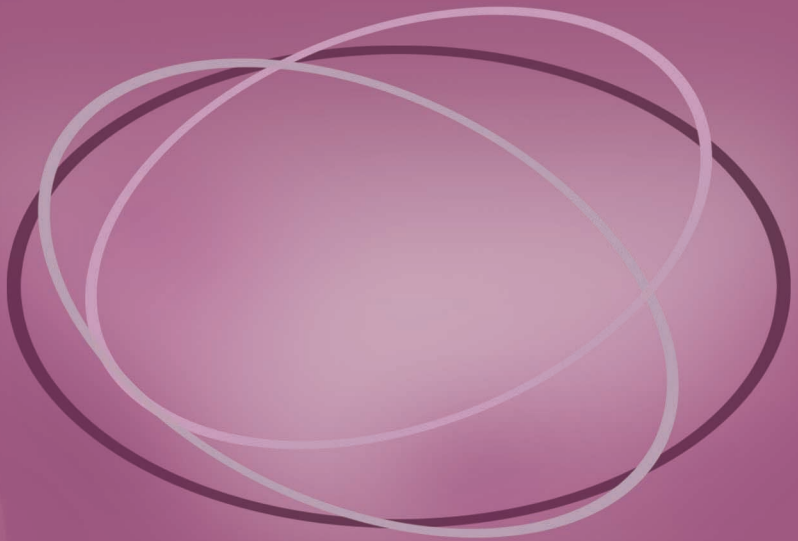
Sustainable Development Indicators in the State of Qatar

Issue 2 - Jan 2010



جهاز الإحصاء
Statistics Authority

Permanent Population Committee

Permanent Population Committee

Sustainable Development Indicators in the State of Qatar

January 2010

Foreword

In the context of achieving the goals and objectives of the Qatar National Vision and in line with its pillars, which explores the development prospects of the State of Qatar in 2030 in the areas of; social development to insure a just and safe society, human development to include a development of the population of Qatar, economic development to focus the development of diversified and competitive national economy that meets the current and future needs of Qatar's citizens, and environment development to include environmental management, harmonization and consistency between the economic and social development on the one hand and environmental protection, on the other.

Within theses scopes, a report on the indicators of sustainable development for the State of Qatar was prepared to balance and rationalize proper utilization of available resources, and monitor policies and strategies that help in achieving sustainability.

The report, aims by the same, at assessing progress made by the use of the State of Qatar for multiple resources in sustainable ways, and changes completed to achieve this aforementioned goal through sustainable development indicators, which contribute to the provision of data and deep understanding of the concerned issues and connected relations, as well as the performance achieved and future prospects, as these indicators reflect the status of evolution and development of the characteristics of the State of Qatar and the nature of its economy, geography as well as the availability of its resources.

Each indicator includes definition, rating of progress, whether by tracking the development and measurement of its growth rate or graphical format, and by comparing it to its peers, regionally and internationally to assess its efficiency in the State of Qatar, and explore its future prospect while understanding its growth or decline for the period from the year 2001 to 2008, according to data availability.

This version is the second in its series that relates to indicators on sustainable development, and whereby some indicators have been updated, and some others changed categorically, according to the availability of data on the one hand, and their recent developments in the newly issued United Nations reports on indicators of sustainable development, on the other.

Finally, I have the pleasure to express my deep appreciation and gratitude for the team who worked on this project praising their professionalism and dedication to render this crucial task possible.

Hamad bin Jabr bin Jassim Al Thani
Acting Chairman, The Statistics Authority,
Chairman of the Permanent Population Committee

Introduction

Sustainable development, which aims at improving the living standards of all people and meeting their current societal needs without prejudice for the rights of future generations to meet their own needs, intends to move forward achieving the socio-economic development and the related environmental protection.
The importance of this report, the second of its kind issued by the Qatar Statics Authority and the Permanent Population Committee, is driven by the inclusion of the most significant indicators on sustainable development in their economic, social and environmental development dimensions and by the related reflection of the concrete size of the State's development.

In the same context, this report aims to providing a general overview on what has been achieved from the sustainable development objectives including social, economic and environmental goals, and to generating comprehensive and reliable data that may help decision makers to set developing strategies and policies, on appropriate basis.

Systematically, sustainable development indicators contained in this report were tackled in a smooth and unified method to include; the specific definition of the indicator, its assessment according to official data rendered available to the research team who converted them into simple graphs formats, and to analyze its basic process over a time series starting in 2001 and ending in 2008, to explain changes, establish comparisons, where achievable, with developed and less developing countries and learn more about the progress made by the State of Qatar in relation to other countries of the world, and, accordingly, explore future development prospects.

In terms of components, this report includes the following three chapters:

Chapter I: This chapter includes (16) social and population indicators related to the natural movement of population growth and their practical status, health, education, and etc….

Chapter II: This chapter consists of (19) economic indicators, covering the following main topics: economic development, information technology and communications, as well as global partnership, patterns of production and consumption.

Chapter III: This chapter contains (8) environmental indicators addressing key topics related to land, water and air. In conclusion, while underlining the importance of this work, it is worth noting the need to provide additional data, particularly in the fields of environment, to confer a more comprehensive assessment of the progress made by the State of Qatar in all areas of development.

Contents

Chapter I

Population and social indicators

Preface

This chapter deals with the demographic and social indicators of sustainable development and aims at showing the progress made in the indicators of the social sectors during the period (2001-2008) or closed years, according to the availability of data.

The demographic and social indicators addressed in this chapter, are considered to measure the progress achieved in the State of Qatar in terms of finding a social environment that enables people enjoy a long dignified live free of illnesses and benefits from knowledge gains.

Like other various indicators of sustainable development, population and social indicators do not only contribute in monitoring the progress made by social policies to achieve objectives and identify successes generated to upgrade the quality of life and its flourishes, but also to shed light on weaknesses and problems arising from the implementation of population policies, helping decision makers in reaching proper and accurate decisions for the public interest.

This chapter addresses the following indicators:

- Unemployment rate.
- Ratio of average wages between males females.
- Mortality rate of children under the age of five.
- Life expectancy at birth.
- Percentage of population with access to sufficient sanitation facilities.
- Percentage of population who have access to sufficient safe drinking water.
- Population growth rate.
- Total fertility rate.
- Dependency ratio.
- Proportion of the population covered by primary health care.
- Proportion of underweight newborn children.
- Immunization against infectious childhood diseases.
- Gross enrollment rate to the last primary school grade.
- Proportion of adults with a secondary school certificate.
- Adult literacy rate.
- Number of crimes per 100 thousand inhabitants.

1) Unemployment rate

Definition:

It refers to the number of individuals capable of working, seeking a job but unable to find it, represented as a fraction of the total number of persons who forms the labor force. This indicator has a significant importance to measure the success of efforts made to find a job and to strengthen the economy as well.

Rating:

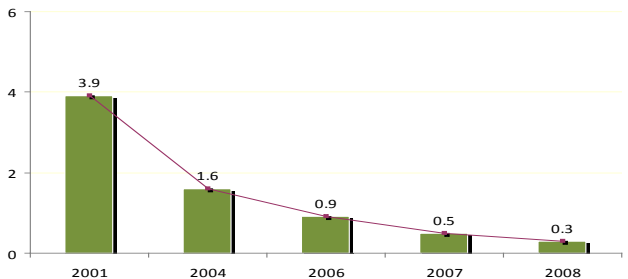
Unemployment rates reached a significant reduction totaling (13) times its initial value over seven years; while it was (3.9%) in 2001, it dropped to (0.3%) in 2008, an average percent of annual decline of (0.51%). The reason behind this significant decline is attributed to the country's comprehensive boom in all areas of economic life, particularly in the fields of oil and gas as well as construction, which contributed in creating new jobs and enabled the country's labor market to absorb larger numbers of new comers, particularly expatriated.

Where are We?

Unemployment rate is very low compared to that in the developed countries (6.6%) and developing countries (16.1%)

Source: United Nations Development Program, Human Development Report, 2009.

Fig (1): Unemployment rate for the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Labor Force Sample Survey, various issues.

The Future:

Unemployment rate is expected to decline in the future, especially among Qataris, as a result of policies adopted by the State in the area of nationalization of jobs that will open more areas of work for young men and women insuring further opportunities.

2) Ratio of average wages between males females

Definition:

It refers to the ratio of the average of earned money between males and females. This indicator shows wages reduction by range between males and females.

Rating:

The gap between the average wages of men and women, tangibly increased during the past seven years, rising from (0.6%) in 2001 to (27.9%) in 2008 in favor of males, and totaling an average annual increase of (6.6%).
The reasons behind this wages gender gap is attributed to the fact that females have more break offs at work than men who work longer hours than females, particularly among the expat labor; in addition, social benefits are often granted to the husband who is considered as the primarily responsible for his family support, while the wife gets only lower proportion from these allowances.

Where are We?

Despite the growing gender gap, and despite the difficulty of specifying precise comparisons, the State occupies a leading position among other world countries, as it managed to achieve justice and equality between sexes in terms of average wages.

Figure (2): Ratio of the wages average between males and females for the period (2001-2008)

Source: Indicator calculated according to data provided by the Statistics Authority, Labor Force Sample Survey, various issues.

The Future:

The relative difference in the average of female to male wages is expected to decline because of the growing involvement of educated and qualified women in the areas of high-paid employment, in parallel with a set of procedures and measures taken by the State to allow women obtain gainful employments matching with her family conditions and her high educational qualifications.

3) Mortality rate of children under the age of five

Definition:

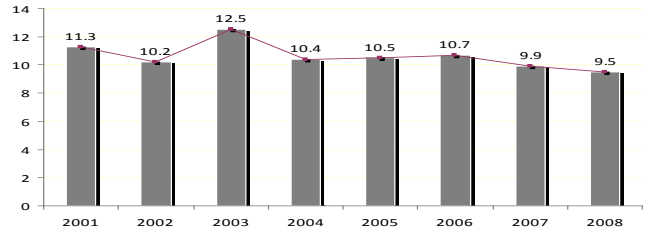
It refers to the mortality of children under the age of five per thousand live births, which is the probability of death during the period between birth and the fifth year of life. This indicator shows the degree of concern for the children's health care.

Rating:

In spite of the fluctuation of this indicator, mortality rate of children under the age of five declined significantly, as the rate decreased from (11.3) per thousand in 2001, to (9.5) per thousand in 2008, at an annual rate of (0.3) per thousand.

