



مركز الإحصاء
STATISTICS CENTRE



Occupational Health and Safety

Yearly Environment Survey 2013

Issue: July 2014

Table of Contents

Editorial	3
Introduction	4
Key Points	5
1. Statistics of Occupational Health and Safety	5
1.1 Number of Annual Working Hours by Economic Activities	5
1.2 Number of Fatal Injuries in Economic Activities	6
1.3 Lost Time Injuries	7
1.4 Reportable Dangerous Occurrences	8
1.5 First Aid Injuries	9
1.6 Medical Treatment Cases	10
2. Statistical Tables	11
Appendix	12
1. Objectives of the Survey	12
2. Statistical Units and Their Classification	12
3. Methodology	13
4. Work Stages	14

Editorial

The Statistics Centre – Abu Dhabi conducts a series of field surveys every year with a view to providing accurate and up to date statistics on the Emirate of Abu Dhabi. The results of this survey are deemed to be among the important pillars relied upon by policy and decision makers, the business sector, and researchers concerned with the environmental field in the development of plans, studies, and researches in all issues concerned with survey.

The environmental survey results provide a broad base of detailed environmental data concerning environmental protection expenditure on sector-based and type of protection. These results provide also detailed data on occupational safety and health statistics and assess the quantities of water and the amount of energy consumed, as well as statistics on waste management for each economic activity included in the survey.

The occupational health and safety report includes a summary of the results of five specialized economic surveys implemented in 2012, namely construction (construction and building), transport and storage, services, wholesale and retail trade, and repair, industry and services. Through these results, we can measure the developments witnessed by these activities and the extent of development resulting in the environmental sector.

As we bring you this important report, which contains the fruit of strenuous field and administrative efforts made over several months, we wish that this issue met the needs of environmental data users at all levels.

Allah is the Master of Success,

Butti Ahmed Mohamed Bin Butti Al Qubaisi,

Director General of the Statistics Centre - Abu Dhabi (SCAD)

Introduction

In the midst of the great economic development of the Emirate of Abu Dhabi and the growing interest in the environment, it has become necessary to expand the environmental database and satisfy the requirements of the Government of Abu Dhabi. The resulting occupational health and safety statistics enable the government to monitor environmental changes and make enlightened decisions on the policies of preservation of the health and safety of workers working for economic facilities in the Emirate of Abu Dhabi.

The Yearly environmental survey is one of the most important sources for collection of information necessary to prepare occupational health and safety statistics in the Statistics Centre - Abu Dhabi, as the environmental survey collects data on an annual basis from facilities operating in the Emirate of Abu Dhabi (Abu Dhabi, Al Ain and Al Gharbia). Based on the information collected by the survey, a wide range of statistics on mortality and occupational accidents are produced by gender in various work environments.

Key Points

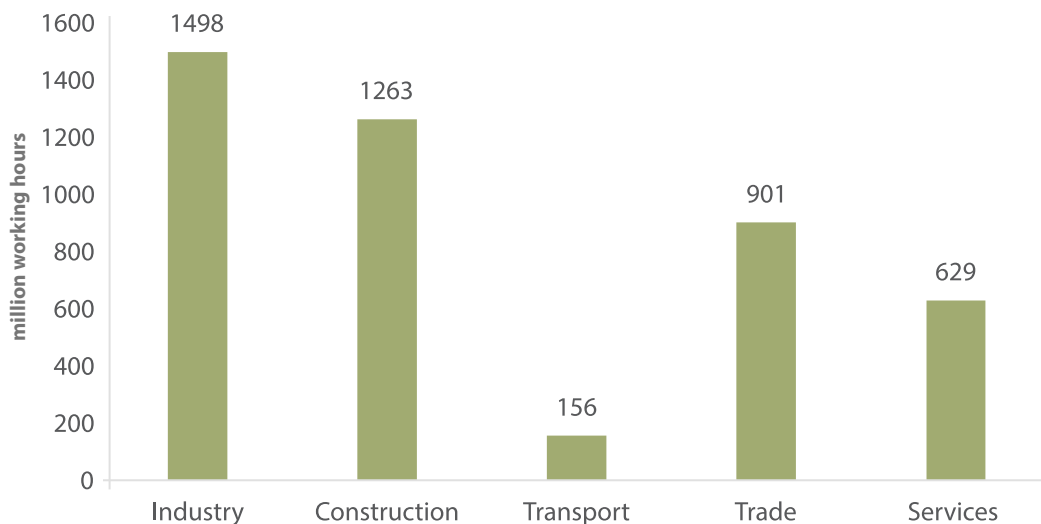
1. Statistics of Occupational Health and Safety

