- date of joining company
- sex
- date of birth
- occupation (to be described in the greatest possible detail)
- national identity document number
- Social Security contribution category
- seniority in job
- type of contract
- relevant agreement or Ordinance
- Social Security scheme
- premium (section, clause)
- address and telephone number
- province
- local authority

. Concerning the company
- name
- tax code number or national identity document number
- Social Security number
- address and telephone number
- province
- local authority
- payroll

. Concerning the workplace (ie of the company in which the worker suffering the accident is habitually employed)
- address
- province
- local authority
- main business activity

- telephone number
- association document number
- Social Security number

Details of the accident
- date of accident
- location of accident
  . in usual workplace
  . travel in course of daily work
  . going to or returning from work
  . in another workplace
  . time of accident (24-hour clock)
  . day of week of accident
  . witness, address and telephone number
  . was it his/her usual work (Yes/No)
  . date of medical certificate
  . hour of work (1st, 2nd, etc) when accident occurred
  . description of accident (this calls for a clear and concise summary of the work being carried out by the affected worker and the attendant circumstances)
  . manner in which the accident occurred
  . equipment or physical agent responsible

Social-security details
- description of injury
- part of body injured
- doctor who gave immediate treatment (name, address and telephone number)
- severity of injury (slight/serious/very serious/fatal)
- type of establishment (hospital/out-patients department)
- medical centre

Economic data
- basic monthly contribution; contribution scale; benefit

Person making out the report
- name, function within the company
- date, signature and stamp

Labour authority
- seal and signature

File No. and Unit No.
Type: accident/relapse

Return on accidents at work without medical certificate

The details included in the official model "Return on accidents at work without medical certificate" are as follows:

Management or joint organ (Organ No.)

Details of company
- name
- Social Security number
- employer's tax code number or national identity document number
- payroll (valid for the period to which the details refer)

Details of the work centre (ie of the company in which the worker suffering the accident habitually worked)
- Social Security number
- province
- main business activity (the one whose value added, sales volume or employed labour accounts for the largest percentage of all the company's activities)

Accident return
A list is provided of the surnames and given names of all the workers who have suffered an accident in the month in question together with their sex, their Social Security number, the date of the accident (day, month and year) in each case and the manner in which it occurred.

The manner in which the accident occurred is specified according to the same indicators as are listed under "Accident-at-work report" including the category: "going to or returning from work".

Person making out the report (Name and function in the company. Date, signature and stamp.)

Labour authority (seal and signature)

Report on the discharge or decease of those who have suffered an accident
The details included in the official model "Report on the discharge or decease of those who have suffered an accident" are as follows: surname and given names of each worker, Social Security number, national identity document number, report reference number, workplace registration number, date of accident (day, month and year), date of medical certificate (day, month and year), date of medical discharge (day, month and year) and cause of discharge (decease, recovery, temporary disability, or assessment). The report must be stamped and signed by the management or joint organ.

3.3.2 Breakdown of data

Since the methodology was changed in 1988 the results of the detailed processing of the gathered data have not been published, and it is planned that this shall take place for the first time in summer 1990. The published information will relate the following data and indicate the number of accidents:
- business activity - gravity
- province and autonomous community - business activity - gravity
- type of accident - gravity - annual trend
- physical agent - gravity - annual trend

- location of injury - gravity - annual trend
- nature of injury - gravity - annual trend
- incidence - business activity - annual trend
- incidence - province and autonomous community - annual trend
- frequency index - province and autonomous community - annual trend

IV. Output and users

4.1 Output types and their influence

The Directorate General for Information Technology and Statistics prepares and circulates the following publications:
- Anuario de Estadísticas Laborales (Yearbook of labour statistics)
- Boletín de Estadísticas Laborales (Labour statistics bulletin - monthly)
- Estadística de Accidentes de Trabajo y Enfermedades Profesionales (Statistics for accidents at work and occupational diseases - quarterly and annually)
- It will shortly issue a study covering a yearly period and providing the results of processing in greater depth the data gathered with the new methodology.

The published data have great influence since the social agents use them as the basis for their activities relating to accidents at work.

4.2 Accessibility

The data are open to the public and can also be supplied on a magnetic carrier subject to prior authorization and non-attribution. The publications are available from the Publications Department.

4.3 Integrated database

The data obtained will form part of the "Labour series database" (BDSL) of the Ministry of Labour and Social Security.

4.4 Users and current recipients

The intended recipients are government organs, employers' organizations and social researchers.

V. Critical analysis

The main difficulties arise from errors in filling in the forms and from the need to relate different documents to each other, eg the accident-at-work report and the report on medical discharges so as to calculate the number of sick days due to the accident. The situation demands the institution of rigorous checking methods to guarantee the reliability of the information.

At the moment it is not possible to detect any gaps in the information supplied by the system as the data necessary to an analysis in greater depth of the variables under consideration are about to be published.

Statistics on occupational diseases

0. Introduction

This report presents the features of Spain's present system of reporting occupational diseases and processing the relevant data.

I. General and structural context

1.1 Identification

Estadística de enfermedades professionales
Directorate General for Information Technology and Statistics
Subdirectorate for Statistics
C/Agustín de Behencourt,11
28003 Madrid
Spain

Telephone: 535.20.00
Telefax: 253.70.65

1.2 Institutional context

The Directorate General for Information Technology and Statistics analyses labour statistics and carries out research under the Ministry of Labour and Social Security. Its activities are funded out of the national budget.

1.3 General profile

3244 occupational diseases were reported in 1989. As required by law, these were reported to the labour authorities, which undertook the processing and analysis of the data for later circulation.

1.4 Origin and history

A Ministerial Order of 22 January 1973 requires companies to report the occurrence of occupational diseases.

II. Aims

2.1 General aim

The purpose of the official occupational-disease report is to:
- standardize the data which have to be provided in such cases,
- facilitate compliance by companies and assist the relevant work of the organs and bodies receiving these reports.

2.2 Users and listed recipients

Government organs concerned with labour, the employers' and trade-union organizations and social researchers.

III. Description

3.1 Frequency

In the event of an occupational disease, regardless of whether this results in the sick leave or death of the worker, the company must complete an "occupational-disease report" within the three days following that on which the occupational disease was diagnosed..

3.2 Methodology

3.2.1 Field

These arrangements relate to all employees of companies as well as to those self-employed persons who are covered by Special Social Security Schemes offering protection extending to occupational disease.

3.2.2 Organization

Two copies of the occupational-disease report are sent to the management organ or employers' mutual fund covering the contingencies of accidents at work and occupational diseases, while the third copy is kept as a record and has to be preserved in the worker's personal file and placed in chronological order. The fourth copy is handed to the worker or to his family relations or beneficiaries should he die or be unable to take charge of it himself.

The companies authorized to collaborate in the management of temporary inability to work also have to complete four copies of the occupational-disease report, one of which is sent to the competent Provincial Labour Branch Office and the second to the management organ or employers' mutual fund concerned with permanent invalidity or death arrangements, while the third is kept as a record and the fourth is handed to the worker or his family relations or beneficiaries should he die or be unable to take charge of it himself.

Occupational-disease report forms will be supplied to companies free of charge by the management organs or employers' mutual funds covering the contingencies of accidents at work and occupational diseases. The management organs and employers' mutual funds shall state on the back of the form the details specified in the model and instructions approved under this Directorate General's resolution of 2 December 1972 (BOE No. 299 of 14 December 1972) so that the employers, after completing the forms, can compute the due benefit for temporary inability to work under the appropriate regulations without prejudice to the subsequent recognition of entitlement, which is the responsibility of the said organs.

3.2.3 Procedure

A model official occupational-disease report is available.

3.3 Data

3.3.1 List of data

The details covered by the model official occupational-disease report are as follows:

Details of worker
- surname and given names
- registration number
- Social Security number
- date of joining company
- sex
- marital status
- date of birth
- function
- vocational category
- total working hours (number of normal hours and overtime worked)
- time in job
- address, district and province
- regulations and/or agreement applicable
- place of birth
- national identity document number
- work being carried out when disease was diagnosed
- previous work

Details of company
- name of company
- payroll (total number of workers employed at the workplace)
- activity
- Social Security registration number
- head office (telephone number, district and province)
- location of workplace (telephone number, district and province)

Details of companies with risk of occupational disease where the worker may have been employed previously
- name of company
- head office
- activity
- dates of recruitment/discharge

Details of disease
- type of occupational disease
- description of types of work regarded as liable to cause the disease
- period in months of exposure to the hazard
- Is a health record card maintained? (Yes/No)
- date of previous medical examination
- date of last periodical medical examination
- diagnosis

- description of the disease (main or predominant symptoms; clinical record)
- gravity of disease (slight/serious/very serious/fatal)
- nature of diagnosis (certain/tentative)
- **Category of operation** (details of the general or special category of the company's operations)
- **Association document number**
- **Date of diagnosis**
- **Medical certificate issued? (Yes/No)**
- **Entry number in accident register** (to be maintained by the management organ or employers' mutual fund)
- **Labour branch office** (dated and signed)
- **Person making out the report** (name, function in the company, date, signature and stamp)

3.3.2 Breakdown of data

In the published information the data are related as follows together with the number of occupational diseases:
- sector and branch of activity - gravity - annual trend
- type of disease - gravity - annual trend
- autonomous communities and provinces - gravity - annual trend

IV. Output and users

4.1 Output types and their influence

The Directorate General for Information Technology and Statistics prepares and circulates the following publications:
- Anuario de Estadísticas Laborales (Yearbook of labour statistics)
- Boletín de Estadísticas Laborales (Labour statistics bulletin - monthly)
- Estadística de Accidentes de Trabajo y Enfermedades Profesionales (Statistics for accidents at work and occupational diseases - quarterly and annually)

These constitute the sole source of information on occupational diseases, although their influence is considerably reduced by the general nature of the limited coverage provided.

4.2 Accessibility

The data are open to the public and the publications are obtainable from the Publications Department.

4.3 Integrated database

The data obtained will form part of the labour series database of the Ministry of Labour and Social Security.

4.4 Users and current recipients

The intended recipients are government organs, employers' organizations and social researchers.

V. Critical analysis

The statistics on occupational diseases do not provide a true picture of the hazards prevailing in workplaces, as the number of reported cases is too low. There is a wide gap in the recording and reporting of these diseases as the existing system allows a large proportion of instances to be channelled into the general health-care system without their possible occupational origin being investigated in the course of diagnosis.

The solution of this problem calls for the greater involvement of medical staff, who need to be given the training and instruments necessary to detect the possible occupational origin of their patients' diseases.

At present the available statistics on occupational diseases provide very limited information and this greatly limits their use for preventive purposes.

Survey of the labour force

0. Introduction

This is a periodical survey for determining the labour-market situation.

I. General and structural context

1.1 Identification

Encuesta de población activa (EPA)
National Institute of Statistics (INE)
Paseo de la Castellana, 183
28046 Madrid
Spain

Telephone: 583.94.38
Telefax: 279.27.13

1.2 Institutional framework

The National Institute of Statistics is an autonomous organization under the supervision of the Ministry of Economics and Finance and its activities are funded out of the national budget.

1.3 General profile

The magnitude of the problems connected with unemployment call for an accurate knowledge of their characteristics and trends. With this in mind a public survey was devised which was to be carried out in the homes of the individuals concerned.

1.4 Origin and history

The survey of the labour force emerged in response to the shortcomings of the various statistical sources relating to the labour market (population censuses, municipal electoral registers, wage surveys, unemployment register, etc), over which it offered the following advantages:

- it could be carried out as a continuous exercise with any chosen frequency;
- it could penetrate in depth into those aspects with a bearing on the labour force, as the investigation was directly focused on these points;
- the questionnaires were completed by specialist interviewers;
- the results were obtained speedily as the survey covered only a sample;

- there was uniformity of definition and data processing throughout the successive stages of the survey, ensuring homogeneous series of results;
- results could be obtained for the overall national picture and for regional areas.

II. Aims

2.1 General aim

The principal aim is the determination of economic activity in terms of its human component. The survey's objective is to supply information concerning the main categories of the population in relation to the labour market (employed, unemployed, working and non-working elements) and to classify these categories according to a range of variables.

2.2 Users and listed recipients

Government organs and social agents concerned with the labour market.

III. Description

3.1 Frequency

The survey of the labour force is an ongoing study with a three-monthly cycle.

3.2 Methodology

3.2.1 Field

The survey of the labour force encompasses the whole country. It is targeted on the population living in family dwellings, ie those used as normal or permanent accommodation during the whole, or most of, the year. Excluded is the accommodation designated as "collective accommodation units" (hospitals, hotels, orphanages, etc), although the survey does include those families forming an interdependent group who live in such establishments, for instance their managers, wardens and caretakers.

All in all, the population excluded from the survey accounts for less than 1% of the total.

All the defined characteristics relate to the "national" rather than the "internal" concept as it is not possible to gather data on the population which works in Spain but resides abroad since the survey is targeted on those living in family dwellings.

3.2.2 Organization

The data are gathered by the provincial offices of the National Institute of Statistics using chiefly:
- interviewers/pollsters (total number: 264)
- interviewer supervisors (total number: 87)
- poll supervisors (total number: 57)

The data processing is also carried out by the technical staff of the National Institute of Statistics. The present size of the sample is 3168 sections with an average of 20 dwellings investigated per section, which adds up to a total sample of 62 000 dwellings.

The distribution of sections by provinces was made by adopting a compromise between uniformity and proportionality. Within each province the allocation between strata was based on proportionality.

The sample is uniformly distributed over time. Each selected section is visited during one of the twelve weeks of the quarter, and each week encompasses the same number of sections. In successive quarters, while the number of sections remains unchanged, one sixth of the sample of dwellings is replaced. A replacement of this kind is carried out every quarter for all the dwellings in one sixth of the sections making up the sample according to a predetermined rotation. In concrete terms, a selected dwelling remains in the sample and is investigated over a period of six consecutive quarters.

The primary sampling units are the electoral rolls. The final units are the dwellings. Dwellings and individuals are the analytical units employed.

The reference period for the results of the survey is the relevant quarter, and the reference period for the data, as a general rule, is the week preceding the interview date.

3.2.3 Procedure

Sample-based survey using a questionnaire. The questionnaire comprises open-ended, precoded questions.

3.3 Data

3.3.1 List of data

The (EPA-C model) questionnaire consists of five quite distinct parts:
- Cover information which provides general details of the dwelling and the interview plus identification and control data.
- Minors under 16 years of age - this part comprises two pages of questions addressed to persons in this age group. Provision is made for gathering details on up to 6 minors.

- Persons aged 16 and over. Four pages of details are collected for each such person. Each questionnaire provides space for interviewing up to four persons aged 16 or over.
- Information on inside cover, the purpose of which is to list the persons in the dwelling who are to be interviewed.
- Annex on wages.

Cover information

A. General details
- cycle
- quarter
- week
- questionnaire number for dwelling
- date of interview
- postal address of dwelling

B. Identification data
- province
- section
- stratum
- serial number of dwelling

C. Interview conducted by:
- interviewer

D. Control data
- interview codes, previous and present
- informant
- persons in dwelling (persons under 16 and persons of 16 and over)
- remarks (to clarify any data which may be unclear)

Details on inside cover
- person number
- name, surname in full
- relationship to main individual
- residence in the dwelling (location and period in said location: less than, equal to or more than three months)
- permanent occupation of other dwelling
- eligible/ineligible for interview
- age (for those eligible for interview)

Persons aged under 16
- name
- date of birth
- relationship to main individual
- sex
- nationality
- country of birth
- performance of work during previous week as self-employed wage-earner or family help
- hours spent in such work
- place of residence one year ago 25

Persons aged 16 and over

A. General details
- surname and given names
- date of birth
- relationship to main individual
- sex
- marital status

B. For foreigners
- country of birth
- military or diplomatic service
- residence in Spain

C. Studies
- completed studies
- training received during previous four weeks
- place where training received
- purpose of training

D. Activity
- situation during previous week (military service, work in Spain, work abroad, employed and did not work; not working, available and not seeking job; other situations ...)
- vocational activity of persons performing military service
- residence abroad
- military or diplomatic service
- reasons for not working

E. Characteristics of employment
- occupation in main job and vocational category
- activity of enterprise in which main job is performed
- seasonal or permanent activity
- location of enterprise
- vocational status in main job
- government department (refers to civil servants only)
- contract (or labour agreement), indefinite or temporary
- reason for undertaking a temporary contract or labour agreement
- full-time/part-time work
- hours worked during reference week (in main job)
- normal hours
- reason for difference between normal and actual hours
- time spent in current job
- other job or jobs
- search for other job or occupation
- reasons for job search

F. Unemployed persons
- situation previous to job search
- previous engagement in work (in wage-earning capacity, self-employed or family help)
- number of months expired since last job
- reason for leaving last job

- most recent occupation or function
- activity of enterprise in which employed
- vocational status
- duration of employment in last job

G. Search for employment
- reason for not looking for a job
- time spent searching for a job
- method of searching for a job
- type of job sought or found
- availability for work
- acceptance by the interviewee of a hypothetical job supposing it were offered
- place of residence exactly one year previously
- situation of interviewee exactly one year previously
- vocational situation one year ago
- activity of enterprise in which he/she worked

Annex on wages
- months in working year
- desired weekly working hours
- gross income over last 12 months

3.3.2 Breakdown of data

Although some publications provide more specific data links, the results offered are generally obtained by relating jobs to the main demographic variables - sex, age and education - and to business activity and distribution by autonomous communities and provinces.