The actual reason behind this reduction especially in the recent years, is attributed to the social, economic and effective health policies adopted by the State, which led to the increase of the living standards of the citizens providing them with all necessary means to protect the health of their children through efficient and wide-ranging health programs, which includes, simultaneously, preventive health and therapeutic services.

Fig (3): Mortality rate of children under the age of five for the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, a publication of Vital Statistics (Births and Deaths), various issues.

Where are We?

The country ranges closer to developed countries where death rate of children under the age of five years is (7) per one thousand, while in developing countries it reached (83) per one thousand

Source: United Nations Development Program, Human Development Report, 2007-2008.

The Future:

Further decline in the rate of deaths of children under the age of five is expected to be, due to the country's policy on child and mother health care, and to the raising of awareness on preventive health at all levels of the society.

4) Life expectancy at birth

Definition:

It refers to the number of years expected to stay alive at birth for males and females. This indicator is extremely important to know the success of the health services provided to the population as well as health awareness among the members of the society.

Rating:

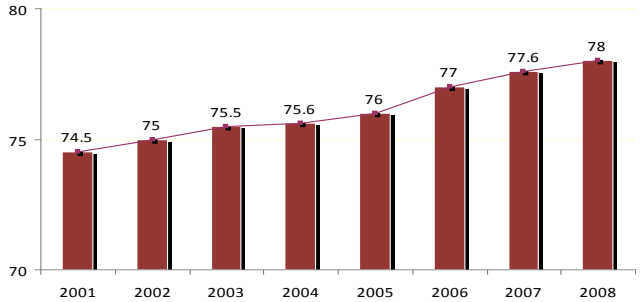
The indicator of life expectancy at birth witnessed gradual increase; after being (74.5) years in 2001, it became (78) years in 2008, at a pace of an annual growth of (0.5) years. The rise of this indicator reflects the advancement of the state development in Qatar, a rise that reflected positively on the socio-economic and health situation of the country's population.

Where are We?

At the level of the life expectancy indicator, the State of Qatar is getting further closer to developed countries where it is (80.1) years, while in medium developing countries it does not go beyond (66.9) years

Source: United Nations Development Program, Human Development Report, 2009.

Fig (4): Life expectancy at birth for the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, a publication of Vital Statistics (Births and Deaths), various issues.

The Future:

Life expectancy at birth is expected to rise, whereby according to different scenarios of the population projections, it is expected to reach (81.5) years in 2030. This increase is attributed to the ever increasing concern of the State for the health and social status, in parallel with the rise of health awareness among the members of the society.

5) Percentage of population with adequate sanitation facilities

Definition:

This refers to the percentage of population with access to health services set for the immediate disposal of human waste. This indicator shows the availability of infrastructure and concern in public health and environment.

Rating:

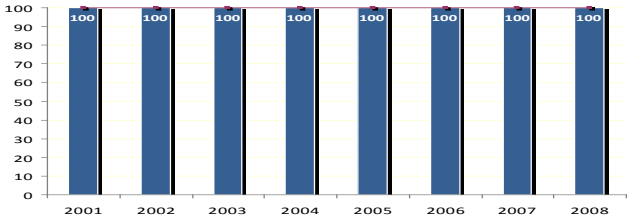
The indicator of the availability of sanitation showed stability, reaching (100%), and marking the most prominent successes in the field of human development in the State. This success resulted from the State's general policy to ensure environmental sustainability, achieve decent living standards and dignity for its people through the execution of a series of procedures including huge investments in the sanitation infrastructure, and provision of housing facilities to meet health requirements in general, and sanitation conditions, in particular.

Where are We?

The State has preceded all developed countries where the percentage of population with adequate sanitation facilities did not exceed (92%), and naturally, even preceded developing countries where the percentage did not exceed (49%)

Source: United Nations Development Program, Human Development Report, 2009.

Fig (5): Percentage of population with access to adequate sanitation facilities for the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

It is expected that the State will continue to maintain providing the sanitation services by (100%). It will, however, keep developing such service through the huge investments that have been allocated for changing the dilapidated sewage pipes to replace them by new ones in all cities and villages.

6) Percentage of population who have access to safe drinking water

Definition:

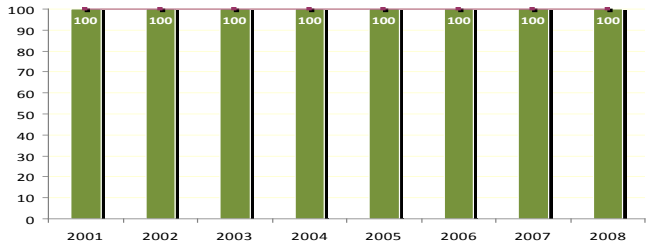
This indicator refers to the percentage of population with access to adequate supplies of safe (non-contaminated) water (20 liters per person per day) attributed to the total population. This indicator is of great importance in measuring the availability of the most important elements of life that is the quality of water that does not cause any harm to public health.

Rating:

The indicator of the availability of safe drinking water showed stability, reaching a ratio of (100%) since 2001 and producing an earlier achievement of the second goal of the seventh Millennium Development Goals (Ensuring Environmental Sustainability). It is known that drinking water sources are very scarce in the country.

The achievement of this level of development is not due to the availability of enough freshwater sources in the country, but to the great efforts made in the area of desalination and development of the water distribution networks.

Fig (6): Percentage of population who have access to safe drinking water for the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

Where are We?

The State of Qatar occupies a leading position in the world, preceding developed countries that reached the ratio of (98%), and developing countries, where the ratio did not exceed (79%).

Source: United Nations Development Program, Human Development Report, 2009.

The Future:

It is expected that the State of Qatar will maintain its leading role in providing safe drinking water to its population by (100%), with the construction of new water desalination stations, and the increase of the water treatment units, according to the foreseen needs for all sectors.

7) Population growth rate

Definition:

he annual increase or decrease of the population in a certain time refers to the percentage of the population related to the beginning of the period. This indicator explains the success of actions taken to control population growth.

Rating:

The indicator of population growth rate witnessed several fluctuation, with an unprecedented rise in the past few years, where the rate was (18.9) for the period (2007-2008), approximately (4) times from what it was for the years (2001-2002), whereby the annual growth rate was (12.1%).

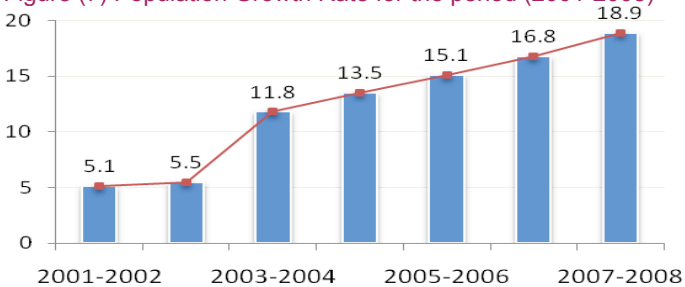
The actual reason for this increase is the economic boom that experienced the State of Qatar in the recent years, which resulted in a mass employment of large numbers of foreign workers in oil and gas projects, construction and other large development projects that require intensive use of manpower.

Where Are We?

Population growth indicator in the state is considered to be the highest among the world, where it did not surpass 0.5% in developed countries and 1.3% in developing countries.

Source: United Nations Development Program, Human Development Report, 2009.

Figure (7) Population Growth Rate for the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

It is expected that this rate would see a gradual decline over the next few years due to the completion of labor-intensive giant projects, which would in turn lead to curbing the in-migrating flow of the expatriated labor.

According to population projection, the growth rate is expected to fall from 8.31% in 2008 (year of reference) to between (the low scenario of 1.74% and the high scenario of 4.3%) during the period from (2010 to 2015).

8) Total Fertility Rate

Definition:

It refers to the average number of children that would be born alive to a women (or group of women) during her lifetime if she were to pass through all her childbearing years conforming to the age-specific fertility rates during a specified time period (usually a calendar year).

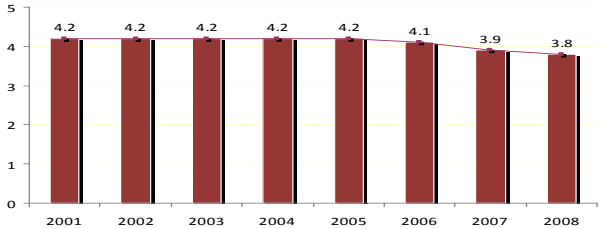
This indicator is calculated on condition that there are no deaths. This indicator shows the success of procedures taken to control the population growth.

Rating:

The indicator, total fertility rate for Qatari women was steady during the period from (2001 to 2008). The indicator of live births per woman during the childbearing age was 4.2, and then started to slowly decline in 2006 to reach 3.8 in 2008, an annual fall of 3.2%. Although that the total fertility rate per Qatari women decreased from 4.20 in 2004 to 3.80 in 2008, it is still high if compared to other countries of the world.

The increase in the total fertility rate per Qatari women is attributed to the traditional culture of the Qatari society with regard to childbearing behavior. It is also attributed to the policy of the State that urges its citizens to procreate so as to correct the imbalance in the demographic structure, a recommendation which was stressed upon in the State's population policy and in the implementation of its action program that started in October 2009.

Figure (8) the Total Fertility Rate for (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, a publication of Vital Statistics (Births and Deaths), various issues.

Where Are We?

The total fertility rate is considered relatively high compared with other countries of the world. The rate reached 1.7 in developed countries and 5.8 in developing countries, *Source: United Nations Development Program, Human Development Report, 2009.*

The Future:

The Total fertility rate is expected to see a decline due to the rapid and major developments witnessed by the society in terms of life modernization and civilization, including education and occupation as well as adoption of modern life styles.

9) Dependency Ratio

Definition:

Dependency ratio refers to the ratio of population who are below 15 years of age and also those who are above 65 years to the ratio of population aged 15-64 years. The indicator of dependency ratio gains importance in identifying the size of manpower and the strength of economy.

Rating:

The total dependency ratio decreased from 38.2% in 2001 to 18.7% in 2008; an annual average fall of 2.8%. The main potential reason behind this decline cannot be attributed to the fall in the fertility rate that would contribute to reducing the number of children and minors aged less than 15 years.

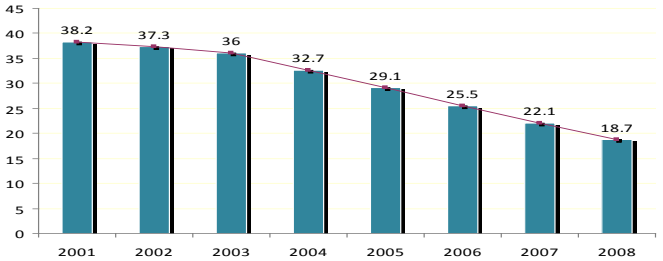
It cannot, also, be attributed to the decline in the ratio of old people aged above 65 years either, but it can be attributed to the major economic prosperity witnessed by the state, which in turn, requires the employment of large numbers of expatriate workers aged between 15-64 years and who constitute the age groups of working categories.