The occupational health and safety systems develop as a result of the developments and changes emerging in several areas such as the industrial, technological, and social progress that is subsequently followed by changes in the labor sector. Health and safety statistics help give a clear image to policy and decision makers towards development of the business sector and the preservation of workers' health through development of systems, legislation, and practices for the management of occupational health and safety within the various economic establishments depending on the type of activity and the size of risks facing workers in various jobs and tasks within the establishment.

1.1 Number of Annual Working Hours by Economic Activities

The indicator of the number of annual working hours by economic activities shows the volume of work and the number of workers involved in such activity. It includes the number of overtime hours and training periods per year. As shown in Figure (1) the number of hours worked in 2012 for the industry and construction sectors was about 1.5 billion and 1.26 billion working hours respectively, while the sectors of trade, services, and transport and storage formed up together about 1.69 billion working hours.

Figure (1) Number of per Annum Working Hours by Economic Activity

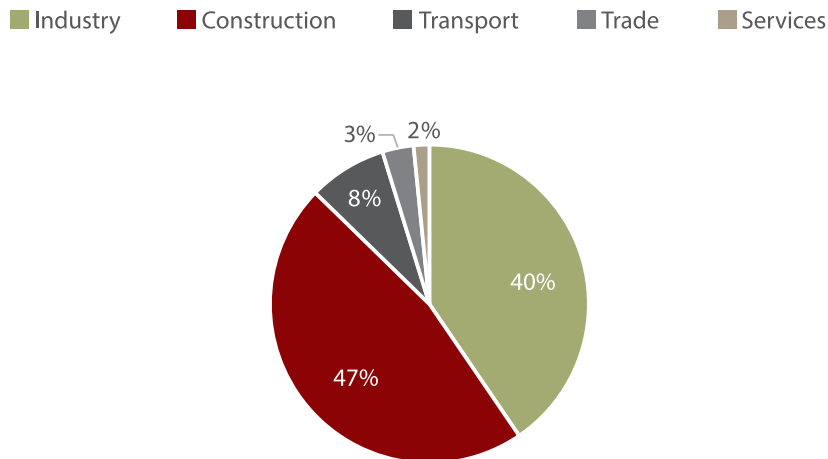


Source: Statistics Centre – Abu Dhabi

1.2 Number of Fatal Injuries in Economic Activities

The study has generally included the number of injuries that led to deaths. The indicator represents the death toll whether occurring as a result of injuries or diseases regardless of the time interval between the time of injury and the time death. The number of death cases in 2012 was about 165 case. The construction sector constituted the largest percentage of the total number of deaths with 47%, followed by the industry sector by 40% as shown in Figure (2).