IV. Output and users

The main outputs prepared from the data produced by the Survey of the labour force are as follows:

- "Survey of the labour force. Major results" - This quarterly publication provides information on the working, unemployed and non-working segments of the population considered both as national totals and in relation to the autonomous communities and provinces.

- "Survey of the labour force. Detailed results" - This quarterly publication enlarges on the tabulated information given in the previous publication, although only at national level.

- "Survey of the labour force. Annual tables" - This annual publication provides average figures for the 4 quarters of the calendar year. It amplifies the information by more detailed processing and provides spatial distributions (by autonomous communities and provinces) of some characteristics and branches of activity at a level of disaggregation conducive to an improvement in regional studies.

- "Survey of the labour force. Information sheet" - This is published quarterly and provides a synthesis of the principal data obtained.

Besides the above there are other specific treatments of some blocks of information, the results of which are conveyed in publications such as the following:
- Migration survey
- Flow statistics

4.2 Accessibility

The publications of the National Institute of Statistics are obtainable from any of its offices, where they may be freely consulted. Application may be made for use of the information in a form other than that in which it is published subject to the requirement that it shall be non-attributable and statistically representative.

4.3 Integrated database

The National Institute of Statistics has a database (TEMPLUS) which includes the series of results of the Survey of the labour force and which can be consulted at any of the provincial offices. Application may also be made for access from outside the National Institute of Statistics.

4.4 Users and current recipients

Government organs, employers' and trade-union organizations and social researchers in general.

V. Critical analysis

The main shortcoming arises from the fact that the survey is based on a sample and cannot therefore provide information at very high levels of disaggregation, as the sampling error is then large and the information lacks accuracy.

Substantial problems also stem from the lack of replies and from the hazards of sampling. In view of all this, the National Institute of Statistics has since 1971 been engaged in a programme for evaluating the quality of the Survey of the labour force. This is aimed at pinpointing the sampling and other errors with a view firstly to taking decisions leading to an improvement in methods and secondly to

providing the user with information concerning the quality of the data he is offered. In this regard the following publications are available:

- Evaluación de la calidad de los datos de la encuesta de población activa, 1988 (Evaluation of the quality of the data originating from the Survey of the labour force, 1988)

- Incidencias en los trabajos de campo (The hazards of field work), Survey of the labour force, 1988

Survey of labour-market trends

0. Introduction

This is a planned periodical survey about to be launched which is designed to provide a qualitative and quantitative record and assessment of employment.

I. General and structural context

1.1 Identification

Encuesta de coyuntura laboral
Ministry of Labour and Social Security
Directorate General for Information Technology and Statistics
Subdirectorate for Statistics
C/Agustín de Bethencourt, 11
28003 Madrid
Spain

Telephone: 535.20.00
Telefax: 253.70.65

1.2 Institutional context

The Directorate General for Information Technology and Statistics analyses labour statistics and carries out research under the Ministry of Labour and Social Security. Its activities are funded out of the national budget.

1.3 General profile

This is a descriptive study based on a survey of Social Security centres operating the general scheme and the special scheme for the coalmining industry.

1.4 Origin and history

Hitherto the information source normally used to determine the employment situation and trend in Spain has been the Survey of the labour force, which is based on surveys aimed at a sample of family units. This method throws no light on the flow of jobs at each Social Security contribution centre, which may or may not coincide with the enterprise. This was the reason for devising the present methodology.

II. Aims

2.1 General aim

To meet the information requirements of the Ministry of Labour and Social Security.

Although the survey has the fixed objective of gathering data on employment, it is planned that once a year, ie every fourth survey, the opportunity will be taken of collecting information on specific issues of concern.

2.2 Users and intended recipients

Concerned government organs, employers' and trade-union organizations and social researchers.

III. Description

3.1 Frequency

Quarterly

3.2 Methodology

3.2.1 Field

This study is targeted on Social Security contribution centres operating the general scheme and the special coalmining scheme, excluding those with fewer than 5 workers.

3.2.2 Organization

Data collection and recording will be handled by a company contracted for that purpose, while the analysis and processing of the data will be carried out by the Directorate General for Information Technology and Statistics.

The selected sample comprises 10 000 contribution centres, proportionally allocated according to autonomous community and size, and the selection of the targeted units will be effected by a systematic random process taking account of economic activity.

3.2.3 Procedure

the enterprise manager by a researcher, who will undertake to go and collect it once it has been completed.

3.3 Data

3.3.1 List of data

- business activity of contribution centre
- type of enterprise, private or public
- workforce by sexes
- composition of workforce by working day and contract type
- recruitment and lay-off of workers by sexes and contract types
- reasons for lay-offs
- changes in contract type
- Full-time workers:
  . agreed number of hours annually
  . agreed number of days' holiday annually
  . number of hours overtime worked and number of workers involved
  . number of hours and days a week worked per worker
  . periods not worked broken down according to reason why
- Part-time workers:
  . number of hours and days worked per quarter
  . periods not worked broken down according to reason why
  . computerized supervision of attendance
  . labour-relations regulating system
  . number of non-agreement workers
  . employment regulating mechanisms
  . labour disputes and types
  . workers paid at the intervocational minimum-wage level by sex and age
  . employer's opinion with regard to growth of workforce

3.3.2 Breakdown

As the survey is at the project stage it is not possible to state how the data will be broken down apart from the relationships already referred to in the above list.

IV. Output and users

4.1 Output types and their influence

It is planned to disseminate the information in a manner analogous to that employed for the rest of the statistical data originating from the Directorate General for Information Technology and Statistics of the Ministry of Labour and Social Security. Besides the possibility of a specific publication, the data will therefore be included in the (monthly) Labour statistics bulletin and the Yearbook of labour statistics.

4.2 Accessibility

basis, and the publications will be obtainable from the Publications Department.

4.3 Integrated database

The data obtained will form part of the "Labour series database" (BDSL) of the Ministry of Labour and Social Security.

4.4 Users and intended recipients

The intended recipients are government organs, employers' and trade-union organizations and social researchers.

V. Critical analysis

As the matter is only at the project stage it is not yet possible to undertake a critical analysis.

Enquiry into risks in the building industry

0. Introduction

This is a national action programme designed to establish the risks and working conditions in the building sector liable to affect the health of building workers.

I. General and structural context

1.1 Identification

Seguimiento de riesgos en construción
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

Designed to prevent accidents at work in the building industry, this study is based on the following action procedure:

- General questionnaire on risk identification and evaluation
- Personal protective equipment used
- Evaluation of the current use of signs

The characteristics of each aspect will be considered later.

1.4 Origin and history

Faced with the persistent accident figures in the building sector and with the need to analyse the adverse factors involved, the Institute

and analysis employing a uniform methodology and designed to establish

the state of affairs and trends in the industry with a view to putting forward measures which would enable the working conditions to be improved.

A methodology was therefore devised which was tried out in 1988 and systematically applied from 1989 onwards. Besides the actions programmed to take place in the industry and those described in this report, there are other prevention-oriented research projects in progress of which the following should be mentioned:
- Enquiry into working conditions in the building industry. This refers to the updating of the enquiry carried out in 1983.
- Research into accidents in the building industry.

II. Aims

2.1 General aim

For the purpose of monitoring the sector with a view to suggesting suitable precautionary measures, information is to be gathered on the following points:

1) The degree of compliance with Royal Decree 555/86 making it mandatory to include a study on health and safety at work in building projects and public works.

2) The degree of adequacy and detail of the health and safety schemes devised by building firms.

3) Confirmation that their safety schemes are actually implemented by site personnel.

4) Acquisition of comprehensive data capable of revealing whether the application of the safety schemes does help to improve site working conditions and reduce accident levels.

5) Determination whether the mechanisms provided for under the regulations and Royal Decree 555/86 in particular are being used by the various responsible parties to encourage compliance.

6) Examination of certain specific aspects of working conditions in the sector which have a bearing on safety, eg personal and collective protective measures, use of signs, etc.

7) Establishment of a systematic method of pinpointing and evaluating the risks prevailing in the sector.

2.2 Users and intended recipients

and employers' and trade-union bodies for which it should provide material for discussion and consideration.

In addition, the companies visited receive a report on the main problems arising together with suggestions on suitable preventive measures.

III. Description

3.1 Frequency

This is a continuous information-gathering system.

3.2 Methodology

3.2.1 Field

The study relates to the following projects:

a) Those covered by Royal Decree 555/86, ie the following:
   . those with a total project budget greater than 100 million pesetas
   . those employing 50 workers or more during the phase when the simultaneous workforce is greatest
   . operations involving tunnels, galleries, underground conduits and dams and works specified by the labour authority as presenting special hazards

b) Those with a total project budget greater than 60 million pesetas which are performed at 4 or more levels

c) Those having special features which, in accordance with the technical assessment, provide grounds for study

3.2.2 Organization

The data are gathered by the technical staff of the National Institute of Health and Safety at Work and the processing is carried out by the Institute's computer unit. This study does not involve the use of samples as it is necessary to visit the whole range of undertakings referred to in the preceding paragraph at least once and wherever possible twice.

3.2.3 Procedure

All the questionnaires and cards used in the study have been designed to enable them to be completed on site in a simple manner suitable for autocode.

the site manager.

3.3 Data

3.3.1 List of data

1) General questionnaire on risk identification and evaluation

A. Details identifying the company

B. General details
- description of project
- type of structure
- number of floors, total area
- number of workers (permanent, self-employed, subcontracted)
- scale of project (in millions of pesetas)
- type of venture

C. Safety services
- Health and Safety Committee. How often does it meet?
- Specialist responsible for health and safety; full-time or part-time duty.
- Medical service; medical inspections.

D. Details of visit
- reason, number of visits
- stage of completion of project

E. Degree of compliance with Royal Decree 555/86 making it mandatory to include a study on health and safety at work in building projects and public works.
- safety plan
- relationship to Safety Study
- plan signed by competent management
- accident log; in existence and properly used
- compliance of safety plan with Royal Decree
- degree of detail of safety plan

F. Items subject to supervision and inspection
- cloakrooms, toilets and sanitary services
- general site arrangements
- electrical installations: generator set, main switchboard, auxiliary switchboard, supply lines, distribution lines
- lifting gear: tracks, hoists, winches
- earth-moving and transport equipment: excavator/tractor, backdigger, motor grader, self-powered scraper/scraper, compactor, dumper truck, self-powered dump truck/dumper
- machinery for foundations and structural work: pile driver, mixer, concreting pump, circular saw, electric compressor, gas-oil compressor, electric vibrator, electric welding set, oxyacetylene welding set

- auxiliary and safety equipment: nets, rails, scaffolding and tubular structures, suspended scaffolding, surrounding and/or entrance canopy, working platforms above 2.00 m, platforms below 2.00 m, unloading platform for materials, troughs for transporting materials, portable ladders, rubbish discharge conduit
- miscellaneous items: earth-moving and trenching, structures and curtain walling, roofing, demolitions

2) Personal protective equipment used
- details identifying company and project
- personal protective equipment used: officially approved types, number of sets of equipment used on the project

3) Evaluation of the current use of signs
- details of project: type of project, intended use, location, stage of completion, type of venture
- company responsible for health and safety: funding, application
- awareness of Royal Decree 1403/86 concerning the use of signs
- signs designed and/or constructed by own personnel, and/or supplied by company specializing in the provision of signs
- standardized use of signs: discrepancies (shape, symbol, colour), preservation, location, perceptibility
- signs not governed by Royal Decree 1403/86: shape, sketch, colours, description and meaning of symbol

3.3.2 Breakdown

The study is descriptive in character and the analysis of each variable is in the main conducted in isolation, although there are links between specific variables and others of a general nature such as the type and size of the project and its stage of completion at the time of the visit.

IV. Output and users

4.1 Output types and their influence

The first output of the study is a report sent to the company responsible for the project visited which indicates the existing risks and the measures to be taken for keeping them under control.

The system is also designed to furnish an initial diagnosis and periodical information enabling the state of the sector to be assessed. This information together with that relating to the implementation of Royal Decree 555/86 with regard to the safety study will be very useful to the technical staff of the National Institute of Health and Safety at Work and to the social agents as a guide for their preventive measures.

National Institute of Health and Safety at Work, the journal Salud y Trabajo (Health and Work), Erga bulletins, etc.

4.2 Accessibility

The information, subject to non-attribution, is freely available without charge.

Any publications which may appear will be obtainable from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This does not exist at present.

4.4 Users and current recipients

Government organs concerned with the health of the labour force, employers' and trade-union organizations and those professionally concerned with workers' health.

V. Critical analysis

Although it is early days to undertake a critical analysis in depth, as it is not yet possible to evaluate the enquiry as a means of assessing the sector, application of the methodology by the technical staff of the National Institute of Health and Safety at Work has suggested the need to broaden the scope of the study to other types of projects and to define the types of machines concerned in greater detail.

Furthermore, the promulgation on 27 October 1989 of the Royal Decree providing for the protection of workers against the risks due to exposure to noise at the workplace has revealed the desirability of including a specific section on noise.

All these changes are now under consideration with a view to future implementation.

On the other hand, the methodology to be applied to two lines of investigation which will shortly be incorporated within this study is practically complete. We refer here to:
- tower cranes, and
- collective precautionary measures against the risk of falling from heights.

Environmental and biological study of the labour force exposed to metallic lead

0. Introduction

This system is designed to gather information about the size of the labour force which is environmentally and biologically affected by the risk of exposure to metallic lead and its ionic compounds.

I. General and structural context

1.1 Identification

Seguimiento ambiental y biológico de la población laboral expuesta al plomo metálico
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite general council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

In compliance with the current legislation relating to the risks of exposure to metallic lead and its ionic compounds, a system has been established for gathering environmental and biological data for evaluating the labour force subject to exposure.

1.4 Origin and history

The law originates from Directive 82/605/EEC of 28 July 1982 concerning the protection of workers against the risks arising from exposure at work to metallic lead and its ionic compounds and from its adaptation to Spanish law via the regulations for the prevention of

Ministerial Order of 9 April 1986. In conformity with the legal provisions under these regulations the National Institute of Health

and Safety at Work undertook to establish the extent of this hazard and for this purpose devised and applied a methodology which, in conjunction with the terms of reference and functions laid down by law, led to the present project of national scope which was launched in 1987.

II. Aims

2.1 General aim

To determine at national level the degree of environmental and biological exposure of the labour force handling lead or its ionic compounds in accordance with the action levels and limits laid down in the current legislation. This information is collected with a view to the performance of a preventive study.

2.2 Users and intended recipients

The information collected in the course of this project will be issued on an institutional basis at the conclusion of the first three-year period following its initiation and will be general in character as well as being addressed to all those sectors concerned with combating occupational hazards.

III. Description

3.1 Frequency

This is a continuous system fed by the information received from the companies collaborating in the project.

3.2 Methodology

3.2.1 Field

All companies and workers handling metallic lead and its ionic compounds.

3.2.2 Organization

Where companies have their own specialized health and safety services, the data are collected by their own staff. Where such services do not exist, companies are assisted by the provincial technical offices of the National Institute of Health and Safety at Work or by the Health and Safety Centres of the autonomous communities in gathering this

processing and application.

There is no sampling as the study encompasses the whole labour force handling metallic lead or its ionic compounds.

3.2.3 Procedure

A standard record devised by the National Institute of Health and Safety at Work is used which covers information about environmental and biological exposure as well as details of the use of protective systems, the cleanness and working practices at the place of work.

3.3 Data

3.3.1 List of data

General data
Identification of company
Activity of company
Identification of worker
Job
Technical protective measures
Personal health measures at the place of work

Technical data
Duration of exposure
Concentration of lead in the environment
Concentration of lead in the blood
Concentration of zinc protoporphyrin in the blood
ALA-D concentration
ALA-U concentration

3.3.2 Breakdown

Preliminary examination of the data received enables an estimate to be made of the exposed and non-exposed labour force in accordance with the statutory action levels and limits together with a correlation of some of the biological exposure indices.

IV. Output and users

4.1 Output types and their influence

- Preparation of report covering the first three-year period of the project
- Information to users via the provincial technical offices for the purpose of proposing preventive measures
- Articles and technical papers for congresses

at work, including the production of a video

4.2 Accessibility

Information including the above report is obtainable from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This does not exist at present.