Where Are We?

The dependency ratio is low compared to that of developed countries (49%) and developing countries (53%).

Source: United Nations Development Program, Human Development Report, 2007-2008.

Figure (9) Dependency Ratio for the period from 2001 -2008



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

This indicator is expected not to witness a decline over the next few years yet, but a gradual increase due to policies and measures aiming at curbing the flow of expatriate workers and the growing reliance on modern technologies in various economic sectors.

10) Proportion of population covered by primary healthcare services

Definition:

It refers to the number of people in rural and urban areas who are expected to receive medical treatment for various diseases and injuries, to the total population. The coverage with primary healthcare indicator is very important to know the degree of attention given to healthcare and its expansion over all members of the society.

Rating:

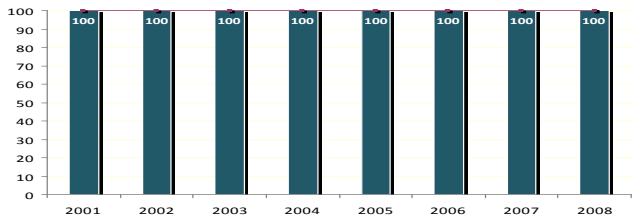
The indicator of the proportion of population covered by primary healthcare reached 100% since the early 2000, and contributed to the eradication of many diseases, such as child polio, tetanus, diphtheria, whooping cough and others.

The reason behind the elimination of such diseases is the State's early awareness for the importance of primary healthcare in the second half of the 20th century when the health system was set by the State, where healthcare was viewed as an effective and fundamental instrument for every efforts exerted to achieve the highest goal, which is excellent health for everyone.

Where Are We?

Despite the difficulty of making international comparisons, the State of Qatar ranks among countries of the world that achieved the total population coverage with primary healthcare services.

Figure (10): Proportion of population covered by primary healthcare during the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

It is expected that the State of Qatar would continue to maintain what it achieved in the field of primary healthcare as a result of its growing attention given to the health sector whether in terms of infrastructure or quality of healthcare services provided to the population.

11) Proportion of underweight newborn children

Definition:

It refers to the percentage of the number of newborns with weight below 2.5 kilograms in a certain year compared to the total newborns in the same year.
This indicator reflects the attention provided to maternity and childhood healthcare.

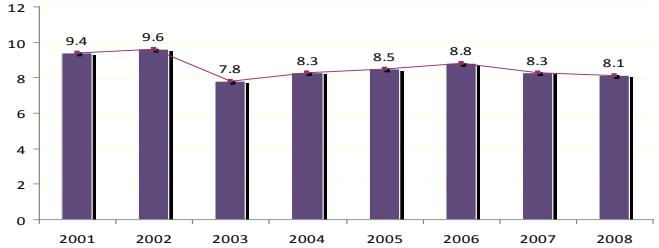
Rating:

The indicator of newborns with low birth weight witnessed fluctuations with a low birth weight for newborn children reaching 9.4% in 2001 before declining to 8.1% in 2008, constituting an annual average fall of 0.2%.
The reason behind the relative increase of this indicator and related fluctuation is that many categories of the society still lack health awareness, especially some unhealthy nutritional habits adopted by pregnant women.

Where Are We?

The State of Qatar is considered almost among the advanced countries, where the proportion of newborn children with low birth weight reached 3%, and in developing countries, where it reached (30%).
Source: United Nations Development Program, Human Development Report, 2009.

Figure (11): Proportion of Newborns with low birth weight (%) from 2001 -2008



Source: Indicator calculated according to data provided by the Statistics Authority, a publication of Vital Statistics (Births and Deaths), various issues.

The Future:

It is expected that Qatar would see a fall in the proportion of newborns with low birth weight due to health awareness campaigns and a number of measures taken to achieve a safe maternity.

12) Immunizations against infectious childhood diseases

Definition:

It refers to the number of one-year old children who completed the main health immunizations program during a certain period divided by the total number of one-year old newborns and multiplied by 100.

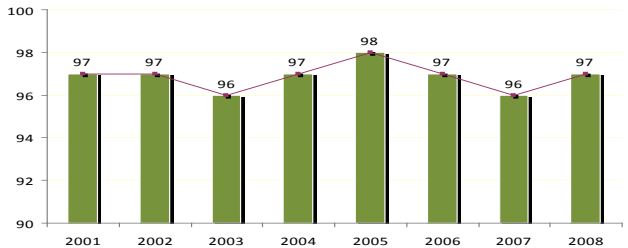
This indicator shows the extent of attention given to child health and the elimination of contagious diseases.

Rating:

Despite the slight fluctuation of immunization ratios in some years, the rate of immunizations against contagious diseases, including Bacilli Chalmette-Guerin vaccine (BCG), three doses of oral polio vaccine (OPV3), three doses of combined Diphtheria–Parotitis–Tetanus vaccine (DPT3) and three doses of Hepatitis B vaccine 3 (HBV3) , Measles vaccine, Parotitis vaccine, German Measles vaccine, Hemophilia Influenza vaccine and Chickenpox vaccine, have not changed in 2008 compared to the same ratios of 2001. Yet these ratios remained unchanged registering a high percentage of 97% in the two years under review.

This high percentage is attributed to the state's early attention to healthcare services and programs provided to the population in general and children in particular, leading to a semi elimination of these diseases.

Figure (12): Immunization against communicable childhood diseases



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

Where Are We?

The State of Qatar ranked among the top countries of the world with a ratio of 95%, while it was 83% of children immunized against tuberculosis, 74% against measles in developing countries.

Source: United Nations Development Program, Human Development Report, 2009.

The Future:

It is expected that the ratio of immunization against communicable childhood diseases reaches 100% due to the continuous upgrading of health services and relevant coverage, likely to include the total population on the one hand, and to adopt strict measures to prevent the spread of communicable diseases in the country, on the other.

13) Gross Enrolment Rate in the last primary school grade

Definition:

It refers to the number of students enrolled in the last primary school grade at the end of the year divided by the total number of population aged 11, and then multiplied by 100.

This indicator is important to know the success of learning process and the level of alleviation of school dropout.

Rating:

The gross enrolment rate at the last primary school grade witnessed a fluctuation but exceeded 100% to reach 102% in 2008. This rise is attributed to the effective implementation of the compulsory education law on the one hand, and the increasing awareness about the importance of education and its positive impacts on the Qatari individuals and the total society on the other.

Regarding the relative drop of this indicator in 2006 compared to 2005, it is attributed to the enrolment of students at the early age of five years.

Where Are We?

Although it is difficult to make comparisons at international level, data show that the State of Qatar is considered from among developed countries for the comprehensiveness of education.

Figure (13): Gross Enrolment Rate in the last primary school grade during the period (2001-2008)

Source: Indicator calculated according to data provided by the Statistics Authority, and the Annual Statistics Report of the Ministry of Education, various issues.

The Future:

This indicator is expected to remain high due to measures taken by competent authorities in the State to ensure the continuity of enrollment at school at the various educational levels, and the actions related to combating the phenomenon of school dropout.

14) Proportion of Adults with General Secondary School Certificate

Definition:

It is calculated by dividing the number of population aged between 25 and 64 years who obtained General Secondary School Certificate to the total number of population in the same age group, and then multiplied by 100.

This indicator is important to know the success of the learning process and eradication of school dropout.

Rating:

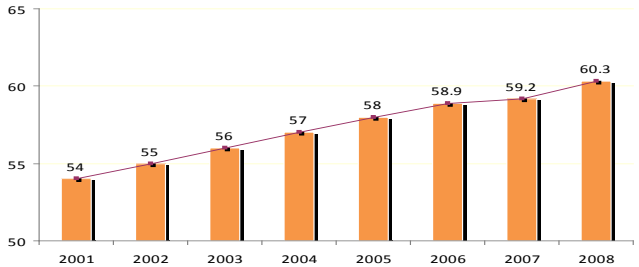
The proportion of adults who obtained general secondary school certificate increased from 54% in 2001 to 60.3% in 2008, an annual growth of 0.9%. This progress is attributed to the policy adopted by the State, which provided the education sector a top priority among the development priorities encouraging both males and females to enroll in the various educational stages and obtain academic certificates and qualifications.

Where Are We?

This indicator is considered high when compared to developed countries where it did no go beyond 70.3% in 2008.

Source: Education at a Glance 2009: OECD Indicators

Figure (14): Proportion of Adults with General Secondary School Certificate



Source: Indicator calculated according to data provided by the Statistics Authority, Qatar Population Census 2004 and Manpower Survey, various issues.

The Future:

The rate of adults who obtained general secondary school certificate is expected to see an increase thanks to the intensive efforts exerted by the State to develop education at its various stages and increase expenditures on education on the one side, and implement procedures necessary to combat the phenomenon of school dropout at the secondary stage, especially dropout of males, who prefer integrate the job market before finishing their secondary education, on the other side.

15) Adult literacy rate (15+ years, by gender)

Definition:

The Adult Literacy Rate is defined as the population of women and/or men aged 15 years and over who can read and write. The adult literacy rate indicator is very important to measure the success of efforts exerted to eradicate illiteracy.

Rating:

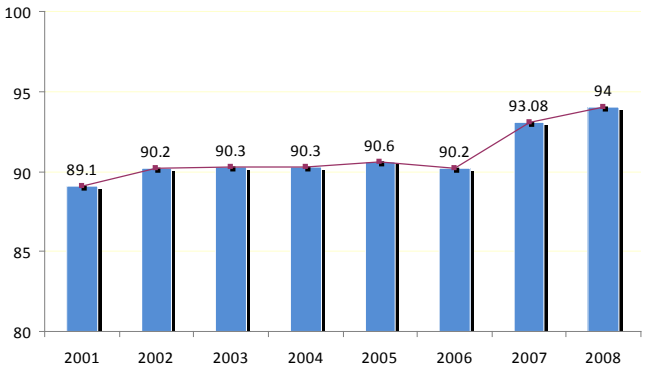
The Adult Literacy Rate indicator witnessed a rise in general, especially in the past two years, increasing from 89.1% in 2001 to 94% in 2008, and constituting an annual growth of 0.7%. This rise is attributed to a set of procedures and measures taken by the State to control illiteracy, such as the instating of compulsory primary education, adult illiteracy programs, and increase of the general social awareness about the importance of education and its necessity for both males and females.