Figure (2) Percentage Distribution of the number of deaths by economic sector

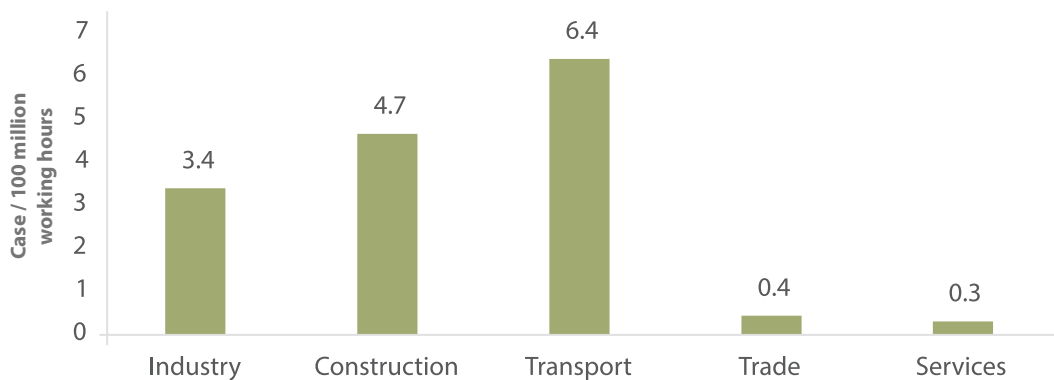


Source: Statistics Centre – Abu Dhabi

1.2.1 Fatality incidents Rate (FAR)

The rate of death incidents is measured by dividing the number of injuries that led to worker's death by the number of working hours in a hundred million. In 2012, as shown in Figure(3), the rate of death accidents in the transport and storage sector was about 6.4, where this high rate is due to reduced working hours against the number of deaths, while the rates in the construction and industry sectors were respectively 4.7 and 3.4.

Figure (3) Recurrence Rate of Fatality incidents for each one hundred million working hours by economic activity

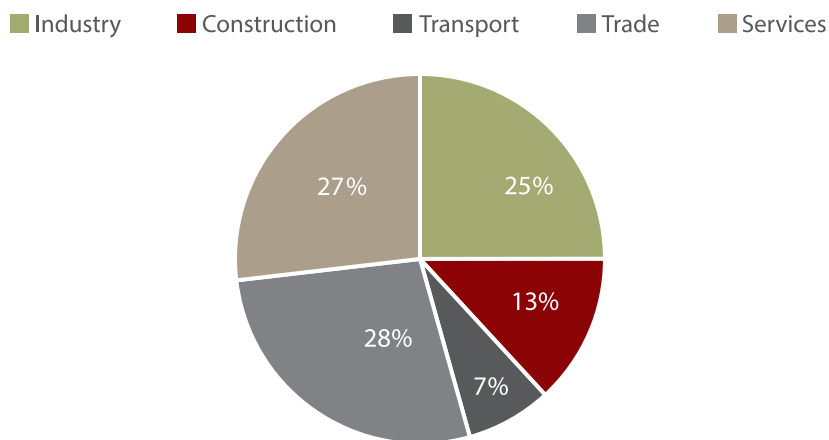


Source: Statistics Centre – Abu Dhabi

1.3 Lost Time Injuries

The lost time injuries represent the total number of fatal injuries, total disability injuries or partial disability injuries, and the cases of loss of working days including occupational injuries (excluding the two cases of total disability and partial disability) which make the employee unable to perform any regular work for a temporary period of time starting after the occurrence of the accident. This period of time is called the “lost working days” and it includes any rest or vacation day because of the accident. This definition excludes the restricted work cases involving any work injuries (other than injuries resulting in death or loss of working day(s)) that cause the employee’s inability to perform his job efficiently at any day after the accident day. The number of lost time injuries in the economic sectors covered by the study reached 75 thousand injuries, where the construction and industry sector made up 55% of the total number of lost time injuries in the other five sectors.