4.4 Users and current recipients

Companies and workers handling metallic lead or its ionic compounds, government organs concerned with this subject, employers' and trade-union organizations and those professionally concerned with workers' health.

V. Critical analysis

This study of national scope will for the first time in Spain provide a measurement of the extent of the exposure of the labour force to metallic lead and its ionic compounds considered from the environmental and biological angles and will be very useful in later actions aimed at combating these contaminants.

Study of the size and assessment of the labour force exposed to asbestos

0. Introduction

This study is intended to gather information about the size of the labour force affected by the risk of exposure to asbestos and the resulting pathology.

I. General and structural context

1.1 Identification

Estudio de incidencia y evaluación de la población laboral expuesta al amianto
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

In compliance with the current legislation relating to the risks of exposure to asbestos a system has been established for gathering data for studying the size and assessment of the labour force subject to exposure.

1.4 Origin and history

The law originates from Directive 83/477/EEC of 19 September 1983 concerning the protection of workers against the risks arising from exposure to asbestos at work and from its adaptation to Spanish law via the regulations governing work with an asbestos hazard under the Ministerial Order of 31 October 1984 and subsequent developments. Prior to these regulations the National Institute of Health and Safety at Work was concerned to establish the extent of the risk and for that purpose devised and applied a pilot methodology which, in conjunction

with the terms of reference and functions laid down by law, led to the present project of national scope which was launched in 1987.

II. Aims

2.1 General aim

To determine at national level the degree to which the labour force exposed to asbestos is affected (pathological evidence) and the degree of exposure in accordance with the environmental-action level laid down in the current legislation. This information is gathered with a view to the performance of a preventive study.

2.2 Users and intended recipients

The information gathered in the course of the project is submitted annually to the board set up under the Regulations governing work with an asbestos hazard as the body for monitoring their implementation. This board has a tripartite structure and consists of representatives of the government (the Ministry of Labour and Social Security and the Ministry of Health and Consumer Affairs) and of employers' and trade-union organizations.

It is also of great interest to asbestos users and those concerned with combating occupational hazards.

III. Description

3.1 Frequency

This is a continuous system fed by the information companies supply in accordance with the law which requires the annual submission of the asbestos record.

3.2 Methodology

3.2.1 Field

All companies and workers handling asbestos.

3.2.2 Organization

Collection of data by the company which has to pass them to the labour authority, which in turn sends them on to the National Institute of Health and Safety at Work for scrutiny, processing and application.

No sample is used as the study encompasses the whole labour force subject to exposure.

3.2.3 Procedure

Standardized record forms are used which have been approved by the monitoring board and are in conformity with the current legislation.

To achieve the intended purposes 2 forms are used referring respectively to environmental and medical issues.

3.3 Data

3.3.1 List of data

Environmental record
- details identifying company
- details identifying worker
- exposure to asbestos fibres expressed as fibres/cm3, as weighted concentration over time and/or as cumulative dose expressed as fibres per day/cm3.

Medical record
- details identifying company
- details identifying worker
- occupational anamnesis
- personal anamnesis
- functional examination of respiratory organs
- radiological examination of respiratory organs

3.3.2 Breakdown

Preliminary examination of the data received enables an estimate to be made of the exposed and non-exposed labour force in accordance with the statutory action level and limits laid down in the regulations for this contaminant.

IV. Output and users

4.1 Output types and their influence

- Annual report to the board monitoring the implementation of the regulations governing work with asbestos
- Articles and technical papers for congresses
- Information to users through the provincial technical offices for suggesting preventive measures
- Leaflets and documents for the dissemination of information within the programme set up by the National Institute of Health and Safety at Work, including the production of a video

4.2 Accessibility

The data collected are submitted in their entirety to the monitoring board. Information, subject to non-attribution, is freely available to others without charge.

Published material is obtainable from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This does not exist at present.

4.4 Users and current recipients

Companies and workers exposed to asbestos, government organs concerned with this issue, employers' and trade-union organizations and those professionally concerned with workers' health.

V. Critical analysis

The study carried out under this national project will provide for the first time in Spain a measure of the extent to which the labour force is exposed to asbestos and will be very useful in defining later measures aimed at combating this contaminant.

Given the toxicological peculiarities of asbestos, it is for the moment difficult to establish a clear relationship between evaluated exposure and pathological evidence.

Study of the size and assessment of the labour force exposed to vinyl chloride

0. Introduction

This system is designed to gather information about the size of the labour force affected by the risk of exposure to vinyl chloride.

I. General and structural context

1.1 Identification

Estudio de incidencia y evaluación de la población laboral expuesta al cloruro de vinilo
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

In compliance with the current legislation relating to the risks of exposure to vinyl chloride a system has been established for gathering data for studying the size and assessment of the labour force subject to exposure.

1.4 Origin and history

The law originates from Directive 78/610/EEC of 29 June 1978 concerning the protection of workers against the risks arising from exposure at work to vinyl chloride and its adaptation to Spanish law via the Regulations for risk prevention and the protection of health in the presence of monomer vinyl chloride in the work environment under the Ministerial Order of 9 April 1986. Pursuant to the legal provisions laid down in these regulations the National Institute of Health and Safety at Work was concerned to establish the extent of this risk and for that purpose devised and applied a methodology

which, in conjunction with the terms of reference and the functions laid down by law, led to the present project of national scope which was launched in 1988.

II. Aim

2.1 General aim

To determine at national level the degree of exposure of the labour force handling vinyl chloride in accordance with the limits and alarm levels laid down in the current legislation. This information is gathered with a view to the performance of a preventive study.

2.2 Users and intended recipients

The information collected in the course of this project will be issued on an institutional basis at the conclusion of the first three-year period following its initiation and will be general in character as well as being addressed to all those sectors concerned with combating occupational hazards.

III. Description

3.1 Frequency

This is a continuous system fed by the information supplied by the companies collaborating in the project.

3.2 Methodology

3.2.1 Field

All the companies and workers handling vinyl chloride

3.2.2 Organization

The provincial technical offices of the National Institute of Health and Safety at Work or the health and safety centres of the autonomous communities collaborate with companies in collecting the information which is then passed on by the provincial technical offices or the health and safety centres to the National Institute of Health and Safety at Work for scrutiny, processing and application.

No sample is used as the study encompasses the whole labour force subject to exposure.

3.2.3 Procedure

A record form devised by the National Institute of Health and Safety at Work is used which covers the details of exposure as well as the information relevant to technical preventive measures.

3.3 Data

3.3.1 List of data

General data
- Identification of the company
- Activity of the company
- Identification of the worker
- Work area in accordance with current legislation
- Technical preventive measures

Technical data
- Duration of exposure
- Method of sampling
- Calibration
- Concentration of vinyl chloride in the environment

3.3.2 Breakdown

Preliminary examination of the data received enables an estimate to be made of the exposed and non-exposed labour force in accordance with the limits and alarm levels laid down in the current legislation.

IV. Output and users

4.1 Output types and their influence

- Preparation of the report covering the three-year period considered in this project
- Information to users via the provincial technical offices and health and safety centres for suggesting preventive measures
- Articles and technical papers for congresses
- Leaflets and documents for the dissemination of information within the programme set up by the National Institute of Health and Safety at Work

4.2 Accessibility

Information including the above report is obtainable from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This does not exist at present.

4.4 Users and current recipients

Companies and workers using monomer vinyl chloride, government organs concerned with this issue, employers' and trade-union organizations and those professionally concerned with workers' health.

V. Critical analysis

The study carried out under this national project will provide for the first time in Spain a measure of the extent to which the labour force is exposed to monomer vinyl chloride and will be very useful in defining later measures aimed at combating the risks arising from this contaminant.

It is intended in future to extend the study by including data on the biological monitoring of workers whose exposure exceeds the limits set by law within the supervised area.

Maps of sectoral hazards

0. Introduction

Hazard maps are information systems relating to the risks to the health of workers in a particular sector of industry, compiled in such a way that these risks can be located and evaluated and the exposure to which the various groups of affected workers are subjected can be established.

I. General and structural context

1.1 Identification

Mapas de riesgos sectoriales
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

Sectoral hazard maps are studies designed to identify existing risks to the labour force for the purpose of guiding preventive strategies.

1.4 Origin and history

The initial action plan of the National Institute of Health and Safety at Work, approved by its General Council on 18 July 1984, provides for "the conduct of systematic studies and operations of a general, informative and analytical character aimed at establishing a genuine and constantly updated knowledge of the working conditions directly associated with risk factors for the labour force in Spain with a view to compiling a hazard map which could serve as a basic element in formulating action programmes for combating these hazards".

With this intent the National Institute of Health and Safety at Work set up a working group which undertook to devise and apply a "methodology for the compilation of hazard maps" on a trial basis. This was implemented in the autonomous community of La Rioja and led on to the methodology which the National Institute of Health and Safety at Work decided to apply between 1988 and 1990 to the 24 industrial sectors of the greatest significance for preventive action.

II. Aims

2.1 General aim

Hazard maps are investigative tools with a preventive function in that, by enabling risks to be located and given relative ratings, they back up proposals for specific preventive measures in the enterprises visited and assist in formulating an overall diagnosis for devising preventive strategies of a general character.

They also highlight points requiring later investigation.

2.2 Users and intended recipients

The information is very useful to all the sectors concerned with the improvement of working conditions and particularly to government organs and employers' and trade-union bodies for which it should provide matter for reflection and discussion.
In addition, the companies visited receive a report covering the chief prevailing problems with a suggestion as to suitable preventive measures.

III. Description

3.1 Frequency

Following the trial in La Rioja the National Institute of Health and Safety at Work drew up a three-year plan for 1988-1990 covering the compilation of hazard maps for 24 industrial sectors.

3.2 Methodology

3.2.1 Field

The sectors selected for each year were as follows:

1988
- vehicle repair shops
- manufacture of metal building components
- mechanical engineering shops
- timber industry: sawmills
- timber industry: component manufacture
- timber industry: furniture making
- footwear industry
- rubber industry

1989 manufacture of terracotta products
manufacture of ceramic products
abattoirs and production of meat-based products
production of vegetable preserves
production of fish preserves
tobacco manufacture
clothing industry
plastics processing industry
1990 cement, lime and plaster production
basic chemicals industry
machine construction
drinks industry
textile industry
paper and board industry
graphics industry
hospitals

3.2.2 Organization

The data are gathered and analysed by the technical staff of the National Institute of Health and Safety at Work and the processing is carried out by the Institute's computer unit.

Sampling: in each sector a sample of target companies was picked out on the basis of their size and geographical location.

3.2.3 Procedure

To homogenize the data collected by different technical staff members in companies engaged in the same business, a group of technical specialists worked out beforehand for each sector a complete inventory and description of the typical processes, each broken down into the various typical functions. In each case the risks of a possible accident at work or occupational disease were specified and codified, so that the result was a "risk-spotting guide" covering each of the industries.

Although the specific data-gathering tools to be used in each sector under investigation were defined beforehand in accordance with its special characteristics, the records and questionnaires used were generally as follows:
- accident risks by process and job
- health risks by process and job
- raw materials used by process and job
- installations (electricity, fire service, compressed air, materials handling, steam generation, etc)
- occupational pathology
- biological control
- occurrence of accidents at work
- working postures by process and job
- social factors affecting the workforce (number of workers, age, sex, working hours, contract type, medical service, safety services, training activities, etc)

3.3 Data

3.3.1 List of data

Those referred to in 3.2.3.

3.3.2 Breakdown

The analysis of the gathered data occurs at two levels: firstly the descriptive level at which the various types of risk detected in the sector are presented and analysed with relationships being established between the data as required, and secondly a level at which the same information is analysed by processes and jobs in order to pinpoint those of the greatest significance for preventive action.

In both cases particular interest attaches to establishing the number of workers exposed to each risk at its various levels of evaluation.

IV. Output and users

4.1 Output types and their influence

A "situation report" is prepared for each sector investigated and this is publicly presented at events specially organized for that purpose. It is distributed to employers' and trade-union organizations within the sector.

To step up the dissemination of the information and draw it to the attention of all the enterprises concerned, work is currently proceeding on the preparation of sectoral "risk-spotting guides" which point out the chief hazards and the corresponding counter-measures and provide some easily managed indicators enabling each company to evaluate its working conditions for itself.

In addition, the National Institute of Health and Safety at Work encourages the compilation of hazard maps by companies themselves and for this purposes organizes numerous courses in which the necessary methodology is imparted together with the necessary records, questionnaires and codes. These activities are linked to the presentation of methodologies and results at many congresses and technical conferences as well as to the publication of articles on this subject. To back up these efforts at dissemination the National Institute of Health and Safety at Work is also preparing a video for each industrial sector investigated.

Since the initiation of this line of work a lively interest has been displayed by many employers' and trade-union organizations, and this interest is reflected in the numerous projects which have been carried out and in the fact that the preparation of a hazard map figures in many collective agreements as an undertaking which should be pursued.

4.2 Accessibility

The data collected in these reports are public and freely accessible. The documents prepared by the National Institute of Health and Safety at Work are obtainable from its Publications Department.

4.3 Integrated database

At the moment the possibility of this is only internal to the National Institute of Health and Safety at Work.

4.4 Users and current recipients

Government organs concerned with this issue, employers' and trade-union organizations and social researchers.

V. Critical analysis

Since the beginning the methodology underlying the hazard maps has been gradually modified to adapt it to the problems encountered in each sector. Similarly, the information obtained has to be constantly updated, and for this purpose a "hazard-map-updating methodology" has been devised which reduces the labour of taking account of the changes going on in each sector.

The hazard maps satisfactorily fulfil their function as investigative tools by providing the necessary information in suitable form. However, their usefulness in the preventive sense demands the intervention of other factors of a social and political character, as the maps are designed to assist the decision-making process in the preventive field and this is a process in which the technical specialists have to hand over to the social actors who are ultimately responsible for defining the priorities for action.

National survey of working conditions, 1987

0. Introduction

This was a survey on a national scale of the working conditions liable to affect the health of Spanish workers.

I. General and structural context

1.1 Identification

Encuesta nacional de condiciones de trabajo, 1987
National Institute of Health and Safety at Work
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 403.70.00
Telefax: 403.00.50

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

The functions assigned to the National Institute of Health and Safety at Work include carrying out studies and investigations of working conditions.

1.4 Origin and history

The evolution of the concept of countering occupational hazards from an initial point of departure concerned exclusively with health and safety to a more up-to-date approach to health protection via improved working conditions requires tools enabling these conditions to be determined from the information supplied by the workers themselves.

II. Aims

2.1 General aim

The general aim is at once investigative and preventive since the objective is to determine the working conditions within the country and to apply this knowledge to the preventive policy of the National Institute of Health and Safety at Work.

2.2 Users and intended recipients

a) The National Institute of Health and Safety at Work and its technical staff

b) Employers, workers and the public at large

III. Description

3.1 Frequency

This was a specific one-off study. A repetition is intended, although the date is not yet fixed.

3.2 Methodology

3.2.1 Field

The survey relates to 6 620 536 workers covered by the general social security scheme and employed in industry, construction and the service industries. Not included are the primary sector, sea and air transport and special social security schemes.

3.2.2 Organization

The data were gathered by professional interviewers and were processed by a data-processing centre and the computer unit of the National Institute of Health and Safety at Work. A sample of 4000 workers was selected, divided up according to business activity and size of company. A random nominal sampling system was employed.

3.2.3 Procedure

A questionnaire (164 questions) designed for oral use was compiled. The questionnaire was standardized, autocoded and comprised both closed and open-ended questions.

The questionnaire was employed at the workplace.

3.3 Data

3.3.1 List of data

sex
marital status
number of children
educational level
workload
contact
status
autonomy
size of company
contract type
type of wages
vocational category
stability
promotion
working hours
participation
preventive system
training
thermal environment
lighting
noise and vibration
chemical pollutants
safety conditions
accidents at work
general illnesses
occupational diseases
discomforts

3.3.2 Breakdown

All the questions in the questionnaire were related to the following variables: age, sex, type of work, type of job, size of company, educational level, business sector and autonomous community.

Special breakdowns of data relevant to specific hazards.

Cluster analysis of reported discomforts.

IV. Output and users

4.1 Output type and influence

Monograph of published results
Fernández de Pinedo, I., et al.
National survey of working conditions, 1987
Madrid, National Institute of Health and Safety at Work, 1988
ISBN 84-7425-293-8
306 pages, 2000 copies

Other publications
Erga Noticias, No. 8, Nov-Dec 1988
Special 4-page supplementary monograph
Edition of 80 000 free copies
Posted to all Spanish companies with more than 25 workers and to all health and safety committees (all enterprises with more than 100 workers)

Salud y Trabajo, No. 70, Nov-Dec 1988
Editorial (1 page) and article on national survey of working conditions, 1987 (11 pages)
Edition of 3500 copies
Summaries and articles about the results of this study have also appeared in various Madrid, Barcelona and Bilbao daily newspapers.