Where Are We?

The State of Qatar is fairly considered from among the advanced countries as the adult literacy rate approaches the value of 100% in the developed countries and 80% in developing countries.

Source: United Nations Development Program, Human Development Report, 2009.

Figure (15): Adult literacy rate 15+ years, by gender



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

This rate is expected to increase due to the measures and procedures taken by the State within the framework of its educational policy, especially combat of illiteracy.

16) Number of crimes per 100,000 inhabitants

Definition:

It refers to the number of crimes registered annually by the security services multiplied by 100,000 and divided by the mid-year total population.

This indicator reflects the security status of the State in addition to its socio-economic conditions.

Rating:

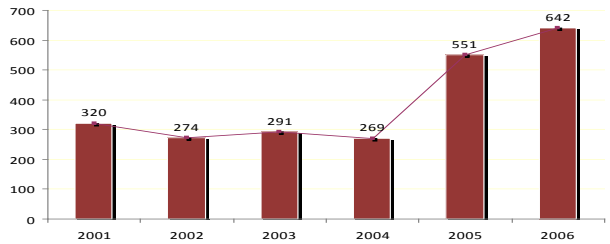
Despite the low number of crimes registered in the state and compared to other countries of the world, this number increased in the past five years from 2001 to 2006. It increased from 320 crimes per 100,000 people in 2001 to 642 crimes in 2006.

The rise in crime rate is attributed to the major openness that the country has been witnessing and which coincides with the entry of huge numbers of people from different parts of the world into the country, in addition to the development of criminal methods and techniques used in committing crimes.

Where Are We?

Despite making international comparisons, the State of Qatar has one of the lowest crime rates in the world in terms of number of registered crimes.

Figure (16): Number of crimes per 100,000 people during the period (2001-2006)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

Crime rates are expected to continue rising because Qatar has become one of the world's most employment attracting poles. Qatar is witnessing a flow of workers in huge numbers; hence, crimes become more sophisticated with the application of the latest related methods and technologies.

Chapter Two

Economic Indicators

Preface

This chapter covers the economic indicators related to the sustainable development aspects and reviews the on-going development in the various economic sectors, between the years 2001 and 2008, or, where not available, in adjacent years.

Economic indicators, computed in this chapter, contribute to show the progress made by the State of Qatar in the various economic aspects, and more essentially to evaluate the situation of the State through digital standards that can be calculated and compared with other countries.

These indicators are set to give a clear picture of the current situation and elements of strength and weakness of economic development explaining the level of progress or backwardness in the implementation of the global economic policies.

This chapter covers the following indicators:

- Gross Domestic Product per capita –GDP per capita.
- Investment to Gross Domestic Product (GDP).
- Inflation rate.
- Domestic debt to Gross Domestic Product (GDP).
- Employment rate.
- Crude economic activity rate.
- Number of landlines telephone per 100 people.
- Number of mobile phone lines per 100 people.
- Number of internet users per 100 people.
- Number of personal computer devices per 100 people.
- Current Account as percentage of Gross Domestic Product (GDP).
- Exports and Imports as percentage of Gross Domestic Product (GDP).
- Subsidies as percentage of Gross Domestic Product (GDP).
- Remittances as percentage of Gross Domestic Product (GDP).
- Income Foreign Direct Investment (FDI) as percentage of Gross Domestic Product (GDP).
- Outcome Foreign Direct Investment (FDI) as percentage of Gross Domestic Product (GDP).
- Use of energy.
- Dangerous waste generator.
- Waste recycling.

1- Gross Domestic Product per capita –GDP per capita

Definition:

It refers to the Gross domestic product (GDP) in current prices divided by the total population. This indicator has special importance because it helps measuring the level of economic development and the total economic performance.

Rating:

The Gross Domestic Product per capita indicator witnessed a remarkable development as it increased from $25,200 in 2001 to $70,600 in 2008, achieving an average annual increase of 13.7% in current prices.

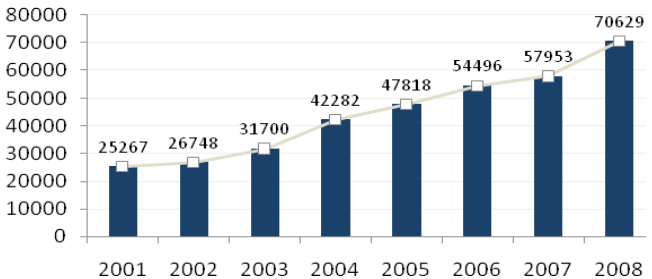
This enormous rise was attributed to the GDP growth resulting from the huge increase in oil incomes due to the rise of oil prices in the last decade.

Where Are We?

Gross Domestic Product (GDP) per capita exceeds its alike in developed countries, where it reached 32.6 thousand dollars in 2008.

Source: World Bank, Development Report 2010.

Figure (1) Gross Domestic Product per capita



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues, unpublished data.

The Future:

GDP per capita is expected to continue to rise due to the high economic growth resulting from accumulated incomes brought by the implementation of liquidated gas projects and petrochemical industries, in addition to the rise in the investment returns of the State investments abroad, whether in the tourism, or auto manufacturing, or agriculture sectors or other investments in profitable investment domains.

2) Investment Ratio to Gross Domestic Product (GDP)

Definition:

It refers to the total capital made in one year, divided by the Gross Domestic Product (GDP). This indicator helps in measuring the capital growth and further identifying the investments necessary to achieve the economic growth.

Rating:

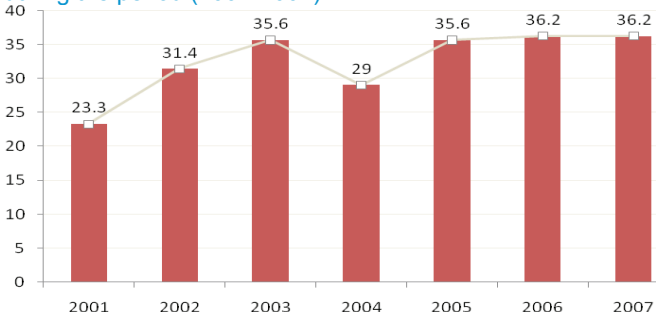
The indicator of Investment ratio to GDP witnessed a noticeable increase, as it jumped from 23.3% in 2001 to 36.2% in 2007, achieving an annual growth average of 6.5%. This increase is attributed to the major investments in infrastructure and some vital sectors, namely gas and oil.

Where Are We?

The Investment Ratio to Gross Domestic Product (GDP) surpasses its alike in developed countries where it reached 21.1% and 28.8% in developing countries, while it amounted to 23.3% in the entire world in 2007

Source: International Monetary Fund (IMF), World Economic Outlook Report October 2009.

Figure (2) Investment Ratio to Gross Domestic Product (GDP) during the period (2001-2007)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues

The Future:

The Investment Ratio to Gross Domestic Product (GDP) is expected to continue to rise, as a result of the state's implementation of several giant investment projects in various infrastructure sectors, such as electricity and water, Doha International Port, and the bridge linking Qatar to the Kingdom of Bahrain, in addition to investments in hydrocarbon projects and petrochemical industries.

3) Inflation Rate

Definition:

It refers to the annual rate of change in the consumer prices of goods and services (Consumer Price Index). This indicator is considered one of the most important indicators to measure the economic performance and economic stability, and is also adopted as one of the indexes monitoring monetary policy frame.

Rating:

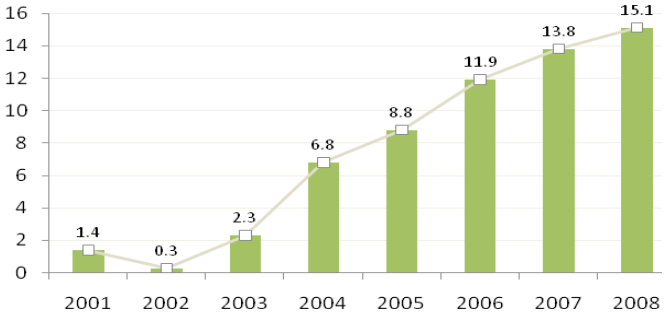
The inflation rate index saw an acceptable increase during the period 2001 to 2003, but started to boost during the period 2004 - 2008 as it jumped from 6.8% in 2004 to 15.1% in 2008, achieving an annual increase of 8.3%. This increase in the inflation rate can be attributed during this period to the increase for housing demands and rise of accommodation rents that were accompanied, then, by a high rise in the prices of food commodities.

Where Are We?

The current inflation rate is regarded as high when compared with developed countries, where it reached 3.38% and 9.26% in developing countries in 2008.

Source: International Monetary Fund (IMF), World Economic Outlook Report October 2009.

Figure (2) Inflation Rate during the period (2001-2007)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

The inflation rate is expected to decline gradually due to the increase in supply for housings and the fall in rents on the one side, as well as the decline in the sharp increase in food prices and the fall in the imported inflation on the other side.

4) Percentage of domestic debt to Gross Domestic Product (GDP)

Definition:

It refers to the total domestic public debt divided by the Gross Domestic Product (GDP). This indicator is important to measure the State's financial situation and its ability to withstand debts.

Rating:

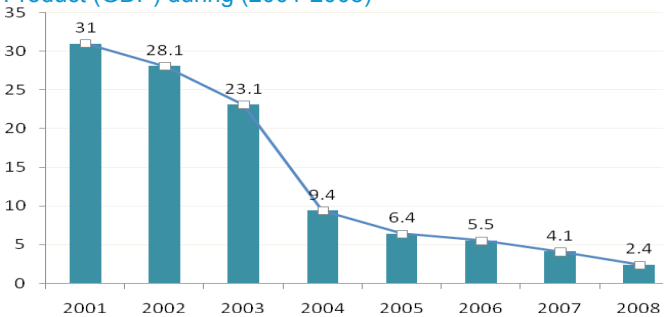
The Percentage of Domestic debt to Gross Domestic Product (GDP) dropped from 30.9% in 2001 to 2.4% in 2008. This is simply because the State benefited from its budget surpluses to reduce domestic government debt, and took measures to regulate the financial conditions and increase the efficiency of the government sector role in developing new sources of income.

Where Are We?

This index is ranked as the least internationally; especially when compared to that of the European countries, which was (83.8%) in 2008.

Source: The European Institute for Statistics, European Union Countries General Debt Report, 2009

Figure (4) Percentage of Domestic debt to Gross Domestic Product (GDP) during (2001-2008)



Source: Indicator calculated according to data provided by the Ministry of Economy and Finance, unpublished data.