Figure (4) Percentage Distribution of the number of lost time injuries by economic sector

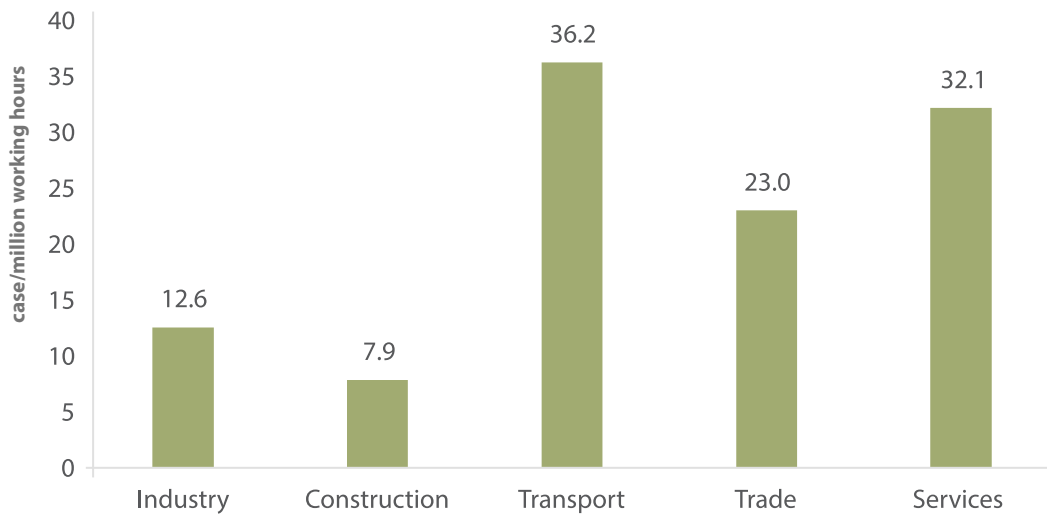


Source: Statistics Centre – Abu Dhabi

1.3.1 Lost Time Injuries Rate (LTIR)

The ratio of time wasting accidents is measured by dividing the ratio of the number of injuries that led to wasted working hours or days by the economic facility as a result of an injury by the number of working hours in million hours. In 2012, as shown in Figure (5), the rate of time wasting accidents in the transport and storage sector was about 36.2, while the two rates in the service and trade sectors reached 32.1 and 23 per million working hours, respectively.

Figure (5) Rate of lost time injuries per million working hours by economic activity

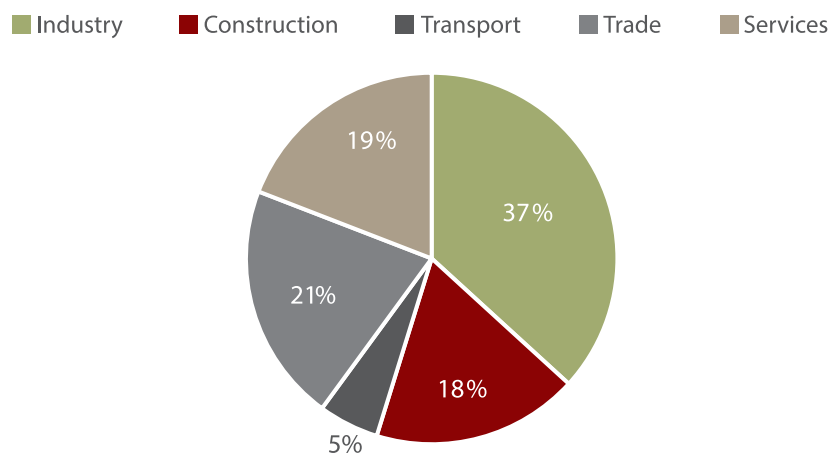


Source: Statistics Centre – Abu Dhabi

1.4 Reportable Dangerous Occurrences

The total dangerous occurrences represent the reported cases that fall within or outside the scope of work environment they lead or not to injuries or deaths. The number of hazardous cases registered in 2012 was about 196 thousand, out of which the industry sector constituted 37% while the trade and the services sectors made up 21% and 19% respectively.