Other means of dissemination
ILO - INSHT conference
Working conditions in a changing society
Barcelona, 28-29 April 1988
Presentation of the methodology and preview of results
A 60-page summary was handed to the 330 participants.

Technical conference: Working conditions in Spain, 1987
Barcelona, 20 December 1988
Presentation of the investigation and analysis of results
The published report was handed to the 240 participants.

IIIrd Sociology Congress
San Sebasti n, 28 September - 1 October 1989
Presentation of the results of the national survey as part of the activities of the National Institute of Health and Safety at Work
A 14-page report was handed to the participants.

4.2 Accessibility

The report is available on request from the Publications Department of the National Institute of Health and Safety at Work.

All the data obtained from the questionnaires are recorded on a magnetic carrier. Access to the data is free on application to the computer services of the National Institute of Health and Safety at Work in Madrid.

4.3 Integrated database

This does not exist at present, although the gathered data could be provided in integrated form in the future.

4.4 Users and current recipients

As this is the first survey on a national scale the results obtained are often used in studies of working conditions.

V. Critical analysis

The unquestionable utility of these data for preventive and investigative purposes requires that they should be updated later to register the changes brought about in working conditions by social and technological trends. This is especially relevant to information about psychosocial and organizational conditions and their consequences, given the difficulty of ascertaining these by other means.

Working conditions in the timber industry

0. Introduction

This is a descriptive study of conditions in the timber sector seen both objectively and in the eyes of the worker himself. It also encompasses opinions and attitudes to health and safety issues within the timber industry.

I. General and structural context

1.1 Identification

Condiciones de trabajo en la industria de la Madera
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

Organization
The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

The functions assigned to the National Institute of Health and Safety at Work include carrying out studies and investigations of working conditions.

1.4 Origin and history

The National Institute of Health and Safety at Work compiles hazard maps to determine the risks existing in each industrial sector. Essentially these studies centre on the identification and evaluation of the risks prevailing at a given place of work, and this activity is carried out by a member of the technical staff of the National Institute of Health and Safety at Work, the necessary information mainly being obtained by structured observations and programmed measurements. This system of operation does not acquire information from the worker whose working conditions are being analysed either

with regard to those aspects of his work which elude observation or concerning his perception and opinion of his work.

The National Institute of Health and Safety at Work decided to combine both information-gathering systems in its study of the timber industry, ie to back up the compilation of the hazard map with an enquiry into working conditions.

II. Aims

2.1 General aim

To gather from the workforce information concerning the conditions in which work is performed and their effects on health with a view to proposing appropriate preventive measures and measures to improve working conditions.

2.2 Users and intended recipients

The National Institute of Health and Safety at Work and its technical staff as well as other organs concerned with the health of the labour force.

The workers, employers and employers' and trade-union organizations within the timber industry.

III. Description

3.1 Frequency

This was a specific one-off study, although the possibility of its being repeated later on is not discounted

3.2 Methodology

3.2.1 Field

The labour force to which the study relates comprises the entire timber-industry workforce engaged in the manufacture of furniture and/or components in Spain's following autonomous communities: Arag"n, Asturias, Baleares, Castilla-Le"n, Castilla-La Mancha, Extremadura, Madrid, Murcia and Comunidad Valenciana.

3.2.2 Organization

The questionnaire, the sampling scheme and the analytical procedure were worked out by the technical staff of the National Institute of Health and Safety at Work, while the conduct of the enquiries and part of the computer processing were entrusted to a specialist firm.

A sample of 1124 workers was selected by a 2-stage random process. In the first stage a sample of 879 companies within the sector was randomly selected. In the second stage a sample of 1124 workers in these companies was randomly chosen.

3.2.3 Procedure

The enquiry was conducted on a personal basis by interviewers. The questionnaire comprised 139 questions, the first three of which covered data identifying the questionnaire itself while the next eight related to the company and the remaining 127 to the worker and his working conditions. The questions on the company relate to all concerned where a number of workers at the same workplace were interviewed.

The questionnaire was standardized, autocoded and mixed (combined closed-ended questions - the majority - with open-ended questions).

3.3 Data

3.3.1 List of data

List of variables and data

Data identifying the questionnaire
- questionnaire number
- date of questionnaire
- interviewer

Company data
- company's identification number
- location
- business of company
- current payroll
- allocation of tasks among current payroll
- joint company agreement
- comparison of current and previous payroll
- workers with economic bonuses

Details of worker and working conditions
1
- Type of contract
- type of contract
- performance of other work
- method of payment
- "performance-related" wages as proportion of total pay
- wage equality between men and women
- distribution of tasks over working day
- type of work
- vocational category
- years with company
- years in customary occupation

2
- thermal environment
- place in which work is performed
- draughts
- temperature
- cold and heat
- causes of cold and heat
- possibility of controlling temperature
- means of controlling temperature
- air-conditioning
- humidity

3
- Lighting
- usual lighting in place of work
- use of artificial lighting
- opinion of lighting of work station
- problems of reflection or glare

4
- Noise and vibration
- usual noise level
- occurrence of intense sporadic noise
- source of noise
- need to use ear muffs
- supply of ear muffs
- use of ear muffs
- reasons for non-use of ear muffs
- noise/health link
- loss of hearing
- cause to which loss of hearing is attributed
- measures taken by employers to reduce noise
- operation of machines
- measures to insulate or reduce machine noise
- noise bonuses
- vibration
- opinion of vibration
- frequency of vibration
- source of vibration

5
- Chemicals
- types of wood processed
- handling of materials
- gases or vapours
- knowledge of their effects on health
- channel through which this information was received
- knowledge of preventive measures
- source of knowledge of these preventive measures
- toxicity bonuses

6
- Safety conditions
- accident risks at work stations
- causes of accidents at work stations
- existence of safety devices on the machines
- compulsory use of personal protective garments

7
- Workload
- normal working posture
- physical exertions necessitated by work
- areas of body suffering discomforts due to posture and physical exertion
- fatigue
- symptoms of mental strain
- factors affecting mental strain

8
- Communication
- isolation
- difficulties in conversing with fellow workers
- contact with other people
- quality of relationship with fellow workers

9
- Status
- skill level required by job
- time needed to learn job
- opportunity for using ability and knowledge
- possibility of changing jobs
- requesting a change of job to other sections
- job content
- status of work within company
- unemployment situation in recent years
- time spent in unemployment in recent years
- fear of possibility of losing job
- ease of finding another job

10
- Autonomy
- consequences of mistakes
- possibility of choosing or modifying tools, the sequence of operations or the method or rate of work
- rate of work
- stoppage and absence of work
- autonomy in organization of work

11
- Promotion
- regulation of promotion within company
- worker's real chances of promotion
- promotion achieved by worker in recent years

12
- Working hours
- daily working hours
- weekly working hours
- satisfaction with present working hours
- normal pattern of working hours
- rigidity/flexibility of working hours
- shift work
- type of supervision of working hours
- work breaks (apart from breakfast and lunch)

13
- Damage to health
- accidents at work, number, type, sick leave
- permanent or partial disability due to accident

- sick leave due to illness of general type
- types of illness
- physical discomforts due to the work
- health problems
- health problems of fellow workers
- occupational diseases during working life
- aspects of work giving rise to discomforts

14
- Participation
- suggestions
- comments on suggestions
- implementation of workers' suggestions
- concern of the various groups within the company for health and safety

15
- Training
- attendance on courses
- types of courses attended
- adequacy of training received for work performed

16
- Miscellaneous
- social assistance for workers
- time spent on journey from home to work

17
- Personal details
- place of birth
- age
- marital status
- sex
- number of children
- educational level

18
- Open-ended comment

3.3.2 Breakdown

The results are set out in descriptive tables. However, links are made between certain variables: size and range of labour within company; type of joint agreement and geographical area; type of joint agreement and company payroll.

In addition, the Galaxy program is used to perform a cluster analysis, which is a technique for effecting a succession of differentiations from a corpus of data in such a way that the elements of each cluster are sufficiently homogeneous among themselves and remote from the others. In this way groups of individuals are identified according to their opinions and attitudes to the matter in hand in terms of the variables defining the said segments or groups.

IV. Output and users

4.1 Output types and their influence

Publication of a monograph by the National Institute of Health and Safety at Work giving the results obtained. It is intended that articles will appear in journals and that an event will be organized for presentation of the results.

4.2 Accessibility

Sale of the publication. In addition, the data are available for consultation without restriction.

4.3 Integrated database

This is not planned.

4.4 Users and current recipients

At the moment the drafting of the report is nearing completion and the results contained in it have not yet been made public.

V. Critical analysis

It is not possible to undertake a critical analysis in depth as the programmed activities have not yet been concluded.

Survey of working conditions in the construction (building) industry

0. Introduction

This is a survey of working conditions in the building sector of the construction industry.

I. General and structural context

1.1 Identification

Encuesta sobre condiciones de trabajo en la construcción (Edificación)
Results of the 1983 National Survey of the sector
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.00.50

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

The functions assigned to the National Institute of Health and Safety at Work include carrying out studies and investigations of working conditions.

1.4 Origin and history

Given the special characteristics of the building sector and the hazards to which the labour force is exposed, the National Institute of Health and Safety at Work, as a complement to other preventive measures of a technical character, considered it necessary to establish a description and analysis of the working conditions in the building sector based on information supplied by construction workers.

The study having been carried out for 1983, it was considered that it should be updated and work on this is currently under way.

II. Aims

2.1 General aim

The purpose of this study is the investigation of the construction sector and more particularly the building subsector. This purpose is subsumed in a wider objective, which is that of prevention and of contributing to suitable comprehensive preventive action in the sector.

2.2 Users and intended recipients

a) The National Institute of Health and Safety at Work and its technical staff

b) In accordance with the results obtained, co-operation and specific efforts are called for from all those concerned: companies, workforce, employers' and trade-union organizations and government organs.

III. Description

3.1 Frequency

This is a specific one-off study, although a similar study is currently in progress.

3.2 Methodology

Two essential considerations determined the chosen framework of the investigation: 1) the absence in Spain of information concerning working conditions and, more particularly, the relevant views of the workforce; and 2) the characteristics specific to the sector (wide variation of work situations, permanence of temporary expedients, etc).

3.2.1 Field

Workforce: 917 000 workers (Survey of the labour force, October-November-December 1982).

Labour force throughout Spain engaged in building work on undertakings subject to municipal licence, except minor works, in provincial capitals and towns with over 50 000 inhabitants (National Institute of Statistics, "De jure and de facto populations of Spanish towns", 1981 population census, Madrid, 1982).

3.2.2 Organization

The gathering and processing of the data and the analysis of the results were carried out by the technical staff of the National Institute of Health and Safety at Work.

Size of sample: in the 1983 study 1003 valid enquiries were conducted, and in the present case the number was 1000.

Two types of sample are used:

1) A stratified sample on a proportional basis, the sample size being fixed for the different provinces and subsequently in similar manner for the towns of over 50 000 inhabitants.

The 1990 study imposes no limitation in respect of town size and consideration is extended to the whole range of companies and workers within the sector.

2) A straightforward random territorial sample in which the worker to be interviewed is selected.

3.2.3 Procedure

A questionnaire (92 questions) for oral use was compiled. The questionnaire was standardized, autocoded and mixed (with closed and open-ended questions). It was completed at the workplace by an interviewer.

In the revision which is currently under way the questionnaire has been slightly expanded.

3.3 Data

3.3.1 List of data

Identification
- province in which the enquiry was conducted
- town in which the enquiry was conducted
- enquiry number
- interviewer's number
- date of enquiry

Details of project
- designation and/or description of project
- location
- type of project (building of accommodation, offices; construction and erection of industrial premises, etc)
- phase of project (earth-moving, foundations, structural work, walling, etc)
- total cost of project (in millions of pesetas)

- site workforce: how composed
- site workforce: size
- type of venture (public or private-sector or combined)

Employment conditions
- number of years vocational experience in the construction sector
- time spent working on project
- main function or job performed on project
- customary job performed in building operations
- how employed on project (wage-earner or self-employed)
- if a wage-earner, vocational category and type of contract; on payroll - possibly on part-time basis, or possibly hired for special skills or for specific project
- if self-employed, was this out of necessity or choice?
- number of building companies in which previously employed
- sector in which employed before the construction sector
- reason for working in the construction sector
- time spent in employment over the last two years
- desire to change to another activity given equal economic conditions
- time spent living away from home because of work over the last three years

Accommodation and transport
- place of residence during performance of the project (on site, usual accommodation, elsewhere)
- time taken to travel from home to work
- type of transport normally used to reach place of work

Training and instruction
- attendance at any course or training session connected with his work; and whether these were concerned with health and safety at work
- information about health and safety received from company, foreman or trade-unions
- knowledge of ways in which health can be impaired at work, protective measures and safety rules

General health and safety conditions
- interviewee's description of the general health and safety situation on site (very good, good, reasonable, poor or very poor)
- availability of the necessary protective devices

Accidents at work
- number of accidents during work on this project (incapacitating or otherwise, while travelling). Time lost through sickness per accident.
- accident risks for a newcomer to this place of work

Occupational disease
- possibility of having suffered some work-related disease

Physico-environmental conditions
- noise
- temperature

- vibration
- pollution
- lighting
- humidity
- general hygienic conditions

Safety organization
- existence of safety supervisors (on projects with fewer than 50 workers)
- existence of health and safety committee (on projects with over 50 workers). Opinion of its effectiveness.
- existence on site of a technical safety specialist

Working hours and wages
- hours worked and amount of overtime; whether or not Saturdays are worked
- form of payment (piecework, incentive rates, fixed rates, other)
- work rates (high, normal or low); work subject to norms or performance scales (difficult, reasonable or easy to achieve)

Rest times
- existence of laid-down rest times apart from times for meals and snacks. When do these occur, and are they considered to be sufficient?
- existence of other rest times apart from those laid down

Interest of work
- time needed to learn job
- previous knowledge needed for proper performance of job
- degree of interest of job
- degree of autonomy or freedom in organization of job
- belief that a job of greater responsibility is deserved. What job would that be?

Workload
- physical exertion demanded by place of work (slight, quite demanding, very demanding)
- causes to which fatigue is attributed (working posture, handling loads, muscular exertion, other causes). Weight and frequency of loads handled
- most frequent working postures and time spent in each of these
- variety/monotony of worker's job

Relations at work
- work done alone or in a team
- genuine possibility of relating to other people for talking, asking questions, requesting help, etc
- opinion held of such relations (good, reasonable or poor) with those in charge and why; also in regard to relations with fellow workers

General aspects
- existence of trade-union representatives on site
- concern with health and safety on the part of the company, the trade unions and the government

- how is the building worker looked upon in relation to those in other sectors?
- what aspect of the work gives greatest pleasure?
- what aspect of the work gives least pleasure?

Personal details
- age
- marital status
- sex
- number of children
- educational standard
- native province

3.3.2 Breakdown

Essentially data are related in terms of the following blocks: data identifying the project (project type, phase of project, total size of project, site workforce and type of venture) and employment conditions (time spent working in construction, main job or occupation, contract type, etc). In addition, links are made between specific variables where appropriate.

IV. Output and users

4.1 Output types and their influence

Publication of monograph presenting the results
Condiciones de trabajo en la construcción (edificación). Resultados de encuesta nacional realizada en el sector - 1983 (Working conditions in the construction (building) industry. Results of national survey of the sector, 1983), Madrid, National Institute of Health and Safety at Work
1984 ISBN 84-7425-204-0
125 pages

This publication was widely circulated in the sectors concerned.

4.2 Accessibility

It is currently available from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This does not exist at present, although the data are recorded on a magnetic carrier, which facilitates comparison with other similar studies like the one currently in progress.

4.4 Users and current recipients

As this is the first study of these characteristics carried out to date, the collected data are used and referred to as a reference study of the sector.

V. Critical analysis

Generally speaking, the collected data still remain valid, although the dynamic character of the sector and its high accident rate make it desirable that the exercise should be repeated - as indeed is happening at present - to investigate the trend and to analyse the interaction of the various measures which have been taken in the legislative and social areas and in preventive techniques.

Survey of living and working conditions in Spain

0. Introduction

The transformations which have come about in the economic system and the labour market have generated some changes in the world of work, in the behaviour patterns of workers, in the framework of labour law and particularly in forms of contracts and so on. All these changes have created a new situation which is not reflected in the customary statistics and which this study endeavours to analyse.

I. General and structural context

1.1 Identification

Encuesta sobre condiciones de vida y trabajo en España
Sociological Research Centre (CIS)
C/Montalbán, 8
34014 Madrid
Spain

Telephone: 532.21.22
Telefax: 531.81.31

1.2 Institutional context

Organization
The Sociological Research Centre is a Directorate General of the Ministry for Relations with the Cortes and the Government Secretariat. Its activities are funded out of the national budget.