The Future:

The ratio of the internal debt to Gross Domestic Product is expected to remain low in the coming phase as a result of the government's deep and intense financial and economic reforms as well as the control of public remittances, to avoid crisis that may ensue in the future as a result of changes in oil sector prices or other sectors of the national economy that are related to the international economic decline.

5) Employment rate

Definition:

It refers to the ratio of workers (men or/and women) to the overall economically active population (15 years old and over), or the ratio of workers to population

This indicator is important to understand the economical performance, quality of life and social participation.

Rating:

The employment rate witnessed a noticeable rise from (96.1%) in 2001 to around (99.7%) in 2008, indicating that the Qatar labor market is approaching its comprehensiveness. This index varied between men and women, where it increased for men from (97.7%) in 2001, to around (99.9%) in 2008. This increase was due to the Qatari economic progress, and the accelerated flow of the labour force needed to employ in all the country's economic activities.

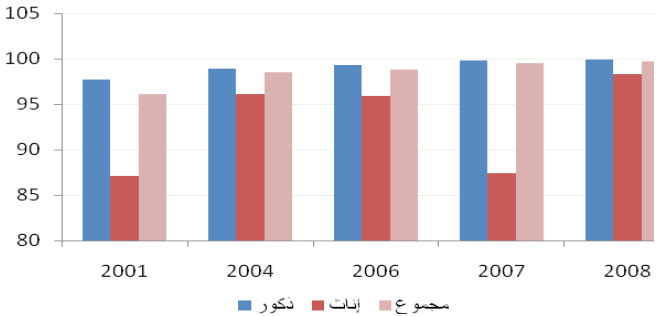
The employment rate for women increased from (87.1%) in 2001 to (98.3%) in 2008.

Where Are We?

The overall employment rates (for both men and women) superseded their correspondingly in developing countries by (46.1%) and in the world by (49.1%) in 2006.

Source: World Bank, World Bank's Data Base, 2008.

Figure (5) Employment rate (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Labor Force Sample Survey, various issues, and the Population and Housing Census, 2004

The Future:

The employment rates for the Qatari labour market are expected to recede as a result of a drop in the influx of foreign labour force and the completion of the majority of dense economic work projects, such as constructions.

6) Crude Economic Activity Rate

Definition:

The crude economic activity rate refers to the number of economically-active population (15 years and above) divided by the total population and multiplied by 100.

Rating:

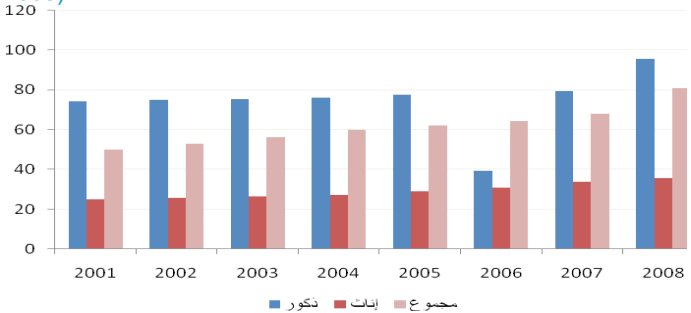
The raise of the economically active population led to the increase of the crude economic activity rate from (49.8%) in 2001 to (80.9%) in 2008. This rate varied also during this period, between men and women, according to employment policies instated by the Government and related to the migratory flux of foreign workers required, then, for the projects generated by the development process.

Where Are We?

The crude economic activity rates exceeded their alike around the world; the maximum of which reached (64.2%) in 2005

Source: Arab Monetary Fund, the Unified Arab Economic Report for 2006.

Figure (6): Crude Economic Activity Rate by gender (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Labor Force Sample Survey, various issues.

The Future:

The crude economic activity rates for males are expected to drop as most of the dense economic activities' projects, such as constructions have been completed; accordingly, this will lead to decrease the migratory movement of the male foreign labour force. However, the crude economic activity rates for women will increase, albeit with a slower growth rate, as a result of the economic and social development as well as the enhancing measures for women's participation in development.

7) The number of landlines telephone for every 100 people

Definition:

This refers to the number of land telephone lines divided by the total number of population and multiplied by 100. This index, which is important in determining the development degree of wire and wireless telecommunications, shows the extension of telecommunication services.

Rating:

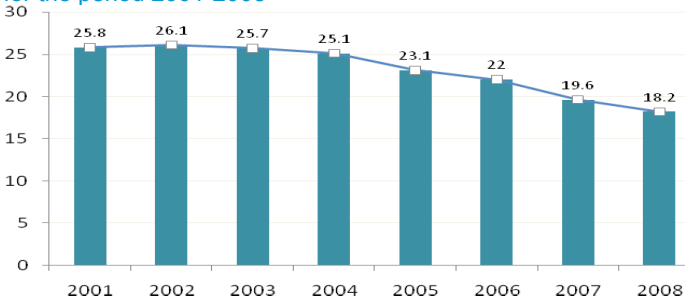
The size of the landlines telecommunication indicator witnessed an evident decline, as it dropped from (25.8) lines for every 100 people in 2001 to (18.2) lines for every 100 people in 2007. In other words, it receded by (4.27%) annually. This drop is attributed to an increase in the usage of mobile telephones, affected by the increase of expatriated labour force between 2004 and 2008 that opted for the use of the mobile telephony rather than the landline telephony system.

Where Are We?

This indicator is less than half its alike in advanced countries (47), and precedes the average in developing countries (12). It is also a bit higher than the average recorded internationally (18) for 2008.

Source: UNCTAD, Information Economy Report, 2009

Figure (7): Number of landline telephones for every 100 people for the period 2001-2008



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues, and Qatar Telecommunication Company, unpublished data.

The Future:

The number of landline telephones spread is expected to drop among the population during the coming years due to people's tendency to use mobile telephones inline with the world trend, which is witnessing a drop in the use of landline telephones.

8) Number of mobile telephones for every 100 people

Definition:

The total number of mobile telephone prescribers at the country level divided by the total population, multiplied by 100. This indicator is considered a scale for the advance and ease of the telecommunication process.

Rating:

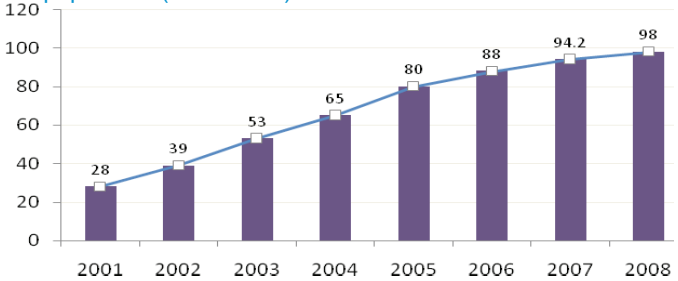
The indicator of the mobile telephone usage among the population witnessed a remarkable increase, where it increased from (28.8) lines for every 100 people in 2001 to (98) lines for every 100 people in 2008, achieving an annual growth average of (17%). This is partly due to the population increase which led the increasing demand on mobile telephone services, in parallel with the government's adoption of policies that aim at providing these devices for affordable prices.

Where Are We?

This indicator is less than its alike in developed countries (104), and supersedes the average of developing countries (48), it is also much above the international average, which was (60) in 2008.

Source: UNCTAD, Information Economy Report, 2009

Figure (8): Number of mobile telephones for every 100 people in the population (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues, and Qatar's Supreme Council for Communications and Information Technology, The Digital Scene in the State of Qatar, 2009.

The Future:

The prevalence rate of mobile telephones among the population is expected to increase as a result of the increase of the population number, and the country's inclination towards the setting up of strategies for developing the information technology and telecommunication sector, as well as the openness of the Qatari telecommunication market to international telecommunication companies. The Qatari market became open after its monopolization by one company.

9) The number of Internet user for every 100 people

Definition:

It refers to the number of internet users in the country, divided by the total population and multiplied by 100. This indicator is a scale for the intensity of access to Internet.

Rating:

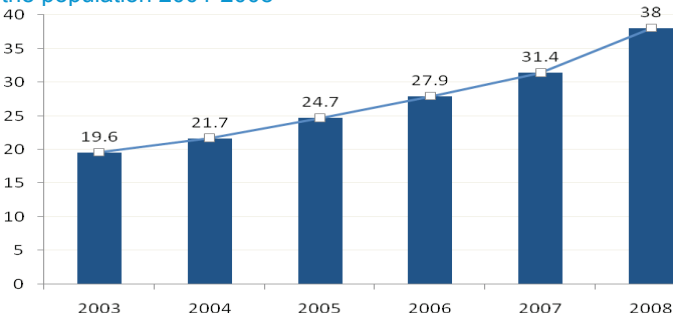
The Internet usage indicator witnessed a noticeable rise, where it increased from (19.6) users for every 100 person in 2003, to (38.0) users for every 100 person in 2008; in other words, the average annual growth reached (11.7%). This increase is due to the government's adoption of policies and strategies aiming at providing Internet services to everyone, and the increase of individual's awareness for using the technology of digital economy.

Where Are We?

This indicator is less than its alike in developed countries (55), and supersedes the average in developing countries (15), it is also much above the international average which was (20) in 2008.

Source: UNCTAD, Information Economy Report, 2009

Figure (9): The number of Internet user for every 100 people in the population 2001-2008



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

The prevalence rate of Internet usage among the population is expected to increase as a result of the country's inclination towards lowering the price of Internet subscriptions in the telecommunication sector, and developing different service applications that will increase the interaction among the population, the educational cultural, social and economic activities through e-learning, e-commerce, e-government and the alike.

10) Number of personal computers for every 100 people

Definition:

This indicator refers to the number of personal computers (used or ready for use) divided by the number of the population and multiplied by 100. This indicator is important in measuring the availability of IT and telecommunications.

Rating:

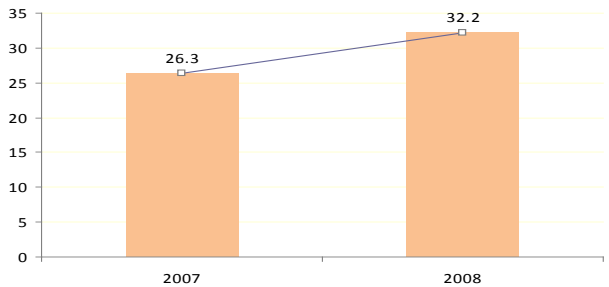
The personal computer dispersal indicator witnessed a notable increase during the past two years, where it raised from (26.3) owners for every 100 person in 2007 to (32.3) owners for every 100 person in 2008. The indicator's rise is due to the policies and initiatives adopted by the government aiming at boosting the usage of PCs, electronic education, and encouraging the use of digital telecommunications by individuals and companies.