Figure (6) Percentage Distribution of the number of Reportable Dangerous Occurrences recorded by economic activity

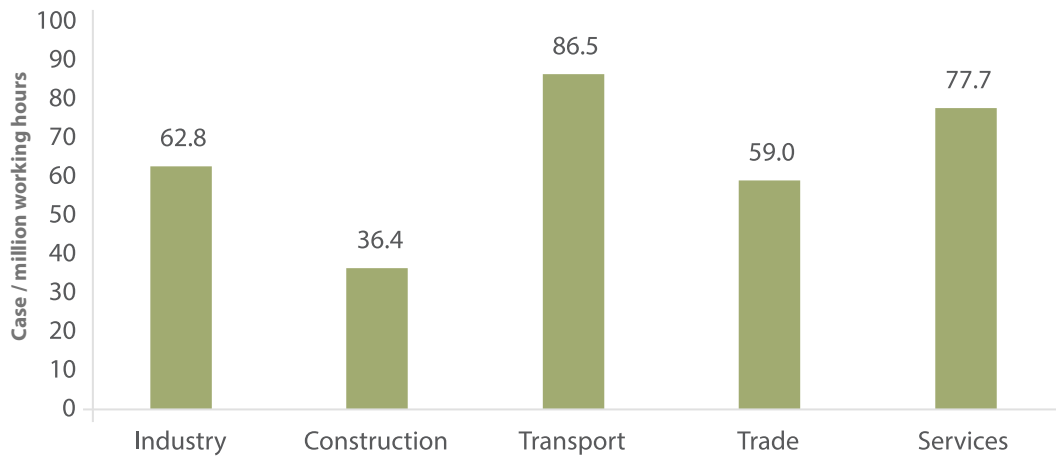


Source: Statistics Centre – Abu Dhabi

1.4.1 Reportable Dangerous Occurrences Rate

Number of dangerous occurrences recorded for each one million working hours in 2012 was 62.8 in the industrial sector, 77.7 in the service sector, and 86.5 in the transport and storage sector measured per one million working hours.

Figure (7) Reportable Dangerous Occurrences Rate per 100 million working hours by economic activity

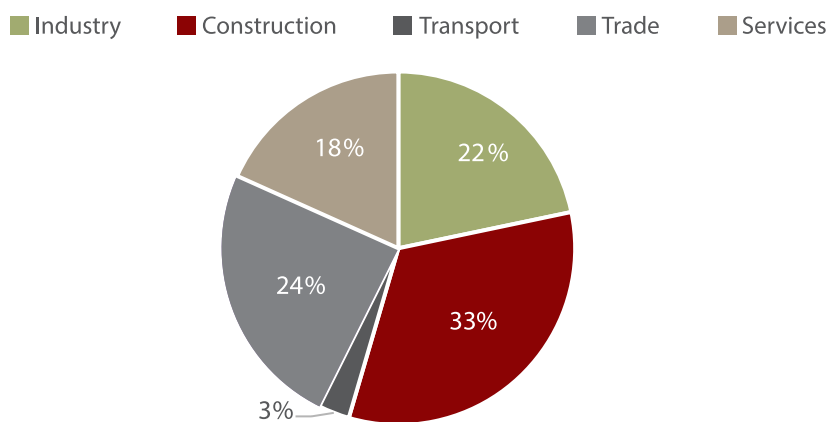


Source: Statistics Centre – Abu Dhabi

1.5 First Aid Injuries

First Aid Injuries include the number of cases that occur at the work site and are treated and involved first aid procedures: these injuries are usually minor and require no medical control for more than 12 hours. In 2012 the number of injuries amounted to 65.8 thousand, where the construction sector injuries represented 33% of the total number of injuries while the trade and industry constituted 24% and 22% of that respectively.