1.3 General profile

This study considers the labour-market situation and its characteristics and includes an estimate of irregular employment in the Spanish economy.

1.4 Origin and history

The primarily descriptive character of population censuses, the survey of the labour force and the statistics on the registered unemployed and social security coverage gives no insight into such questions as the implications of unemployment, job mobility and other aspects of the labour market and the living conditions of the populace.

Consideration also has to be given to the interviewee's situation in the labour market, his relationship to the social-security system and the bearing of the social services on the working community.

II. Aims

2.1 General aim

To cover four broad areas capable of providing a better insight into the operation of the labour market:

a) The situation of the labour market from the standpoint of supply analysis
b) The coverage of social security and social services in relation to the working community
c) Levels of family incomes
d) Assessment of irregular employment

2.2 Users and intended recipients

In principle the users are likely to be the same departments and government ministries which sponsored the study, although the data are public in character.

III. Description

3.1 Frequency

One-off study carried out in November 1985

3.2 Methodology

3.2.1 Field

Population: 29 993 000 individuals aged 14 and over living in family dwellings. The sample encompasses national territory with the exception of Ceuta and Melilla.

3.2.2 Organization

The data were collected by Sociological Research Centre interviewers and were processed in the Centre's data-processing unit.

Sample:
The sample comprised 63 120 individuals aged 14 and over, living in family dwellings and proportionally divided by provinces, town size and economic activity, the dwellings and individuals being randomly selected.

3.2.3 Procedure

The enquiries were based on a questionnaire (36 questions) applied orally by the interviewer in the family home.

3.3 Data

3.3.1 List of data

- activities undertaken during the previous week
- activities undertaken last Sunday
- for those not working the previous week
  . present situation
  . work activities over the last 3 months and weekly working hours
  . previous work
- present type of work (contract and working day)
- additional occasional work
- occupation and sector of activity
- type of work: employed or self-employed, and in latter case number of employees
- place of work
- seniority in job
- wage received
- necessary training
- necessary length of apprenticeship
- age at start of work
- number of changes of company
- previous work: type of activity, reasons for change, type of work, number of employees, social-security contributions
- time spent looking for job
- possession of social-security card and its origin
- contribution to social security
- receipt of social-security benefits
- family situation
- job situation of head of family
- marital status
- total number of children and economic dependants
- family relations living in interviewee's home: working, looking for a job, drawing unemployment benefits
- economic resources
- total monthly income
- sex
- situation in labour market
- type of work
- economic activity
- socio-economic condition
- income level
- self-assessed social class

IV. Output and users

4.1 Output type and influence

Publication of monograph presenting results
Condiciones de vida y trabajo en España (Living and working conditions in Spain)
Secretariat General of Economic Affairs and Planning, Sociological Research Centre
Madrid, Sociological Research Centre, 1986

4.2 Accessibility of information

Information available in the Sociological Research Centre database and from its Publications Department.

4.3 Integrated database

The Sociological Research Centre has a database accessible to the public in which the data from all the studies undertaken are stored.

4.4 Users and current recipients

Government organs, employers' and trade-union organizations and social researchers.

Epidemiological studies. Exposure to isocyanates and problems of broncho-pulmonary sensitization

0. Introduction

The National Institute of Health and Safety at Work is currently pursuing three epidemiological studies embodying a similar methodological approach. This report will therefore describe only one of these on the understanding that the others have a similar structure.

The three studies are as follows:
- Epidemiological study of exposure to toluene diisocyanate (TDI) and problems of broncho-pulmonary sensitization. This is the study which will be described in detail.
- Epidemiological study of effects on the upper limbs in industrial abattoirs
- Epidemiological study of pneumological effects on those handling adhesives containing n-hexane in the footwear sector

I. General and structural context

1.1 Identification

Estudios epidemiológicos. Exposición a isocianatos y problemas de sensibilización bronco-pulmonar
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

The incorporation of new elements into production processes and the modification of these have led to changes in the pattern of occupational diseases. Apart from other features, these are characterized by their greater chronicity and poorer symptomatological definition together with the appearance of new syndromes and

illnesses. All this argues for the need to carry out epidemiological studies on the causes to determine the factors involved and the population groups which are at risk.

1.4 Origin and history

The origin of this project stems from the need to gather rigorously and properly acquired information about the existing pathology of the labour force as this relates both to the development of industrial processes and to the present methodologies of health analysis.

Similarly, the collection of updated information about the risks occurring at workplaces and their effects on the health of the workers with the associated compilation of sectoral hazard maps supports the need to apply the epidemiological method.

The epidemiological studies form part of a process of rationalizing and homogenizing the activities of the National Institute of Health and Safety at Work in the area of preventive industrial medicine which started in 1988 with the institution of records of the general and specific medical examinations carried out on workers.

In this particular instance the epidemiological study on exposure to isocyanates began in 1989.

II. Aims

2.1 General aim

As an investigation aimed at prevention, this project proposes to study the prevalence of clinical patterns of broncho-pulmonary sensitization in workers exposed to isocyanates in foamed plastic processes.

2.2 Users and intended recipients

Government and private organizations concerned with industrial health as well as those professionally concerned with combating occupational hazards and especially epidemiologists and industrial health specialists. Furthermore, these studies have a significance for risk prevention which goes beyond the work environment as the conclusions reached are also of use to the National Health Service.

III. Description

3.1 Frequency

This is a transverse study programmed for 1989 and 1990.

3.2 Methodology

3.2.1 Field

Workers exposed to TDI in foamed plastic processes, eg in the manufacture of foam-plastic chairs, mattresses, etc.

3.2.2 Organization

The data are collected by the medical and industrial health staff of the offices of the National Institute of Health and Safety at Work and by the various autonomous communities with delegated responsibility for health and safety which are participating in the project.

The information is scrutinized, processed and analysed by the National Centre for New Technologies in Madrid, which is responsible for co-ordinating the project.

The study is not based on a sample as the analysis encompasses all the workers subject to exposure. On the other hand sampling was used to obtain a "non-exposed" group in such a way that they were similar in sex and age to those who were exposed.

3.2.3 Procedure

A variety of tools are used to gather the necessary information. They are all standardized and prepared so as to facilitate computer processing, and closed-ended questions predominate.

The person in charge of completing all the questionnaires used is the doctor carrying out the medical examination, who adds to the report the data furnished by the laboratory.

3.3 Data

3.3.1 List of data

The tools used in the study cover the following variables:

1 a) Form used to select exposed group
- . sex
- . date of birth
- . identification data
- . type of foaming process performed
- . hazardous duties performed

1 b) Form used to select non-exposed group
- . sex
- . date of birth
- . identification data
- . criteria defining non-exposure to TDI

2) Specific broncho-pulmonary form
   . sex
   . age
   . identification data
   . family history of broncho-pulmonary disease
   . personal history of broncho-pulmonary disease
   . present respiratory symptoms

3) Research report on broncho-pulmonary sensitization
   . sex
   . age
   . identification data
   . occupational exposure to TDI (data obtained in compiling the relevant hazard map)
   . basal study of respiratory function
   . study of respiratory function after bronchodilatation
   . allergic tests on skin and inhalation
   . peak-flow study
   . laboratory tests: transaminases, total Ig-E and TDI-specific Ig-E immunoglobulin

3.3.2 Breakdown

It is initially proposed to carry out a descriptive study of the exposed workers with an analysis of the influence due to certain factors such as age, sex, personal and family history, detected irregularities, etc.

Later there will be a specific analysis of the incidence of broncho-pulmonary sensitization in exposed as compared with non-exposed workers.

IV. Output and users

4.1 Output types and their influence

As the project is still in the process of being carried out, there is not yet any final output. The following activities are proposed:
- preparation of a report
- preparation of articles
- organization of an event for presenting the results
- general dissemination via the normal information channels of the National Institute of Health and Safety at Work

4.2 Accessibility

The data, subject to non-attribution, are freely accessible and the publications will be available from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

There are no plans for this.

4.4 Users and current recipients

At the moment only a medical report is prepared for the worker under examination.

V. Critical analysis

At the present stage of the project it is not possible to undertake a critical analysis. The activities carried out so far have gone according to plan.

Occupational brucellosis. Analysis of prevalence and risk factors

0. Introduction

This study encompasses the reported cases of brucellosis and aims to analyse their occupational origin and the risk factors involved.

I. General and structural context

1.1 Identification

Brucelosis profesional. Análisis de prevalencia y factores de riesgo
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

Brucellosis is a disease which has to be reported to the Epidemiological Supervisory Services. In addition, in the context of the low level of reportable occupational diseases existing in Spain brucellosis is one of the commonest and is highly endemic in our country. It is a disease which basically affects the farming sector, and this fact suggests that occupational brucellosis may well be more prevalent than appears from the occupational-disease statistics.

1.4 Origin and history

In 1987 a one-off study was carried out by a provincial technical office of the National Institute of Health and Safety at Work which detected the wide difference between cases of occupational brucellosis and those reported as such.

As a consequence of this the National Institute of Health and Safety at Work adopted a methodology which would provide a genuine indication of the occurrence of occupational brucellosis, initially on the basis of a study carried out in 1988 on the prevalence of reported cases in 1987 and from 1989 onwards by a continuous study of cases as they arose, ie those studied immediately after being reported to the Epidemiological Supervisory Services.

II. Aims

2.1 General aim

To assess the actual prevalence of occupational brucellosis and determine the factors associated with animal husbandry and the conditions influencing its onset with a view to suggesting suitable preventive measures.

2.2 Users and intended recipients

Government organs concerned with industrial health and employers' and trade-union organizations; the Epidemiological Supervisory and Health Planning Services; workers in the farming industry and members of farming associations.

III. Description

3.1 Frequency

The continuous stage, involving the study of cases as they arise, is planned to end in 1990.

3.2 Methodology

3.2.1 Field

All those suffering from brucellosis as there are no exceptions to the compulsory reporting of the disease.

3.2.2 Organization

The details relating to the report of the disease are collected by the doctors and, where they relate to installations or animal husbandry, by the technical staff of the offices of the National Institute of Health and Safety at Work in both cases.

The data are scrutinized, processed and analysed by the Technical Subdirectorate of the National Institute of Health and Safety at Work.

The 1988 study covers all the cases reported in 1987 for persons aged over 15. 25% of these individuals are also subject to an enquiry on working conditions.

In the 1989-1990 phase systematic sampling is carried out (covering 1 in 4 of the reported cases).

3.2.3 Procedure

Standard specific record cards and questionnaires are being prepared.

3.3 Data

3.3.1 List of data

Record of cases reported to the Epidemiological Supervisory Services
- identification data
- age
- sex
- health area
- vocational details
- details of report

Sickness report
- identification data
- age
- sex
- health area
- vocational details
- details of report

Occupational-disease report
- identification data
- age
- sex
- health area
- vocational details
- details of report

Details of reporting doctors
- details identifying case
- details identifying reporting doctor
- details relating to report
- details relating to disease
- details relating to occupational exposure
- details relating to non-occupational or dietary exposure

Enquiry into working conditions in the farming sector
identification data
- details of enterprise or installation
- details of disease
- details of exposure to animals
- details of state of animal hygiene

Enquiry into working conditions in other sectors
- identification data
- details of disease
- details of risk factors
- dietary habits

3.3.2 Breakdown

- geographical distribution
- distribution by age and sex
- distribution by economic activity
- seasonal distribution by province and type of livestock
- symptomatological data and laboratory diagnostic tests
- details relating to animal hygiene
- installations for livestock
- distribution of cases by nature of disease (occupational, work-related or general disease)

IV. Output and users

4.1 Ouput types and their influence

The following activities are planned:
- preparation of a report
- preparation of articles
- organization of an event to present the results
- general dissemination via the normal information channels of the National Institute of Health and Safety at Work

4.2 Accessibility

The data, subject to non-attribution, are freely available and the publications will be available from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This is not planned.

4.4 Users and current recipients

Customary arrangements

V. Critical analysis

In the present phase of the project it is not yet possible to undertake a critical analysis. To date the activities carried out have gone according to plan.

Ethylene oxide

0. Introduction

The purpose of the study is to investigate the use of ethylene oxide in hospital sterilization processes, the levels of exposure and the workforce exposed.

I. General and structural context

1.1 Identification

Oxido de etileno
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

The category of "studies by agents" focused on the investigation of particular products or substances which are plainly important from the standpoint of risk prevention includes the case of ethylene oxide in view of its carcinogenic potential and its wide use as a sterilizing agent in the sanitary environment.

1.4 Origin and history

The present study is an outcome of the international alarm triggered by the publication in the American Federal Register of the norms issued by the OSHA which lay down for ethylene oxide a maximum environmental concentration of 1 ppm for an 8-hour working day in view of its carcinogenic potential for humans.

Similarly, the proposed directive of the Commission of the European Communities on the protection of workers against the risks associated with exposure to carcinogenic agents will include ethylene oxide as

this substance has the designation R 45 (can cause cancer) in the Community's official classification.

In view of the above the National Institute of Health and Safety at Work devised the project in 1988. The data were collected in 1989 and are currently being processed and analysed.

II. Aims

2.1 General aim

- To determine the conditions under which this agent is used in hospital sterilization processes, the characteristics of the systems and the working methods.
- To evaluate the degree of exposure under the various working conditions.
- To determine the size of the affected workforce.

2.2 Users and intended recipients

Primarily, workers in health centres using ethylene oxide and the risk-prevention services at the centres. Also the government organs concerned with this issue, employers' and trade-union organizations and technical workers concerned with the prevention of occupational hazards.

III. Description

3.1 Frequency

This is a one-off study of a given situation and at the moment there are no plans for its continuation.

3.2 Methodology

3.2.1 Field

All workers in public and private health centres using ethylene oxide with the exception of military establishments.

3.2.2 Organization

The data are collected by the technical staff of the National Institute of Health and Safety at Work and are processed by the Institute's computer unit.

The provincial technical offices of the National Institute of Health and Safety at Work made a random selection of 10 provinces in which they visited all the hospital facilities using ethylene oxide with the exception of military establishments.

3.2.3 Procedure

A range of standardized record cards and questionnaires was devised, details of which are set out in the following paragraph.

3.3 Data

3.3.1 List of data

The data collected fell into different categories with specific record cards and questionnaires. The categories were as follows:

- Details of consumption: type of packaging, trade name, manufacturer, trade reference, annual consumption, capacity of container
- Details of equipment. Sterilizer record card: make, model, type, capacity, product used, number of cycles, cycle time, location (isolated or in clean or dirty room), whether or not ventilator is provided, drainage system, emptying system, locking system
- Details of equipment. Ventilator record card: make, model, number of ventilation cycles, air extraction (disposal area), cycle time, location relative to sterilizer, co-ordination with and distance from sterilizer
- Evaluation: weighted mean concentration in ppm over 8 hours, related to type of job, working area, number of workers, number of cycles per shift, number of extractions during sampling period, evaluation
- Risk control: (for each sterilizer) type and level of on-the-job control and medical supervision of individuals
- Auxiliary equipment and working methods: the following were used:
  . questionnaire covering the operation of sterilizers using shots of mixed ethylene oxide
  . questionnaire covering the operation of sterilizers using single-dose cartridges
  . questionnaire covering the use of glass ampoules
  . questionnaire on working methods
  . questionnaire on maintenance

3.3.2 Breakdown

As the collected data are at present being analysed, it is not possible to state exactly how the variables will be related to each other. However, some of the relationships provided for in the analytical plan may be noted:

- distribution of sample
- risk evaluation by:
  . job
  . type of sterilizer
  . ventilator characteristics
  . equipment type
  . working method

IV. Output and users

4.1 Output types and their influence

The following measures are proposed:
- specific preventive arrangements in the workplaces investigated
- preparation of a report enabling the situation to be diagnosed with a view to planning future preventive actions
- dissemination aimed at risk prevention via the information channels of the National Institute of Health and Safety at Work:
- the journal Salud y Trabajo (Health and Work)
- a leaflet for circulation
- a technical document
- the arrangement in September this year of an event specifically designed to disseminate the results obtained and the relevant conclusions

It is hoped that the above actions, taken together, will have a considerable impact on the adoption of the necessary preventive measures.

4.2 Accessibility

The data obtained, subject to non-attribution, will be freely available. The publications will be obtainable from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This is not planned at the moment.

4.4 Users and current recipients

In the present stage of analysis and preparation of the report the data are being used by the technical staff of the National Institute of Health and Safety at Work, and their results are being passed on to the workplaces visited together with recommendations on the necessary preventive measures. At a later stage this information will be of interest to all the workers exposed to risk as well as to the public and private organizations faced with this problem.

V. Critical analysis

The methodology is not designed to pinpoint specific risk (leakage) situations but to provide a basis for analysing equipment and working methods and for estimating the levels at which ethylene oxide is present in the sector under study with a view to proposing suitable preventive measures.