Where Are We?

This indicator is less than its alike in developed countries (54.1), and supersedes the average in developing countries (14.9).

Source: Qatar's Supreme Council for Communications and Information Technology, The Digital Scene in the State of Qatar, 2009.

Figure (10): Number of personal computers for every 100 people (2007-2008)



Source: Qatar's Supreme Council for Communications and Information Technology, The Digital Scene in the State of Qatar, 2009.

The Future:

This indicator is expected to further rise as a result of the government's adoption of policies that aim at enhancing the information technology and knowledge, such as the electronic learning initiatives, electronic commerce, electronic exchange and other applications of electronic governments, in addition to the government procedures that boost the digital culture through providing free Internet usage outlets in some public locations.

11) Current Account as a percentage of the Gross Domestic Product

Definition:

It is the total current account (the total net commodity exports and services, and the net income and transfers) divided by the Gross Domestic Product. This indicator reflects the economy's openness and global participation.

Rating:

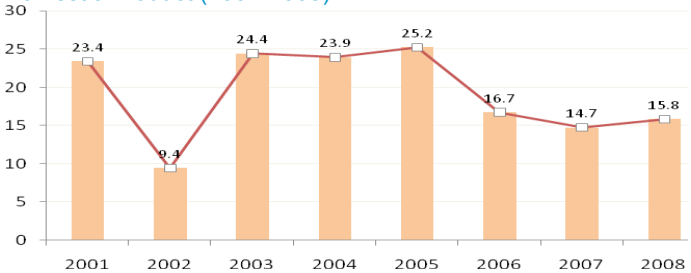
The rate of current accounts to the GDP dropped from (23.4%) in 2001 to (15.8%) in 2008. The big drop in 2002 is due to the receding of the absolute value of the current account from (4.5) billion dollars in 2001 to (3.8) billion dollars in 2002, as well as to the major increase of the GNP during the last few years in comparison to the net current account.

Where Are We?

Qatar ranks, according to this indicator, among the countries that have achieved a positive surplus in the current account budget in comparison to the alike in advanced countries (-1.2%) for 2007

Source: International Monetary Fund: World Economic Outlook, October, 2009

Figure (11): Current Account as a percentage of the Gross Domestic Product (2001-2008)



Source: Indicator calculated according to data provided by the Qatar Central Bank's annual report, various issues.

The Future:

It is expected that Qatar's economy will continue achieving a surplus in the current account balance as a result of an expected increase in the value of liquid gas, and petrochemical products' exports.

12) Exports and imports as a percentage of the Gross Domestic Product

Definition:

This is the total quantity of export added to the total quantity of imports divided by the gross domestic product and multiplied by 100.

This indicator is considered a scale for the degree of openness of national economy towards international economy.

Rating:

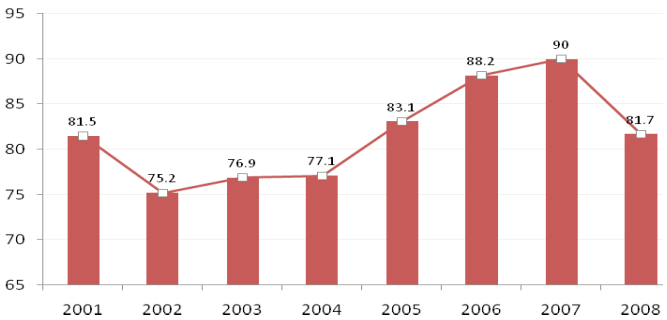
The indicator of exports and imports as a percentage of the Gross Domestic Product witnessed a rise between 2006 and 2007, where it reached (90 %). It was due to the issuing of the government of a number of programs to liberalize trade and enhance the process of integration into the international economy. The drop noted in 2008 was due to the increase of the GDP.

Where Are We?

The degree of trade openness is considered high in comparison to its alike internationally (53.5%) and in developed countries (52.3%) for the year 2008.

Source: World Bank, World Development Report, 2010

Figure (12) Exports and imports as a percentage of the Gross Domestic Product (2001-2008)



Source: Indicator calculated according to data provided by the Qatar Central Bank's annual report, various issues.

The Future:

This indicator is expected to remain high; especially that Qatar joined officially the Joint Gulf Market that started operating in 2008. Qatar also became part of the Greater Arab Free Trade Area which came into force in 2005. The State of Qatar is keen to sign many agreements to encourage mutual trade exchange and investment with developed and developing countries, in parallel with the establishments of free zones.

13) Official Development Assistance as a percentage of the Gross Domestic Product

Definition:

Official Development Assistance are official credit aids (grants or easy loans) provided by the government sector to countries and regions for development purposes over a year, divided by GDP and multiplied by 100. This indicator is important in measuring the contribution of countries in achieving an international development partnership.

Rating:

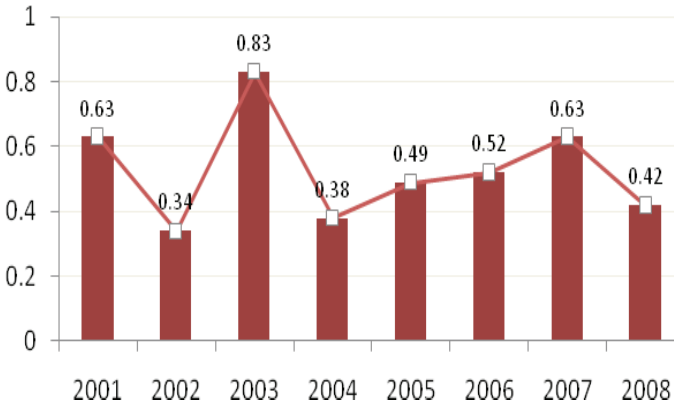
The credit aid indicator as a percentage of the GDP witnessed both fluctuations and decreases. It went down from (0.63%) in 2001 to (0.42%) in 2008. The reason for these decreases and fluctuations is due to the absence of proportionality between the growth rates in the value of GDP, and the growth rate in the official credit aid value.

Where Are We?

This percentage is considered high in comparison with its alike in the Development Assistance Committee (DAC)'s Countries which amounted (0.28%) in 2007.

Source: Development Assistance Committee, Organization for Economic Co-operation and Development, 2008

Figure 13: Official Development Assistance as a percentage of the Gross Domestic Product for the period (2001-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues; and the Cabinet's General Secretariat, Credit and Assistance Offered by the State of Qatar, 2008.

The Future:

The magnitude of credit (financial) assistance offered by the state is expected to grow as a result of the expansion of cooperation with developing countries and the International role of Qatar, as well as to the approaching launch of the Qatar's Development Fund that will monitor the State's policy in the area of assistance offered to other countries. However, the rate of assistance to the Gross Domestic Product will fluctuate.

14) Remittances as proportion of the GDP

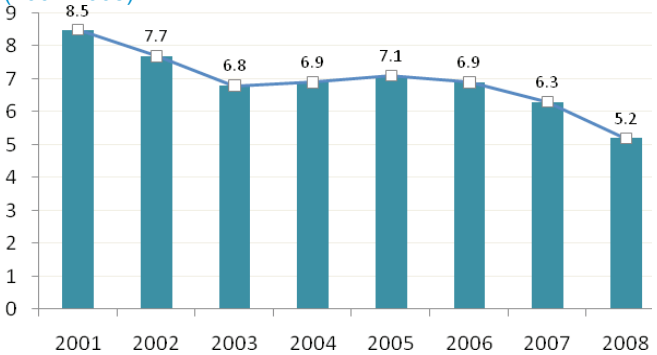
Definition:

These transfers are the total funds transferred by expatriate workers in Qatar over the duration of one year, divided by the Gross Domestic Product. The size of remittances is usually linked to the number of foreign workers in the State and the bank procedures used. These remittances play a big role in countries where money is remitted by the labour force, as they are a money source and affect foreign accounts, balance of payments and eventually lead to economic stability.

Rating:

The economic boom witnessed in Qatar during the last few years was accompanied by an increase of foreign workers and their remittances that increased from (5.0) billion Qatari Riyals in 2001 to about (19) billion Qatari Riyals in 2008, thus achieving an annual growth rate of (19.5%). However, achieving an annual growth rate in the Gross Domestic Product of (28.1%) led to a drop in remittances as a percentage of the GDP of about (8.5%) for 2001 to (5.2%) in 2008.

Figure (14): Remittances in proportion to the GDP for the period (2001-2008)



Source: Indicator calculated according to data provided by the Qatar Central Bank's annual report, various issues.

Where Are We?

Qatar is considered among the first twenty countries around the world in terms of remittances made by expatriate workers. The percentage of remittances have exceeded the GDP of its counterparts internationally by (0.37%) and in developed countries by (0.50%).

Source: World Bank, Facts about immigration and transfers, 2008

The Future:

Remittances made by foreign workers are expected to increase over the next coming few years. However, they will start to decline gradually as the flow of foreign workers starts receding. Hence, the percentage of remittances to the GDP will continue decreasing.

15) Foreign Direct Incoming Investment as a percentage of the GDP

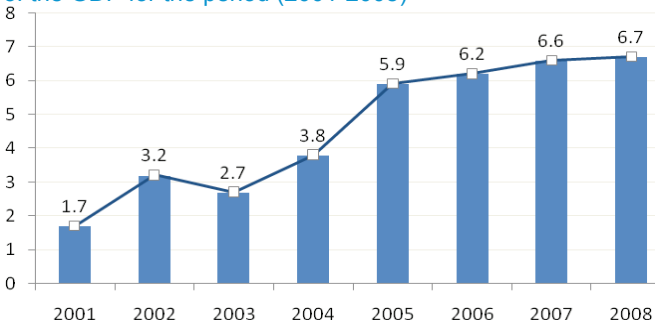
Definition:

The Total Foreign Direct incoming Investment to GDP is the international investment done by a resident of a certain country either by contributing or owning a project in another country, on a condition that the shares owned are 10% or more of the company's assets, to be carried out either through a share in the capital or a re-investment of revenues as percent of the GDP. Direct foreign incoming investment is considered as a foreign source of finance to the State.

Rating:

The Total Foreign Direct incoming Investment as a percentage of the GDP indicator witnessed a notable rise from (1.7%) in 2001 to (6.7%) in 2008. This was due to the increase of the foreign direct incoming Investment value from (296) million dollars in 2001 to (6700) million dollars in 2008, achieving an annual growth of (56.1%), as a result of the economic boom witnessed by Qatar, which included the investment opportunities available, the development of the infrastructure and the attractive investment climate.