Figure (8) Percentage Distribution of First Aid Injuries by economic activity

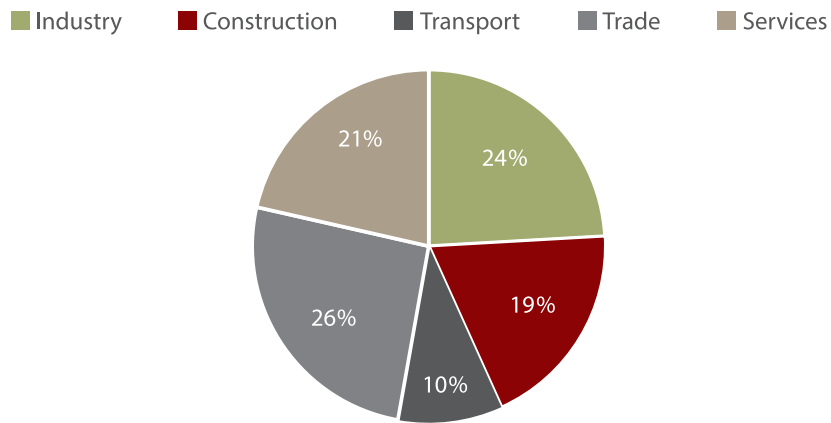


Source: Statistics Centre – Abu Dhabi

1.6 Medical Treatment Cases

Injuries requiring medical treatment include the number of cases that require medical or physical treatment. They do not include the computation of restricted work injuries, the injuries involving loss of a whole working day, and first aid cases. Figure (9) shows that the two sectors, industry and trade, form ratios of 24% and 26% respectively of the total the number of injuries of about 57 thousand cases.

Figure (9) Percentage distribution of the number of injuries that require medical treatment by economic activity



Source: Statistics Centre – Abu Dhabi

2. Statistical Tables

Table (1): Number of working hours by economic activity

million hour

Economic Activity	2010	2011	2012
Industry	683	910	1,498
Construction	1,126	1,155	1,263
Services	367	366	629
Transport & Storage	99	110	159
Trade	-	-	902

Source: Statistics Centre – Abu Dhabi

Table (2): Mortality rate per 100 million working hours by economic activity

Case / 100 million working hour

Economic Activity	2010	2011	2012
Industry	1.5	3.7	3.4
Construction	3.8	2.2	4.7
Services	3.5	2.2	0.3
Transport & Storage	0.0	3.6	6.4
Trade	-	-	0.4

Source: Statistics Centre – Abu Dhabi

Table (3): Total rate of accidents recorded per million working hours by economic activity

Case/ million working hour

Economic Activity	2010	2011	2012
Industry	54.23	43.70	62.8
Construction	47.81	43.74	36.4
Services	82.21	84.00	77.7
Transport & Storage	19.46	19.38	86.5
Trade	-	-	59.0

Source: Statistics Centre – Abu Dhabi

Appendix

1. Objectives of the Survey

The importance of this survey is evident in the broad database it provides on various economic activities operating in the Emirate of Abu Dhabi, in addition to its important role in the measurement of development in various environmental fields. Given to this importance and the need to provide this database, the Statistics Centre - Abu Dhabi has started to implement environmental surveys for economic facilities with a view to collecting data for the year 2012, to achieve a set of objectives, mainly the following:

1. Provide the database necessary to advocate, support, and make environmental policies and decisions in the Emirate of Abu Dhabi and measure the performance of these policies.
2. Provide the data necessary to measure the change in the areas of spending on environmental protection and its emerging development.
3. Provide support to the Government of Abu Dhabi in projects related to environmental statistics such as the inventory of greenhouse gases emissions, occupational health, and industrial security.
4. Contribute to provide a strong environmental statistical data in the Emirate, with respect to economic activities.
5. Provide a basic database to measure progress in achieving the agenda of the Government of Abu Dhabi and Abu Dhabi 2030 vision.
6. Contribute to the building of a national statistical system in the United Arab Emirates, by providing detailed statistical data for the Emirate of Abu Dhabi.
7. Provide the necessary data for businessmen and investors to make appropriate decisions and evaluate their investment decisions.