With regard to a later study it is considered that the questionnaire on maintenance should be changed so as to reflect more closely the conditions prevailing at the centres.

Sectoral health analyses: labour force employed in the timber sector

0. Introduction

In the compilation of each sectoral hazard map the pinpointing and evaluation of the prevailing risks is accompanied by an analysis of the morbidity of the sectoral workforce. The study of the timber sector is described here as an example of the methodology applied.

I. General and structural context

1.1 Identification

Análisis sectorial de salud de la población trabajadora ocupada en el sector de la madera
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

A combined analysis of risk exposure and of the effects on the timber-sector workforce by production process and jobs performed carried out by the National Institute of Health and Safety at Work in 1988 and 1989.

This study is one of a series of sectoral health analyses which will extend to other manufacturing sectors.

1.4 Origin and history

In 1988 the National Institute of Health and Safety at Work set up a group of experts to arrange for the medical examinations carried out on the labour force by the medical services to be recorded, to establish uniform criteria and methods for the early detection of the

effects of exposure to industrial hazards, to design data carriers suitable for easy computer processing and to adopt an international code for the classification of diseases (WONCA). During the second half of 1989 and in 1990 this resulted in the gathering of uniform data relating to all the workers examined.

II. Aims

2.1 General aim

As an investigation aimed at prevention, this project proposes to study the morbidity prevailing among timber-sector workers.

2.2 Users and intended recipients

Government and private organizations concerned with industrial health as well as those professionally concerned with combating occupational hazards and especially epidemiologists and industrial health specialists. Furthermore, these studies have a significance for risk prevention which goes beyond the work environment as the conclusions reached are also of use to the National Health Service.

III. Description

3.1 Frequency

This is a study programmed for 1990 and 1991.

3.2 Methodology

Workers examined by the medical services of the National Institute of Health and Safety at Work and employed in the timber sector.

3.2.1 Organization

The data are collected by the medical services of the offices of the National Institute of Health and Safety at Work.

The data are scrutinized, processed and analysed by the Technical Subdirectorate of the National Institute of Health and Safety at Work.

The sample covers all the workers undergoing medical examination in the sector under analysis.

3.3 Data

3.3.1 List of data

The tools used in the study cover the following variables:

1 a) Cornell Medical Index health survey
- . sex
- . date of birth
- . identification data
- . personal medical history
- . present symptoms of disease
- . details of exposure at work

1 b) General report
- . sex
- . age
- . identification data
- . prior employment history
- . present employment history
- . family medical history
- . personal medical history
- . toxic habits
- . personal hygiene
- . medical examination
- . complementary examinations

1 c) Specific reports concerning the effects of exposure on health
- . sex
- . age
- . identification data
- . personal history relating specifically to the disease under consideration
- . present symptoms of the disease
- . specific medical examination
- . specific complementary tests

The following reports have been formulated under this heading:
- . specific report on broncho-pulmonary disease
- . specific report on skin diseases
- . specific report on osteo-muscular complaints

1 d) Specific reports by agents
- . sex
- . age
- . identification data
- . present relevant symptoms
- . specific medical examination
- . specific complementary examinations

The following reports have been formulated under this heading:
- . specific report on exposure to noise
- . specific report on exposure to solvents

3.3.2 Breakdown

The project initially proposes to carry out a descriptive study of the workers in the various sectors analysed, followed by a study aimed at

determining the jobs and groups subject to risk and the predominant complaints in each of these.

IV. Output and users

4.1 Output types and their influence

As the project is still in progress there is as yet no final output. The following measures are planned:
- preparation of a report
- preparation of articles
- preparation of an information document
- organization of an event to present the results

4.2 Accessibility

The data, subject to non-attribution, are freely accessible and the publications will be obtainable from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This is planned, although only for internal use by the technical staff of the National Institute of Health and Safety at Work.

4.4 Users and current recipients

At present only a medical report is prepared for the worker concerned, and it is intended that the rest of the information will be disseminated via the government and private organizations concerned with industrial health and those professionally concerned with combating occupational hazards, especially epidemiologists and specialists in industrial medicine.

V. Critical analysis

In the present phase of the project it is not yet possible to undertake a critical analysis. The activities carried out so far have gone according to plan.

Investigation into special accidents: Accidents due to machines

0. Introduction

In view of the special importance and gravity of accidents due to machines, this information system is designed to collect specific relevant details to back up those obtained through the normal accident notification system.

I. General and structural context

1.1 Identification

Investigación de accidentes especiales: Accidentes producidos por máquinas
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

The concern here is a method of collecting information about the salient characteristics of accidents due to machines and their consequences and causes.

The same approach to the search for specific details relating to certain accidents of great concern from the point of view of prevention and similar methodological procedures are currently being used to investigate electrical accidents and accidents in building operations.

1.4 Origin and history

In Baracaldo (Vizcaya) the National Institute of Health and Safety at Work has under its aegis the National Machinery Supervisory Centre

where two action programmes are under way, one of which is concerned with machinery surveillance with a view to preventive measures in the furtherance of the safety of machines.

In this context, the promulgation in 1986 of the regulations governing the safety of machines and the approval of Directive 89/392/EEC relating to the harmonization of the legislation on machines of the Member States are substantially changing the previous statutory framework and creating new needs with regard to inspection and standardization.

To cope with these needs it was necessary to acquire specific information on the safety aspects of machines, and for that purpose a specific methodology was formulated for investigating the accidents due to machinery. This started to be applied in 1988 and was subsequently amended in 1989.

II. Aims

2.1 General aim

To obtain information about accidents due to machines with a view to guiding forthcoming legislation on the safety of machines and widening the knowledge conducive to the prevention of this type of accident.

2.2 Users and intended recipients

The results of this investigation are of major interest for all the sectors concerned with machinery, particularly manufacturers and operators, as well as for the government and private organizations engaged in combating occupational hazards.

III. Description

3.1 Frequency

This is a continuous system in so far as the methodology is applied on every occasion when a serious, very serious or fatal accident due to a machine occurs.

3.2 Methodology

3.2.1 Field

The following categories of machine are excluded:
- machines whose only source of power is directly applied human effort
- machines for medical use in direct contact with the patient
- steam boilers and pressure vessels
- firearms

- machines specially designed or used for nuclear applications the failure of which can give rise to emissions of radioactivity radioactive sources integral to a machine
- storage facilities and pipelines for petrol, diesel fuel, flammable liquids and hazardous substances

3.2.2 Organization

All the provincial technical offices of the National Institute of Health and Safety at Work and a number of the autonomous communities with delegated health and safety responsibilities are participating in the performance of this project.

When a serious, very serious or fatal accident occurs, and in the case of slight accidents of special importance, a technical officer of the appropriate technical office carries out an investigation based on the specific questionnaire, which is sent to the National Machinery Supervisory Centre in Baracaldo (Vizcaya) where the relevant data are scrutinized, processed and analysed.

3.2.3 Procedure

The questionnaire used is standardized and comprises mainly closed-ended questions. It is normally accompanied by photographs and specifications of the machine in question.

3.3 Data

3.3.1 List of data

The following questions are included in the questionnaire:

Details of the worker suffering the accident
- surname and given names
- sex
- date of birth
- occupation
- contract type
- seniority in job

Details of company and workplace
- name of company
- address of company and workplace
- main activity of workplace
- payroll

Details of the machine
- machine type, model and series
- year of manufacture
- certificate attesting that the machine conforms to the safety rules laid down by the Regulations for the Safety of Machines (applicable to those manufactured or imported after 21.1.87)

- instruction manual (for those manufactured or imported after 21.1.87)
- types of power supplied to the machine
- technology used in the control circuit

Materials processed
- normally
- at the time of the accident

Work environment and location
- noise
- fire or explosion risk

Function performed
- normal function of machine in question
- supply of materials
  . at time of accident
  . suitability for operation
  . provision of feed system
  . was system provided actually in use?
- operating and control modes
  . mode in use at time of accident
  . suitability for operation
  . intended operating mode
  .was intended operating mode actually in use?
- intended operating mode
- suitability for operation
- need for more than one worker to start machine
- discharge/release system:
  . type in use at time of accident
  . suitability for operation
  . provision of discharge/release system
  . was the system provided actually in use?
  . intended system
  . suitability for operation
- phase of machine's life in which accident occurred
- operation in progress when the accident occurred

Other working conditions
- work rated by output
- solitary work
- night work
- other conditions

Details of accident
- date
- witnesses
- time of day
- working hour
- type of accident
- part of the machine which caused the accident

Details of consequences
- degree of injury
- description of injury
- part of body injured
- date of medical certificate
- date of medical discharge
- conclusion of medical report and, where applicable, type of permanent vocational disability

Causes of accident
- factors connected with installations, machines or tools
  . failures of intrinsic safety system
  . defects in or absence of safety elements or devices
- factors connected with materials
- factors connected with work environment and location
  . physical agents
  . chemical agents
  . spaces, access and areas for working and moving
- factors connected with job
  . exceptional nature of job
  . shortcomings in working methods
  . unsuitability for job of machines, tools or materials
  . defects in job organization
- factors connected with work organization and accident prevention
  . defects in work organization
  . defects in accident prevention management
- individual factors
- classification of detected factors
  . permanent or sporadic in character
  . direct or indirect cause
  . chronological sequence

3.3.2 Breakdown

At the moment the incoming reports dealing with accidents which occurred in 1989 are being studied with the intention of presenting the results at a technical conference, and for this purpose relationships are being established between the various factors involved. On completion of this work it will be possible to highlight the significant links.

IV. Output and users

4.1 Output types and their influence

To date the entire body of information received and analysed has only been used to extract partial items of intelligence to respond to specific requests. At present the data relating to 1989 are being examined with a view to presenting the results at a technical conference arranged for machine manufacturers and operators and for technical staff and professionals concerned with safety from government and private bodies.

One of the main aims of this conference is to heighten the awareness of manufacturers and operators regarding their responsibilities in the matter of accident prevention in line with the relevant national and Community regulations on this subject. New publications are also being prepared to draw attention to the methodology used and the results obtained.

4.2 Accessibility

The data are freely available and the publications issued will be obtainable from the Publications Department of the National Institute of Health and Safety at Work.

4.3 Integrated database

This is not planned at present.

4.4 Users and current recipients

Machine manufacturers and operators and safety staff from government and private bodies concerned with accidents at work.

V. Critical analysis

At present the main problem in this work is its lack of geographical coverage, as there are some autonomous communities which are not taking part and, given that the missing areas include some centres of lively industrial activity, the information obtained may exhibit some sizeable gaps.

With regard to the methodology used in accident investigation, advances have been made on the initial questionnaire as far as the determination and sequence of causes are concerned, but a further step probably has to be taken beyond the questionnaire currently in use reflected in the request that each one submitted should be accompanied by a "tree of causes".

Map of hazards in the hospital sector

0. Introduction

Hazard maps are information systems relating to the health risks to the workers within a given sector of activity. They are compiled in such a way that these risks can be located and evaluated and the exposure of the various groups of affected workers can be established.

The special characteristics of the hospital sector suggested that it would be advisable to devise a specific methodology different from that used for the rest of the hazard maps compiled by the National Institute of Health and Safety at Work.

I. General and structural context

1.1 Identification

Mapa de riesgo del sector hospitalario
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

Sectoral hazard maps are studies aimed at establishing existing occupational hazards as a suitable guide to preventive measures.

1.4 Origin and history

The National Institute of Health and Safety at Work started to compile hazard maps with the one for the autonomous community of La Rioja, and this gave rise to the maps relating to 24 industrial sectors in the three-year period 1988-1990, which followed similar methodological lines. However, when it came to preparing a hazard map for the hospital sector, its special characteristics made it advisable to devise a specific methodology different from the rest.

With this aim a working group of the National Institute of Health and Safety at Work formulated an alternative methodology, and this is now being applied on an experimental basis in eight hospital centres.

II. Aims

2.1 General aim

- To determine particular risks occurring in hospital centres and their degree of danger and noxiousness at individual, provincial, autonomous community and national level.
- To determine the existing risk factors and on that basis provide the hospital centre with comments on their elimination or control at the end of the visits of inspection.
- To investigate certain aspects of the working conditions which tend to occur in the hospital centres of our country and their possible interrelationship with health.
- To promote a self-generated awareness of the prevention of occupational risks in the hospital sector among those to whom the hazard map applies.

2.2 Users and intended recipients

The information gathered is very useful to all the sectors concerned with the improvement of working conditions in hospitals, including especially hospital administrations and trade-union organizations, for which it should provide matter for thought and discussion with a view to the adoption of suitable preventive measures.

III. Description

3.1 Frequency

In its present phase the study is centred on eight hospital centres. On completion, a proposal will be made that it should be extended to a larger number of hospital centres.

3.2 Methodology

3.2.1 Field

At present, public-sector hospital centres

3.2.2 Organization

Data are being collected by a technical officer of the National Institute of Health and Safety at Work in close collaboration with the Preventive Medicine Service, the Health and Safety Committee, the Maintenance Service and other appropriate groups.

At present the methodology which has been devised is being applied experimentally to eight hospital centres located in Madrid, Barcelona, Zaragoza, Valladolid and Vitoria (Alava).

3.2.3 Procedure

For this hazard map the basic method of working relies on data collection by means of standardized questionnaires of the check-list type which are completed by a technical officer of the National Institute of Health and Safety at Work from his own observations.

With regard to evaluation, each defect or risk factor is assigned a preset points rating, and pre-established weighting factors are then used to evaluate "the level of probability of the risk materializing".

The following three information levels are used:
- enquiries relating to the hospital centre covering general information about the centre, reports on accidents at work and occupational diseases
- enquiries relating to the hospital building with the distribution of staff by services
- enquiries relating to the service or unit with the distribution of the relevant staff, questionnaires about general and specific hazards and a record card noting risks of accident and exposure to undetected pollutants

3.3 Data

3.3.1 List of data

The services potentially existing in a hospital have been divided into sixteen sanitary services, seven non-sanitary services and nine general services/facilities. The questionnaires to be used in each of these have been specified. A complete inventory for the project as a whole is set out below:

- distribution of service staff
- working area - general
- working area - individual work station
- environmental factors - lighting
- environmental factors - thermal environment
- environmental factors - noise
- environmental factors - ventilation
- physical workload - working posture
- physical workload - horizontal movements
- physical workload - movements
- physical workload - load-handling
- direct electrical contact on installations and receivers
- indirect electrical contact on installations and receivers
- cuts with glassware
- catching in machinery
- burns in autoclaves
- contacts with caustic and/or corrosive substances

- exposure to ionizing radiation
- exposure to ionizing radiation (handling of radioisotopes)
- explosion of autoclaves
- fire (laboratories)
- initiating factors
- sectorization
- firefighting facilities
- exposure to chemical pollutants - inhalation/skin contact
- exposure to formaldehyde
- exposure to carcinogens
- exposure to chemical pollutants - mercury
- consumption of chemical products
- exposure to biological agents (laboratories)
- exposure to biological agents - preservation facilities
- evaluation of the risks of accident and exposure to pollutants detected by the technical officer and not previously considered
- exposure to biological agents
- exposure to biological agents (intensive care)
- exposure to biological agents
- exposure to ionizing radiation (administration of radioisotopes)
- exposure to ionizing radiation (radiological equipment)
- exposure to cytostatic medicines (preparation and administration)
- work area
- exposure to chemical pollutants - resins
- exposure to biological agents
- defects in electrical equipment of operating theatres
- indicators of mental load
- exposure to ethylene oxide
- fatigue from working with visual display units
- objects falling off shelves
- suffering cuts and getting caught in machinery and tools (kitchens)
- exposure to very cold environmental temperatures
- contact with hot materials
- exposure to ammonia gas in refrigerating systems
- conditions in boiler installations
- general safety conditions of gas systems
- safety conditions of gas bottles
- safety conditions of stores
- inhalation of corrosive and irritating substances
- waste disposal
- waste collection
- blows and cuts caused by metal parts
- particles ejected by machines
- suffering cuts and/or getting caught by machines (maintenance)
- radiation and/or contact with heated objects when welding
- electric shock in high-voltage work
- use of pyralene (PCB) in processing centres
- electric shock in low-voltage work
- fire and explosion in special operations
- exposure to chemical pollutants and welding fumes
- collective safety measures against fires in the building
- guarantee of continuity of supply of electricity to the hospital centre
- general safety conditions

3.3.2 Breakdown

In the present phase of the project it is intended that the results should be chiefly descriptive in character. It is proposed to undertake a joint evaluation of the data for each of the hazards and working conditions investigated in each of the services or units of the hospital centre.

The analytical methodology of this hazard map provides for the need to distinguish between the detected and evaluated risks and the actually occurring accidents, occupational diseases or complaints, including other non-specific work-related pathologies (despite the difficulty in identifying a correlation between existing risks and actual incidents owing to the range of imponderables operating in the work environment) in order to establish guidelines which in some way or other will assist in correcting the evaluative criteria in future, which must be modified in the light of the experience furnished by the hazard map and the real world.