Figure (15): Foreign Direct Incoming Investment as a percentage of the GDP for the period (2001-2008)



Source: UNCTAD, Word Investment Report, various issues.

Where Are We?

The direct foreign incoming Investment as a percentage of the GDP is still limited, although it surpassed its alike in the world (2.78%) for 2008.

Source: The Arab Investment and Export Credit Guarantee Corporation, the Investment Climate in Arab Countries report (2009)

The Future:

The direct foreign incoming Investment's percentage of the GDP is expected to increase as a result of the excellent performance of the Qatar's economy, high growth rates, and attractive investment climate embodied in the infrastructure, and legislative panels that secure an ease of procedures and work for foreign investors.

16) Foreign direct Outgoing investment's percentage of the GDP

Definition:

It refers to the Foreign Direct Outgoing Investment made by Qatari nationals living abroad, as a percentage of the GDP.

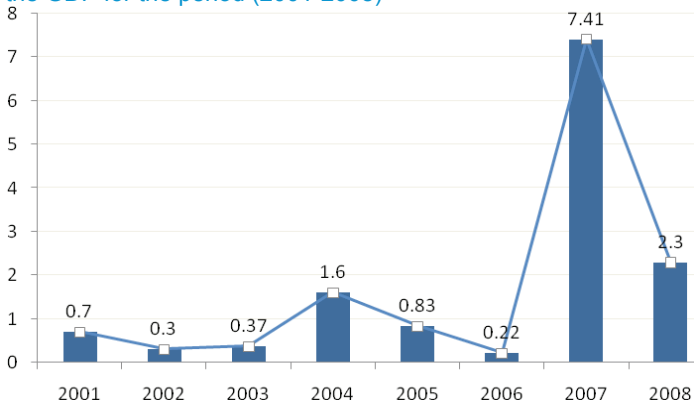
Rating:

The indicator of the Foreign Direct Outgoing Investment's percentage of the GDP witnessed fluctuations, as it reached (0.6%) in 2001, then increased to (1.6%) in 2004, and dropped to (0.2%) in 2006, only to increase to (7.4%) in 2007, then dropping again to (2.4%) in 2008. This is partially due to the pace of development that took place at the international economy level and the rise of the Qatar's GDP due to the high growth rates during the last few years.

Where Are We?

This percentage is considered limited when compared to its international equivalent, which was (3.06%) in 2008.
Source: UNCTAD, World Investment Report, 2009.

Figure (16): Foreign Direct Outgoing Investment's percentage of the GDP for the period (2001-2008)



Source: UNCTAD, World Investment Report, various issues.

The Future:

The Foreign Direct Outgoing Investment's percentage of the GDP is expected to increase as a result of the State's directives to intensify the foreign investments in different economic sectors around the world, within a policy aiming at diversifying income sources.

17) Energy use

Definition:

This indicator refers to the total electrical power consumed in one year by all sectors divided by the number of people for the same year. Energy usage reveals the required energy demanded to cover the consumption and the achieved competence in its usage.

Rating:

The energy use indicator witnessed an increase, where the electric power share of every individual increased from (15.3) thousand kilowatts/hour in 2001, to (18.3) thousand kilowatts/hour in 2007, at an annual growth pace of (3%). This growth is due to the increase in the population and the upgrading of the levels of the standards of living, as well as to the expansion of manufacturing industries and the utilization of power generators in 2007.

Where Are We?

The annual individual consumption share of electrical power was more than the international rate which was (2.7) thousand kilowatts/hour for 2005, and that of the developed countries (8) thousand kilowatts/hour for the same year.

Source: United Nations Development Program, Human Development Report, 2007-2008

Figure (17): The individual share of energy consumption for the period (2001-2007) kilowatts/hour

Source: Indicator calculated according to data provided by the Qatar Electricity and Water Co., The Annual Statistic Report, various issues.

The Future:

The annual individual consumption share of electrical power is expected to increase in the future, as electricity is the main source of power in Qatar and the economic development (which requires electricity) is expected to extend another era, reflecting accordingly on the level of income, population increase and expansion of new energy projects.

18) The generation of hazardous waste

Definition:

This indicator refers to the total quantity of hazardous waste generated by industrial activities and processes, in one year, or any other processes that may result in hazardous waste, according to the definition of hazardous waste in the Basil agreement or other related agreements, divided by the GDP.

Rating:

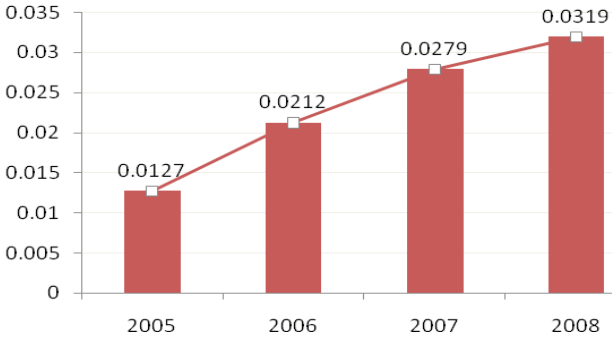
The indicator of hazardous waste witnessed a limited increase, as it went up from (0.0127) tons for every GDP unit in 2005, to (0.0319) tons for every GDP unit in 2008, at an annual percentage growth of (36%).

This increase is due to the expansion of the petrochemical and fertilizers industries, and the waste of fuel and oil as a result of the increased numbers of vehicles, high living standards, and waste of the health care systems.

Where Are We?

It is difficult to conduct a comparison for the indicator of hazardous waste generation, because it is related to the population size and the hazardous waste procedures applied by the generated establishments.

Figure (18): The generation of hazardous waste (2005-2008) metric tons by GDP unit.



Source: Ministry of Environment, unpublished data

The Future:

Hazardous waste generation is expected to decrease, as the result of the government's efforts in this scope, especially, in industrial cities. The government set up a recycling plant for hazardous waste in Musaieed in 2004, using updated and efficient techniques, and activating hazardous waste disposal relevant legislations, environment management, petrochemicals modern technologies' exploitation, health management and health care facilities waste, as well as enhancing the related increased awareness.

19) Recycled Waste

Definition:

This indicator refers to the percentage of items recycled from metal, plastic and paper waste to the total waste. It is considered as a very important indicator to determine waste and environment management in a country.

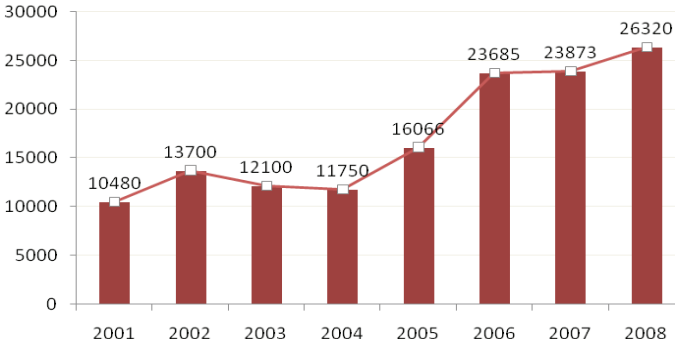
Rating:

This indicator witnessed a noticeable rise, where recycled waste increased from 10,084 tons in 2001 to 26,319.6 tons in 2008, at an annual growth of 12.2%. Despite the rise of the recycled waste quantity, its percentage from the total waste is still low, attaining (0.009) for 2008. This level is due to the low production capacity of recycling waste in comparison to waste generation.

Where Are We?

The recycling operations are still low, in comparison to Malaysia (5%) and the Scandinavian countries (70%).
Source: www.aleqt.com

Figure (19): Recycled Waste, 2001-2008, tons annually



Source: Ministry of Environment, unpublished data

The Future:

The rate of recycling waste is expected to increase as a result of the recycling factories that will increase the production capacity. The State is also establishing many recycling projects, such as the school waste recycling project, which will include 500 units distributed all over the country, and sponsored by several companies.

Chapter Three

Environment Indicators

Preface

This chapter deals with the sustainable development indicators in the environment context, and aims at displaying the situation of Qatar's environment in the form of indicators for the period (2001-2008) according to their availability.
The environment indicators discussed in this chapter are considered as measuring scales to the advances achieved in Qatar in terms of preserving the natural environments' different components, and limiting related abuses to provide inhabitants with healthy surroundings.
As for other indicators of sustainable development, the environment indicators do not contribute to the observation of advances achieved by the State to realize goals and successes in maintaining the environment only, but they also shed light on weaknesses and problems arising from the application of domestic and international procedures as well as environment laws. They will assist decision makers in taking the best and precise decisions regarding the public interest.
Despite the limited information available about Qatar's environment in comparison to the available population, social and economic related information, due to the country's new interest in environment, this chapter discusses a number of indicators that might assist in monitoring the changes taking place in the Qatar's environment.
This chapter reviews the following indicators:

- Concentration of air pollutants in urban areas.
- Emission of CO2 as a result of industrial operations.
- Ozone depleting substances.
- Arable lands.
- Agricultural Fertilizers.
- Use of agricultural pesticides.
- Annual fishing.
- Ratio of protected areas to total areas.

1) Concentration of air pollutants in urban areas

Definition:

This indicator refers to the quantity of basic gases' concentrations polluting the urban environment.
It assists in measuring the effect of population growth and its accompanying activities on the air in urban areas.

Rating:

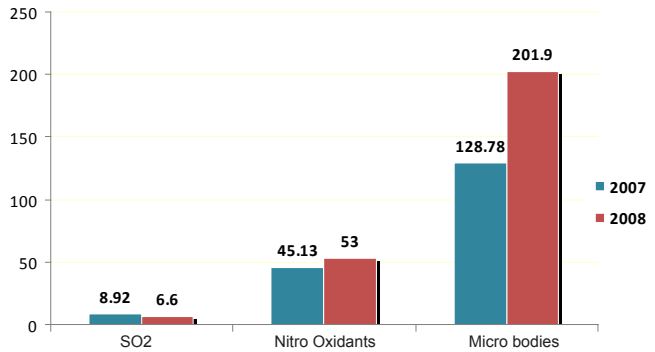
The indicators of air pollutants in urban areas (the city of Doha) witnessed a general rise between 2007 and 2008. The largest raise in the quantity of Micro bodies was from (128.78) ug/m3 of air (ug/m3) to (201.9) ug/m3 at a growth of 56.78%. The quantity of Nitro Oxidants rose slightly from (45.13) ug/m3 to (53) ug/m3 at a growth of 17.44%. The quantity of SO2 receded from (8.92) ug/m3 to (6.6) ug/m3, at an annual receding pace of 30.12%.
The reason behind the increase of air pollutants in Doha is the country's population growth, concentrated mostly in the city, accompanied by the increase of the number of vehicles, buildings and the onset of developing the related infrastructure.