2. Statistical Units and Their Classification

The Statistical Unit from which data were collected is the institution involved in any economic activity that constitutes its main activity. The classification depends on the limit of the second level of the International Standard Industrial Classification of All Economic Activities, Rev.4) (ISIC Rev.4).

The sectors covered by the survey are:

1. The Industry Sector. It includes the following:

- Mining and quarrying.
- Manufacturing (processing industry).
- Electricity, gas, steam and air conditioning supply.
- Water supply; sewerage activities, waste management and waste treatment.

2. The Construction Sector

3. The Trade Sector. It includes the following:

- Wholesale and retail trade; repair of motor vehicles and motorcycles.

4. The Transport & Storage Sector

5. The Service Sector. It includes the following:

- Accommodation and food service activities.
- Real estate activities.
- Professional, scientific, and technical activities.
- Administrative service and support activities
- Education.
- Activities in the field of human health and social work.
- Arts and recreation and entertainment activities.
- Other service activities.

3. Methodology

Due to the special care the Statistics Centre – Abu Dhabi pays in adopting and following international methodologies and standards, the international methodologies and recommendations relating to each economic activity were followed in terms of the concepts used and the basic data collection method, and the numbers and indexes presented were extracted from the real results of the survey.

3.1 Sample Design

The framework of the survey is premised on the framework provided by the Framework Updating Project within the Emirate of Abu Dhabi in 2012, where the framework is divided into three large, medium and small categories according to the number of workers and the method of comprehensive survey of the large-category facilities was used and well as the method of regular random class-sample for the two categories, the medium and the small, according to each activity.

3.2 Year of Survey

Data were collected from establishments primarily collected for each calendar year of the survey years. In case the data of some institutions were provided based on accounting years that are different from the calendar year, such data were then collected according to an accounting period that mostly falls within the year in which the survey was conducted.

3.3. Documents of the Survey

The survey documents comprise the survey form, the instruction manual of field researchers and the office audit rules booklet.

The questionnaire was designed to contain all of the data that would achieve the objectives of the survey. The form includes the following:

1. Definitional and general data about the facility.
2. The environmental protection expenditure value.
3. Health and safety statistics.
4. Water use statistics.
5. Energy use statistics.
6. Waste management statistics.

1.3.3 Instruction Manual

The Instruction Manual contains concepts used in the form so as to make it clear to those working in the statistical area and in office auditing; it also includes a detailed explanation of all the questions found in the form and how data are collected in a way that ensures obtainment of the highest levels of accuracy as well as the duties of cadres working in the survey such as supervisors, observers, researchers, and auditors.

2.3.3 Audit & Matching Rules Manual

The audit and matching rules manual contains the basic rules all researchers and auditors must follow while doing the jobs assigned to them. The matching rules contain the basic technical review rules such as the general rules of surveys and the technical reviews of the tables of each survey.

4. Work Stages

1. The Preparatory Phase

This phase included determination of the survey objectives, the survey form design, and preparation of the manuals of training, auditing, and field and office audits.

2. Fieldwork Phase

Trained researchers selected according to pre-defined criteria and distributed into teams carried out the fieldwork. A field supervisor and observers oversaw the work course.

3. Office Supply

The Audit Division was given the ready form from the field in the meantime to be fully audited. In case mistakes are discovered in the forms, the type of mistake is determined and corrected in the office and the facility is then contacted once again to correct the mistake or returned to the field. After that, the forms are assigned a code and sent to the computer department where the data is fed into the system.

4. Electronic Data Processing

Once the form is checked and assigned a code, the computer department staff timely feed the form into the system according to the program intentionally designated to the data entry process; then statements including the preliminary results are extracted and edited and verified to check the data accuracy, then the pre-designed reporting processes are entered and audited, and the results are finally extracted.

إحصاءاتنا تقدم حلولاً وتقدمنا
Our Statistics Provide Solutions @ Development

www.scad.ae