IV. Output and users

4.1 Output types and their influence

In the main this project has three outputs with a clear preventive function:

1. The analytical methodology is a tool of great value for the study of an area as complex as the health sector.

2. The results applied to a particular centre enable it to pinpoint and arrange its shortcomings in order of priority so that it is able to devise suitable preventive strategies.

3. The results at sectoral level enable an overall diagnosis to be made and assist in formulating the necessary action policies besides allowing comparisons to be made between centres.

Apart from the above, the results obtained will be made known through the information channels of the National Institute of Health and Safety at Work.

4.2 Accessibility

The reported data will be published and will be freely accessible subject to non-attribution.

4.3 Integrated database

This is not planned at present.

4.4 Users and current recipients

The technical staff of the National Institute of Health and Safety at Work and those involved in hospital administration and the trade-union organizations.

V. Critical analysis

At the moment data collection has just begun on an experimental basis at eight hospitals, and it is therefore still too early to make any critical comments about the applied methodology.

Industrial-product database

0. Introduction

This is a projected information system concerning industrial products liable to affect the health of workers.

I. General and structural context

1.1 Identification

Banco de datos de productos industriales
National Institute of Health and Safety at Work (INSHT)
C/Torrelaguna, 73
28027 Madrid
Spain

Telephone: 404.80.00
Telefax: 403.25.73

1.2 Institutional context

The National Institute of Health and Safety at Work is an autonomous organ of the Ministry of Labour and Social Security controlled by a tripartite council including government, trade-union and employers' representatives. Its activities are funded out of the national budget.

1.3 General profile

This is a project for establishing an information system based initially on the data obtained for compiling the sectoral hazard maps and supplemented by planned data collection and analyses relating to specific products.

1.4 Origin and history

In compiling the sectoral hazard maps the aim is to pinpoint the risks arising from the various products and raw materials handled in each industrial sector. For that purpose samples of these are analysed in industrial health laboratories so as to determine their composition in quantitative and qualitative terms with a view to drawing attention to the resulting problems in the report to each hazard map.

The industrial-product database encompasses the information resulting from all these analyses and keeps it available for later consultation.

At a later stage, in order to fill in the gaps for certain products, it is proposed that data will be collected on selected specific product groups.

II. Aims

2.1 General aim

To determine the qualitative and quantitative composition of the various raw materials and products used in the different industrial sectors in order to identify the risks threatening the health of workers and propose suitable preventive measures.

2.2 Users and intended recipients

Initially it is intended that the project should meet the information requirements of the technical staff of the National Institute of Health and Safety at Work, although it is envisaged that the database may later be used by any person or body concerned with industrial health.

III. Description

3.1 Frequency

This is a continuous information-gathering system.

3.2 Methodology

3.2.1 Field

In view of the data available from the analyses carried out for the preparation of the sectoral hazard maps and to provide selective supplementary information relating to certain product groups, the following products in particular sectors have been initially selected:

Activity	Product type
Timber	paints varnishes preservatives catalysts solvents and thinners
Vehicle repair shops	soundproofing paints* varnishes fillers solvents and thinners

Industrial structural workshops	oils and fluids finishing paints* thinners
Footwear	adhesives polishes cleaning solvents catalysts
Clothing industry	cleaning agents adhesives and glues mineral fibres
Ceramics	enamels
Silkscreen printing	inks

* Analysis of solvents and metals

3.2.2 Organization

The analyses of the various products have been apportioned to different laboratories, and they will scrutinize the available information and decide in each case on the need to carry out sampling and analysis.

Subsequently the technical staff of the National Institute of Health and Safety at Work will collect the materials and send them to the laboratories for analysis and will be responsible for the reports and the gradual building-up of the database.

In addition, they will have to record all the identification data, which will have to be forwarded to the laboratory at the National Machinery Supervisory Centre in Baracaldo (Vizcaya) which is responsible for co-ordinating the database.

The samples used are not statistically based. For the hazard maps a distribution of processes and functions was worked out showing where these samples had to be collected as a function of the expected product range. Later on, any gaps found will be filled in by specific enquiries.

3.2.3 Procedure

Each sample is sent to the laboratory with a label giving the necessary identification data, and the results of the analysis are also set down on a special form.

3.3 Data

3.3.1 List of data

1) For the units submitting the samples:
- source
- identification number of company
- project number (INSHT code)
- business activity
- process and function in which the product is used (INSHT code)
- sample number (numbered by unit submitting sample)
- laboratory for which it is intended
- date of despatch
- commercial name of product
- product code (INSHT code)
- manufacturer
- manufacturer's reference
- regulation label (yes, if conforming to legal requirements)
- R details (this refers to the label information drawing attention to associated risks, as laid down in the regulations)
- remarks on the raw material

2) For the analytical laboratories
- sample number (numbered by the laboratory)
- CAS number
- agent code (INSHT code)
- common designation
- composition index (estimated concentration/reference quantity)
- quantitative determination
- analytical technique(s) employed
- remarks on analysis

3.3.2 Breakdown

In the processing carried out to date the data for each product have been related to the following variables:
- business activity
- processes and function in which the product is used

IV. Output and users

4.1 Output type and influence

At the present stage of the project, reports containing the results obtained have been prepared for each hazard map for inclusion in the relevant specific studies in view of the importance of the information.

In addition, many requests for information about the composition of certain products have been dealt with. These have mainly originated from the technical staff of the National Institute of Health and Safety at Work, as there have been few approaches from outside.

4.2 Accessibility

At present the industrial-product database is a project in the course of development and for that reason the conditions governing access to the information are not yet clearly defined, although it is certain to be openly available.

4.3 Integrated database

Work is proceeding on the creation of an integrated database internal to the National Institute of Health and Safety at Work.

4.4 Users and current recipients

At present mainly the technical staff of the National Institute of Health and Safety at Work as a back-up to their activities in the interests of prevention.

V. Critical analysis

As this is a recently initiated project any critical analysis would be premature.

Systems for Monitoring Working Conditions related to Health and Safety

PORTUGAL

Extensive Descriptions

Alejo Fraile Cantalejo

Instituto Nacional de Seguridad e Higiene en el Trabajo

13 July 1990

INTRODUCTION

In Portugal the systems for gathering information about working conditions relating to health are shared between various bodies and vary very widely in their methodological characteristics since, besides those officials who bear specific responsibility for these systems in their function as statisticians, there are those who are professionally concerned with health and safety at work for whom the information and the systems used to gather it form part of their day-to-day work and who need this information to programme their activities and gauge their effectiveness.

Broadly speaking, the systems covered by the report are spread over both groups, so that, for instance, those which are the responsibility of the Statistics Department of the Ministry of Employment and Social Security encompass information about accidents at work as well as many periodical or sporadic surveys of the job position, working hours, the social aspects of work and so on.

An important element in this type of information is that concerned with occupational diseases, which is handled by the National Insurance Fund for Occupational Diseases, the organization responsible for providing the legal cover for these eventualities.

The body which is specifically concerned with activities directly relating to the health of the workforce is the Directorate General for Health and Safety at Work of the Ministry of Employment and Social Security. This body carries out studies, including those of a sectoral character, such as the ones considered in the attached report and others, eg those on "Booths for motorway cashiers" and "The characteristics and effects of working with VDUs".

The same body is also responsible for the statutory supervision of vinyl chloride, lead and asbestos as well as for information, publicity and training services.

Finally, the bodies considered in the report as having responsibility for some research aimed at collecting information relevant to the health of the workforce include the National School of Public Health, where a study is shortly to be undertaken of the anthropometric characteristics of the working population of the Lisbon area.

Information on accidents at work

0. Introduction

This report covers the characteristics of the system used in Portugal for the notification, recording and treatment of accidents at work. The methodology in use at present is being reviewed by a working group with a view to its modification.

1. General and structural context

1.1 Identification

"Informação de Acidentes de Trabalho"
Statistics Department
Ministry of Employment and Social Security
R. Rodrigo da Fonseca, 55
1227 Lisbon Codex
Portugal

Tel.: 575720
Telex: 62704/P DEMTSS
Telefax: 537809

1.2 Institutional context

The Statistics Department of the Ministry of Employment and Social Security is a delegated organ of the National Institute of Statistics and its activities are funded from the Ministry's general budget.

1.3 General profile

As a reference figure, 76 731 accidents, 88 of them fatal, occurred in the third quarter of 1989.

1.4 Origin and history

The obligation to report accidents at work is imposed by the law.

II. Aims

2.1 General aim

The general aim is to provide information concerning accidents which have occurred at work with a view to assisting in setting up preventive measures.

2.2 Users and listed recipients

Government organs (Labour Inspectorate, Directorate General for Health and Safety at Work, etc)
Employers' organizations
Trade-union organizations

III. Description

3.1 Frequency

This is a continuous information-gathering system.

3.2 Methodology

3.2.1 Field

The information relates to accidents causing more than 1 day's absence from work.

3.2.2 Organization

When an accident occurs at work, the insurance company, or the enterprise itself if it is in a position to do so, has to send notification to the competent tribunals, which in turn pass on a copy to the National Institute of Statistics for forwarding to the Statistics Department.

3.2.3 Procedure

Notification has to be made in a specific document already prepared for that purpose.

3.3 Data

3.3.1 List of data

Data are gathered concerning the company (activity, area), the accident (gravity, injured part of the body, causes) and the worker concerned (sex and age).

3.3.2 Breakdown of data

The data are broken down as follows:
- gravity - areas
- activity - gravity
- activity - age and sex
- activity - causes
- activity - injured part of the body

IV. Output and users

4.1 Output types and their influence

A quarterly bulletin is issued.

4.2 Accessibility

Access to the information is entirely free and no charge is made.

4.3 Integrated databases

Do not exist at present.

4.4 Users and present recipients

The quarterly statistical bulletin is distributed to government organs and the social agents.

Information on occupational diseases

0. Introduction

The information concerned is obtained from notifications of occupational diseases and the resulting permanent disabilities.

I. General and structural context

1.1 Identification

"Informação de Doenças Profissionais"
National Insurance Fund for Occupational Diseases
Avda. da República, 25 - 1º Esq.
1094 Lisbon Codex
Portugal

Tel.: 547153

1.2 Institutional context

Information on occupational diseases is the responsibility of the Statistics Department of the Social Security Financial Management Institute.

1.3 General profile

As a reference figure, 15 567 occupational diseases were registered in 1989. These were classified in the following groups:
10 500 cases of pneumoconiosis, 3289 cases of deafness, 810 cases of dermatosis and 968 cases of other types.

1.4 Origin and history

Under the law the reporting of any disease which may be occupational in origin is compulsory.

II. Aims

2.1 General aim

To provide the workers concerned with the appropriate statutory cover and obtain suitable information for the guidance of preventive measures.

2.2 Users and listed recipients

- Administration of the Insurance Fund for Occupational Diseases

- Labour Inspectorate
- Directorate General for Health and Safety at Work
- Employers' organizations
- Trade-union organizations

III. Description

3.1 Frequency

This is a continuous information-gathering system.

3.2 Methodology

3.2.1 Field

The National Insurance Fund for Occupational Diseases covers all employees, and the self-employed who apply, with the exception of civil servants.

3.2.2 Organization

The law requires that any doctor diagnosing a disease which may be occupational in origin should report it to the National Insurance Fund for Occupational Diseases, which will undertake the necessary analysis and evaluate the resulting degree of incapacity.

3.2.3 Procedure

There is a special form for reporting the disease. 6

3.3 Data

3.3.1 List of data

The data collected relate to the company, the worker, his workplace, the disease and the hazards to which the worker is exposed.

3.3.2 Breakdown of data

The data are broken down as follows:
types of disease - sex
degrees of incapacity - sex
age - sex
progression of the degrees of incapacity

IV. Output and users

4.1 Output type and influence

The main data are published annually.

4.2 Accessibility

Access to earlier data is free and no charge is made.

4.3 Integrated database

None exists at present.

4.4 Users and present recipients

The data obtained are circulated to the government organs concerned and to the social agents.

V. Critical analysis

The existing data are processed manually and mechanization will enable the information to be put to better use and make a more effective contribution to the guidance of preventive measures.

Information on workforce structure

0. Introduction

This is an annual report based on a statistical data analysis for a range of company operating variables: company structure, jobs, working time, pay and collective labour-regulating mechanism.

I. General and structural context

1.1 Identification

"Quadros de pessoal"
Statistics Department
Ministry of Employment and Social Security
R. Rodrigo da Fonseca, 55
1227 Lisbon Codex
Portugal

Tel.: 575720
Telex: 62704 DEMTSS P
Telefax: 537809

1.2 Institutional context

This activity is one of those carried out by the Statistics Department in order to supply pertinent information to the Ministry of Employment and Social Security and to the social agents.

1.3 General profile

The data in the 1988 report relate to 117 474 companies, 138 093 plants and a total of 1 799 892 employees.

1.4 Origin and history

Under the law companies are obliged to supply this information to the Ministry of Employment and Social Security. 9

II. Aims

2.1 General aim

The provision of information reflecting the real conditions affecting the workforce of Portuguese companies.

2.2 Users and listed recipients

The Ministry of Employment and Social Security and the social agents

III. Description

3.1 Frequency

Yearly

3.2 Methodology

3.2.1 Field

All companies with an employed workforce, except for government offices and domestic service.

3.2.2 Organization

All the companies concerned have to submit the completed records to the Ministry of Employment and Social Security, where the information is processed and analysed by the Statistics Department.

3.2.3 Procedure

The forms to be completed are prepared beforehand.

3.3 Data

3.3.1 List of data

Number of enterprises, number of plants, number of workers, trend in employment, average weekly working hours, overtime, average weekly overtime, average monthly and hourly pay rates, collective labour-regulating mechanism and workers affected, business activity, and the sex, age and skill level of employees together with their educational level, occupation and seniority within the firm.

3.3.2 Procedure

The various sets of variables are arranged in the following groups:

Overall data
number of enterprises by business activity
number of enterprises by area
number of workers by skill level and sex
average monthly pay by skill level and sex

Company structure
number of companies by business activity and size
number of workers in companies by business activity and size
number of plants by business activity and size

number of workers in plants by business activity and size
number of companies by business activity and sales volume
number of companies by business activity and legal status of company
trend in employment by area and business activity

Employment
number of workers by business activity and occupation
number of workers by business activity and educational level
number of workers by age and educational level
number of workers by business activity and seniority in firm
number of workers by business activity, skill level and sex
number of workers by business activity and occupation
number of workers by business activity, age and sex

Working hours
number of workers by business activity and working hours
number of part-time workers by business activity and working hours
average weekly full-time working hours by business activity and skill level
average weekly working hours by business activity, skill level and sex
average monthly working hours by business activity and occupation
average weekly working hours by business activity and educational level
percentage of workers on overtime by business activity, skill level and sex
average weekly overtime by business activity and skill level

Pay
average monthly pay by business activity and size
average monthly pay by business activity, skill level and sex
average monthly pay by business activity and seniority in the firm
average hourly pay rates by business activity, skill level and sex

Collective labour-regulating mechanism
collective regulating mechanisms with number of workers affected, average monthly pay and average weekly working hours

IV. Output and users

4.1 Product types and their influence

A quarterly bulletin is issued and many additional requests for information are dealt with.

4.2 Accessibility

The report can be obtained from the Information Service of the Ministry of Employment and Social Security.

4.3 Integrated databases

These do not exist at present.

4.4 Users and listed recipients

The above report is included in the publication programme of the Statistics Department and is circulated to the appropriate government organs as well as to the employers' and trade-union associations.

V. Critical analysis

The system is considered to fulfil its designated aims.

Quarterly employment survey

0. Introduction

This is a study designed to identify the employment trend in Portugal.

I. General and structural context

1.1 Identification

"Inquérito Trimestral de Emprego"
Statistics Department
Ministry of Employment and Social Security
R. Rodrigo da Fonseca, 55
1227 Lisbon Codex
Portugal

Tel.: 575720
Telex: 62704 DEMTSS P
Telefax: 537809

1.2 Institutional context

This activity is one of those carried out by the Statistics Department in order to supply pertinent information to the Ministry of Employment and Social Security and the social agents.

1.3 General profile

The survey is specially concerned with measuring the "structured employment" dimension of employed labour.

1.4 Origin and history

Meeting the information requirements of the Ministry of Employment and Social Security.

II. Aims

2.1 General aim

To provide information for the guidance of employment policies and for the conduct of investigations.

2.2 Users and listed recipients

The Ministry of Employment and Social Security and the social agents concerned with employment.

III. Description

3.1 Frequency

Quarterly

3.2 Methodology

3.2.1 Field

The survey is centred on employed labour excluding farming, fishing, government offices and domestic service.

3.2.2 Organization

A sample of companies stratified according to their business activities and size of workforce is selected, and these are sent a questionnaire by post. The incoming data are analysed by the Statistics Department.

3.2.3 Procedure

Use is made of a special questionnaire listing the details required.

3.3 Data

3.3.1 List of data

The data considered in the publication referred to are as follows: employment index, type of contract, personnel flow (recruitment), reasons for flow of personnel, business activity and sexes.

3.3.2 Breakdown of data

The data are broken down into the following sets:
- employment index by business activity and sex
- employment index by business activity and monthly trend
- contract type by business activity and sex
- personnel flow (recruitment and job losses) by business activity and sex
- personnel flow (recruitment and job losses) by business activity and cause

IV. Output and users

4.1 Output types and their influence

A quarterly bulletin is issued and many additional requests for information are dealt with.

4.2 Accessibility

The report is obtainable from the Information Service of the Ministry of Employment and Social Security.

4.3 Integrated databases

These do not exist at present.

4.4 Users and listed recipients

The above survey is included in the publication programme of the Statistics Department and is circulated to the appropriate government organs as well as to the employers' and trade-union associations.

V. Critical analysis

The results obtained fulfil the designated aims.

Social Review

0. Introduction

This is a report on statistical data of a social nature, including a number which relate to working conditions.

I. General and structural context

1.1 Identification

"Balanço Social"
Statistics Department
Ministry of Employment and Social Security
R. Rodrigo da Fonseca, 55
1227 Lisbon Codex
Portugal

Tel.: 575720
Telex: 62704 DEMTSS P
Telefax: 537809

1.2 Institutional context

Companies are obliged to send the Labour Inspectorate the details relevant to the Social Review.

1.3 General profile

The report for 1988 includes details of 342 enterprises, of which 49 were public and 223 private, and relates to a total of 480 936 workers.

1.4 Origin and history

A law enacted in 1985 stipulates that all companies with a workforce of more than 100 must compile an annual social review, although this requirement is to come into force in stages and becomes generally mandatory from 1 January 1988.

II. Aims

2.1 General aim

To provide information concerning some quantifiable aspects of the company's social activity.

2.2 Users and listed recipients

Government organs (Labour Inspectorate, Directorate General for Health and Safety at Work, etc)
Employers' organizations
Trade-union organizations

III. Description

3.1 Frequency

The reports are submitted by companies annually and it is planned to publish a periodical analysis of the results.

3.2 Methodology

3.2.1 Field

All companies, public and private, with a workforce of more than 100 are included, although operation of the law started in 1986 for those with over 500 and with effect from 1 January 1988 for those with over 100 workers.

There are some differences between the details required from companies with 100-499 workers and the rest.

3.2.2 Organization

Besides being sent to the Labour Inspectorate, the social-review data must be passed to the Statistics Department of the Ministry of Employment and Social Security for preparing the information for publication.

3.2.3 Procedure

A questionnaire has been prepared for gathering the information.

3.3 Data

3.3.1 List of data

Vocational skills, age, sex, seniority in the company, educational level, types of contract, changes in personnel, promotions, working hours, absenteeism, pay rates and social facilities, accident rates, training, staff relations and social activities.

3.3.2 Breakdown of data

The published report containing the data for 1988 presents tables relating the following variables:
- skill and type of contract

- business activity in relation to: age, educational level, seniority in company, type of contract, sex, dismissals, promotions, working hours, type of timetable, overtime, absenteeism and its causes, temporary inactivity, labour costs and annual cost per worker, wage scale, accidents according to gravity, days lost due to occupational diseases, Health, Safety and Medicine at Work index, vocational training, types and rating of social activities, level of trade-union membership

IV. Output and users

4.1 Product type and influence

A report has been published based on the 1988 data relating to private companies with a workforce of over 500 and to public undertakings with a government holding of 33.5% or over. Many additional requests for information are also dealt with.

4.2 Accessibility

The report is obtainable from the Information Service of the Ministry of Employment and Social Security.

4.3 Integrated database

This does not exist at present.

4.4 Users and listed recipients

The above report is part of the publication programme of the Statistics Department and is circulated to the appropriate government organs as well as to the employers' and trade-union associations.

Sectoral studies: Health and safety at work in the food and non-alcoholic drinks industries

0. Introduction

These are studies carried out by the Directorate General for Health and Safety at Work which aim to provide a picture of the health and safety conditions prevailing in certain areas of economic activity. Similar studies have been performed, and the example taken here is that relating to the food and non-alcoholic drinks industries.

I. General and structural context

1.1 Identification

"Higiene e Segurança do Trabalho em Indústrias Alimentares e de Bebidas Não Alcoólicas"
Directorate General for Health and Safety at Work
Avda. da República, 84-5º
1600 Lisbon Codex
Portugal

Tel.: 773032
Telex: 16704 MTRA P
Telefax: 777709

1.2 Institutional context

These studies are among those customarily carried out by the Directorate General for Health and Safety at Work with the object of identifying the hazards to the health of Portuguese workers and of guiding suitable preventive measures.

1.3 General profile

The study is descriptive in character and considers the main conditions affecting health and safety at work in an economic sector comprising 207 companies and 3402 workers.

1.4 Origin and history

The sectoral studies are initiated by the Directorate General for Health and Safety at Work which selects the priority sectors.

II. Aims

2.1 General aim

This is an investigation aimed at establishing the health and safety conditions prevailing in an industrial sector with the ultimate purpose of devising the preventive measures necessary to their improvement.

2.2 Users and listed recipients

Employers' and trade-union associations within the business sector under consideration
Government organs, the Ministry of Employment and Social Security, the Ministry of Health, the Labour Inspectorate and the National Insurance Fund for Occupational Diseases

III. Description

3.1 Frequency

This type of study is not performed at set intervals.

3.2 Methodology

3.2.1 Field

The study relates to all companies in the food sector (preserved meat, fish and vegetables) and the non-alcoholic drinks industry (carbonated and non-carbonated).

3.2.2 Organization

The data were gathered and analysed by two technical teams from the Directorate General for Health and Safety at Work which visited a total sample of 81 companies in the Lisbon, Santarem and Set#bal areas chosen by reference to their accident rates.

3.2.3 Procedure

Before the visits a "health and safety at work evaluation card" was prepared to ensure that the information gathered was clear and unambiguous.

Where circumstances suggested that this was advisable, measurements were carried out on noise, lighting and thermal environment.

3.3 Data

On the company: business activity, number of workers, age, updating of plant, medical services, organization of Safety at Work Services, and

bodies concerned with health and safety at work which had been in contact with the companies.

On the working conditions: accidents, state of the building, fire precautions, protection of machinery, noise, lighting, individual protective gear, ventilation, electrical installation, movement of loads, temperature and humidity, toilets and cloakrooms, sanitary installations, safety signs and storage facilities.

3.2.2 Breakdown of data

The character of the report is essentially descriptive and in general each variable is subjected to independent analysis.

IV. Output and users

4.1 Output types and their influence

A report is compiled, including recommendations for preventive measures.

4.2 Accessibility

The report is available to the public and may be consulted at, or obtained from, the Directorate General for Health and Safety at Work.

4.3 Integrated database

This does not exist at present.

4.4 Users and listed recipients

The report is circulated to the main users, ie the employers' and trade-union associations in the sector under consideration, as well as to the government organs concerned with the health of the labour force.

V. Critical analysis

5.1 How can the situation be improved?

An obstacle standing in the way of the accomplishment of the study's preventive aims is the absence of pressure placed on the companies, a deficiency which might be overcome by more concerted action on the part of the government organs concerned, the Labour Inspectorate, the National Insurance Fund for Occupational Diseases, the National Health Institute and the Directorate General for Health and Safety at Work and by strengthening the links between these bodies and the employers' and trade-union associations.

Enquiry into the management of working hours

0. Introduction

This enquiry by the Statistics Department of the Ministry of Employment and Social Security was designed to determine a number of factors affecting the practice of flexitime in Portugal.

I. General and structural context

1.1 Identification

"Inquérito à Gestão do Tempo de Trabalho"
Statistics Department
Ministry of Employment and Social Security
R. Rodrigo da Fonseca, 55
1227 Lisbon Codex
Portugal

Tel.: 575720
Telex: 62704 DEMTSS P
Telefax: 537809

1.2 Institutional context

This activity is one of those carried out by the Statistics Department in order to supply pertinent information to the Ministry of Employment and Social Security and the social agents.

1.3 General profile

The study describes the various ways in which working hours are organized by the companies contacted.

1.4 Origin and history

This was a pilot exercise carried out on 23-28 November 1987.

II. Aims

2.1 General aim

To supply to the government departments and the social agents concerned information on the characteristics and distribution of the various arrangements governing working hours.

2.2 Users and listed recipients

The Ministry of Employment and Social Security and the social agents.

III. Description

3.1 Frequency

This was an isolated enquiry of an experimental character and no repetition is planned for the time being.

3.2 Methodology

3.2.1 Field

The enquiry relates to workplaces with more than 100 employees in the following sectors: processing industry, electricity, gas and water, building and public works, transport and communications.

3.2.2 Organization

The staff of the Statistics Department undertook the processing and analysis of the information received on a sample of companies variously rated according to their business activity and size.

3.2.3 Procedure

A questionnaire was prepared and sent to the companies for completion and return to the Statistics Department.

3.3 Data

3.3.1 List of data

- types of timetable (fixed, flexitime, shift work)
- night and Sunday work
- type of work (continuous, night work, Sunday work)
- companies using additional seasonal labour
- reason for this system
- business activity
- size of company

3.3.2 Breakdown of data

The data were broken down into the following sets:

- companies by types of timetable and business activity
- workers by types of timetable and business activity
- workers employed at night and on Sundays by business activity and sex
- companies by type of work and business activity
- companies employing additional seasonal labour by business activity and size

- reasons for employing additional seasonal labour by business activity

IV. Output and users

4.1 Output types and their influence

The results of the study were published.

4.2 Accessibility

The report is obtainable from the Information Service of the Ministry of Employment and Social Security.

4.3 Integrated database

This does not exist at present.

4.4 Users and listed recipients

The above report is part of the publication programme of the Statistics Department and is circulated to the appropriate government organs as well as to the employers' and trade-union associations.

V. Critical analysis

The system is considered to fulfil the designated objectives.

Enquiry into social working conditions

0. Introduction

This enquiry was designed to establish average working conditions.

I. General and structural context

1.1 Identification

"Inquérito às Condições Sociais do Trabalho"
Statistics Department
Ministry of Employment and Social Security
R. Rodrigo da Fonseca, 55
1227 Lisbon Codex
Portugal

Tel.: 575720
Telex: 62704 DEMTSS P
Telefax: 537809

1.2 Institutional context

This activity is one of those carried out by the Statistics Department in order to supply pertinent information to the Ministry of Employment and Social Security and the social agents.

1.3 General profile

The purpose of the study is to describe certain working conditions of the Portuguese labour force as established by an enquiry among a sample of companies and workers.

1.4 Origin and history

The exercise is based on an OECD Social Enquiry model and has been carried out in Lisbon on two occasions and most recently in 1988 in Setúbal, Santarem and Madeira. 30

II. Aims

2.1 General aim

To supply information on working conditions to government departments and facilitate investigations.

2.2 Users and listed recipients

The Ministry of Employment and Social Security and the social agents.

III. Description

3.1 Frequency

Irregular. The last study was carried out in 1988 and no repetition is planned for the time being.

3.2 Methodology

3.2.1 Field

Each study encompasses a restricted geographical area: Lisbon, Set#bal, Santarem and Madeira.

In each case the enquiry relates to employed labour, excluding agriculture, and to workplaces with over 9 employees.

3.2.2 Organization

A sample was selected comprising a variety of business activities and company sizes. The interviews and data processing were carried out by the staff of the Statistics Department.

3.2.3 Procedure

A questionnaire was prepared on the basis of the OECD Social Enquiry model, and the interviews were conducted at the workplace.

3.3 Data

3.3.1 List of data

- business activity and size of company
- back-up structure (canteen, room for eating meals, medical post, crèche, supermarket, rest room/bar, company transport)
- additional facilities (subsidized: meals, transport, child-minding, crèche, accommodation, etc)
- physical exertion (lengthy periods spent standing or in awkward or tiring positions; performance of extended, frequent or rapid movements; transporting or moving heavy loads; other strenuous physical exertion; vibrations, etc)
- noise
- poor conditions at place of work (very high temperature, very low temperature, insufficient lighting, artificial lighting, dirt, damp, draughts, unpleasant smells)
- exposure to hazards (inhalation of smoke/dust/toxic substances; handling of toxic/harmful products; handling of explosive products; serious falls: electrocution, burns, injuries due to machines and other serious accidents)

- daily travelling time between home and work
- type of transport
- job satisfaction
- age and sex

3.3.2 Breakdown of data

The data are broken down into the following sets:
- business activity/age/sexes
- company size/back-up structures/sexes
- company size/additional facilities/sexes
- business activity/physical exertion/sexes
- business activity/noise/sexes
- business activity/unsatisfactory conditions at place of work/sexes
- business activity/exposure to hazards/sexes
- daily travelling time between work and home/sexes
- type of transport/sexes
- job satisfaction/age/sexes
- job satisfaction/business activity/company size

IV. Output and users

4.1 Output types and their influence

The results of the study are published.

4.2 Accessibility

The report is obtainable from the Information Service of the Ministry of Employment and Social Security.

4.3 Integrated database

This does not exist at present.

4.4 Users and listed recipients

The above report is part of the publication programme of the Statistics Department and is circulated to the appropriate government organs as well as to the employers' and trade-union associations.

V. Critical analysis

The results obtained are considered to fulfil the designated objectives.

Anthropometric characterization of the working population of the Lisbon area

0. Introduction

This is a projected study by the National School of Public Health which is about to be launched and is aimed at identifying the anthropometric characteristics of the Portuguese population.

I. General and structural context

1.1 Identification

"Caracterização Antropométrica da População Activa do Distrito de Lisboa"

Director: Dr. Mário Faria
Professor of Occupational Health
National School of Public Health
Avda. Padre Cruz
1699 Lisbon Codex
Portugal

Tel.: 7585599

1.2 Institutional context

The project is being organized on the initiative of the Faculty of Occupational Health of the National School of Public Health, and the funding, estimated at 5 800 000 escudos not counting salaries, is currently being negotiated between the National School of Public Health, the Ministry of Health and the Design Centre, which is a private organization providing both economic and material help in the development of the project.

1.3 General profile

This is an initial study aimed at gathering certain anthropometric data characteristic of the Portuguese working population.

1.4 Origin and history

The absence in Portugal of basic ergonomic data justifies carrying out this project, which is a first step towards filling the gap and creating an ergonomic database.

II. Aims

2.1 General aim

With a view to encouraging the correct dimensioning of technical equipment, premises and working spaces, the study is designed to make an initial contribution to the creation of a basic ergonomic database and to do this by establishing a novel table setting out the anthropometric characteristics of the Portuguese working population. The study is therefore specifically preventive in its objectives.

2.2 Users and listed recipients

The results will be of special interest to the designers of machines, technical equipment, furniture, etc.

III. Description

3.1 Frequency

This is a one-off project, although it is planned to extend it in future.

3.2 Methodology

3.2.1 Field

The population concerned is the entire working population of the Lisbon area.

3.2.2 Organization

The gathering and analysis of the data will be carried out by the technical staff of the National School of Public Health.

A sample of 3502 individuals has been established divided up according to their economic activity, age and sex.

3.3 Data

3.3.1 List of data

- erect height (stature)
- height of eyes above ground level
- height of shoulders above ground level
- height of elbows above ground level
- height of fist above ground level
- maximum upward reach of fist
- maximum extension of upper limb
- extension of upper limb with clenched fist
- maximum extension of forearm
- extension of forearm with clenched fist

- height when seated
- height of eyes above seat
- height of shoulders above seat
- height of elbows above seat
- thickness of thigh
- height of leg
- height of leg to inner surface of thigh
- extension of thigh
- extension of thigh to rear surface of leg
- width across shoulders
- width between elbows
- width between hips
- weight
- sex, age, vocational category, place of origin, place of residence, educational level and working history

3.3.2 Data

The 22 external linear measurements and the weight will be related to the following variables:

- sex
- age
- vocational category
- place of origin
- place of residence
- educational level
- working history

IV. Output and users

4.1 Output types and their influence

It is intended that a report will be prepared on the study together with a published monograph which, it is hoped, will have a major impact on the target sector.

4.2 Accessibility

Unrestricted and free of charge.

4.3 Integrated database

This is not planned for the time being.

4.4 Users and current recipients

The study is still at the project stage.

V. Critical analysis

The study is still at the project stage.

European Foundation
for the Improvement of Living and Working Conditions
Loughlinstown House, Shankill, Co. Dublin, Ireland.
TELEPHONE: Dublin 2826888
TELEX: 30726 EURF EI
FAX: 2826456