Where Are We?

The SO2 pollutants are less than the limit allowed internationally (80)ug/m^3, and the same for the Nitro Oxidants (100)ug/m^3, whereas the micro particles pollutants exceeded the permitted limit of (50)ug/m^3

Source: United Nations, the Group of Environment Statistics for the Economic and Social Commission for West Asia, 2007.

Figure (1): The concentration of air pollutants in urban areas (2007-2008) in ug/m3 of air.



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

The SO2, Nitro Oxidants and Micro particles pollutants are expected to rise due to the population growth and the accompanying increase in transportation and buildings. Without strict measures to contain these pollutants, the increase will be witnessed, especially at the level of Micro particles.

2) The emission of CO2 as a result of industrial operations

Definition:

This indicator refers to the quantity of CO2 emitted as a result of different industrial operations. It assists in measuring the efforts done to limit the emissions of this gas, which is considered, as the main reason for the increasing rates of the earth's temperature.

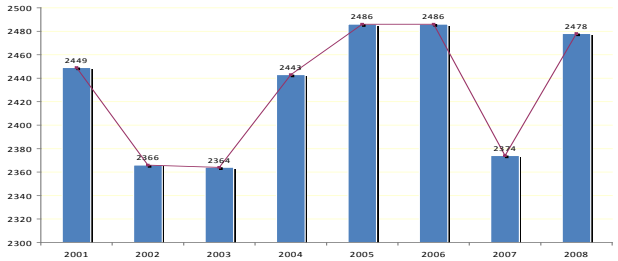
Rating:

The emission of CO2's (as a result of industrial operations) indicator witnessed great fluctuations. In 2001, the emissions were 2449 tons, after which they dropped to 2364 tons in 2003, the rate further dropped to 2374 in 2007, and stabilized at 2478 tons in 2008, with an annual receding growth of 0.11%. The emission of CO2 as a result of industrial operations remains low in comparison to the CO2 emission from other sources, such as burning fuel. The fluctuations of emission are due to the related industries in the country, which may lead to a raise or a drop of emissions according to the addition or halt of one or other relevant plant.

Where Are We?

We cannot compare the quantity of CO2 emissions resulting from industrial processes and operations in Qatar with other related countries, due to dissimilarities in assessing the importance of the related industrial sector, its size, nature, and level of use of modern techniques limiting the emissions.

Figure (2): Emission of CO2 as a result of industrial operations (2001-2008) tons annually



Source: Indicator calculated according to data provided by the Ministry of Environment, unpublished data

The Future:

The quantity of CO2 emissions resulting from industrial operations are expected to remain at their current levels with some fluctuations, for the reasons mentioned previously. The State will continue to work for limiting the emission of this gas in line with international treaties, despite its current limitations, which remain high in relation to the population size, especially, if the fuel burning emissions and others are added.

3) Ozone depleting substances

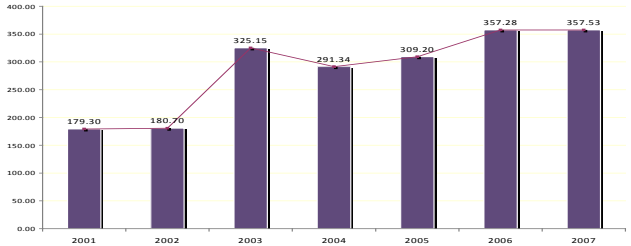
Definition:

This indicator refers to the quantity of Ozone depleting substances imported by the State and measured by the (depletion potential). It is a very important indicator to determine the effect of development activity on depleting the Ozone layer which protects the planet earth from high ultraviolet rays exposure, that cause many diseases, especially skin diseases.

Rating:

The indicator of Ozone depleting substances witnessed a noticeable rise, from (179.30) metric tons in 2001, to (357.53) metric tons in 2007, engendering an annual growth of - 11.51%. This increase is due to the rise of imported organic Chloride and Florid compounds -22, and the decline in importing organic Chloride and Florid compounds-11 and organic Chloride and Florid compounds-12, whereas Halon -1121 and Halon -1301 were not imported over the last few years. This proves the partial success in the procedures implemented to limit the import and use of Ozone depleting substances. However, there were no limitations to the industrial and individual demand for organic Chloride and Florid compounds -22.

Figure (3): Ozone depleting substances (2001-2007)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

Where Are We?

It is difficult to run comparisons related to the quantity of Ozone depleting substances, because the issue is related to the population size, level of environmental awareness, size of the industrial sector and appropriateness of measures taken to limit the use of these substances.

The Future:

The use of Ozone depleting substances are expected to drop on the long run, especially with the strict application of related laws, and the inspection campaigns carried out by specialized authorities to ensure that these substances are not available on the markets.

4) Arable lands

Definition:

It is the total area of agricultural lands cultivated continuously. This indicator reflects the State's support for agricultural activities to assist in providing the population with acceptable level of food security, especially that this activity may contribute to limiting the effects of gas emissions, known as heat retention.

Rating:

The arable land indicator witnessed fluctuations. After an increase in the arable land area which reached (7419.9) hectares in 2003, the land area receded to (6500) hectares in 2008, with an annual drop rate of 2.65%.

In general, the cultivated land area is still high despite the harsh natural circumstances of scarce natural water, its low quality, soil salinity and the limited usage of techniques that assist in land reclamation.

Where Are We?

It is difficult to compare the arable land in Qatar to those in other countries due to its relation to natural circumstances that include the type of soil, the climate's elements that vary from one place to another, and the modern techniques utilized in reclaiming the land.

Figure (4): Arable lands (2001-2008) hectares

Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

The stability of arable land which is expected to maintain only on the short run, will slightly recede afterwards, due to the low level of underground water and, where available, due to its high salinity level, which, certainly, will lead to the aridity of the soil and the increase of the number of abandoned farms. However, as efforts are being deployed to achieve food security, and if these efforts will sustain, modern techniques could be applied in agriculture and water desalination projects might be set up; but this will not greatly affect the size of arable land.

5) The use of agricultural fertilizers

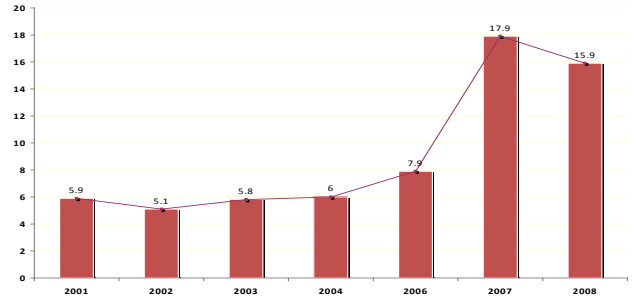
Definition:

It is the extent of using agricultural fertilizers in every unit of the agricultural land. This indicator assists in determining the contribution of agricultural activities in affecting environment systems through the use of different chemicals in the form of agricultural fertilizers that have a negative effect on the soil's quality and underground water.

Rating:

The agricultural fertilizers usage indicator witnessed fluctuations. In 2001 the indicator was (5.9) Kg/hectares and jumped to (17.9) Kg/hectares in 2007 to drop to (15.9) in 2008, at an annual growth rate of 20.32%. The modest use of fertilizers –although the soil lacks organic substances- is due to the fact that most of the cultivated plants are not planted for commercial reasons, thus, they do not need to be fertilized in a continued manner. This will also be evident after running a comparison between the use of agricultural fertilizers and the size of arable land, as there is no big relation between the two.

Figure (5): The use of agricultural fertilizers (2001-2008) Kg/ hectares



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

Where are We?

The rate of using agricultural fertilizers is far from being compared to the related one at the international level, where it reached (91) Kg/hectares, and at the Arab countries level, where it recorded a top value of (49) Kg/ hectares.

Source: The Arab Organization for Agricultural Development, the Agricultural Development in the Arab World's, Annual Report, 2008.

The Future:

The rate of using agricultural fertilizers is expected to rise, but in a limited manner, due to the continuous pressure on the soil that lacks, essentially, to organic materials, and needs additional agricultural fertilizers, on the one hand, as well as, to the shrinking of the arable land areas, which, on the medium and long run, will limit the use of agricultural fertilizers, on the other.

6) The use of agricultural pesticides

Definition:

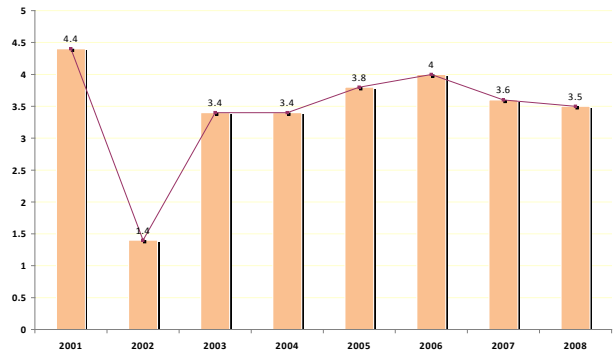
It is the amount of agricultural pesticides that are used in every unit of the agricultural land. This indicator is established to assess the contribution of the agricultural activities in the environment systems through the use of different chemicals in the form of agricultural pesticides that have a negative effect on the soil's quality and underground water.

Rating:

The agricultural pesticides usage indicator witnessed fluctuations. In 2001 the indicator was (4.4) Kg/hectares, dropping to (1.4) Kg/hectares in 2002, and then climbing to (3.5) Kg/hectares in 2008, at an annual growth rate of 0.59%, between 2003 and 2008.

It was also noted that there was no string connection between the use of pesticides and the size of arable land, as these pesticides were used in commercial farms and for certain plants.

Figure (6): The use of agricultural pesticides



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

Where Are We?

It is difficult to run comparisons in the area of agricultural pesticides usage due to its connection to natural circumstances, especially the type of prevailing climate, plants and agricultural production.

The Future:

The rates of agricultural pesticides usage is expected to stabilize at it current levels, however, the slight reduction of the arable land on the medium and long run will lead to a mild decrease in using pesticides.

7) Annual Fishing

Definition:

It is the quantity of annual fishing of consumable fish compared to the highest fishing quantity obtained over a time series. This indicator supports the measurement of the demand elements, including population growth, on one of the most important live sources of the marine environment.

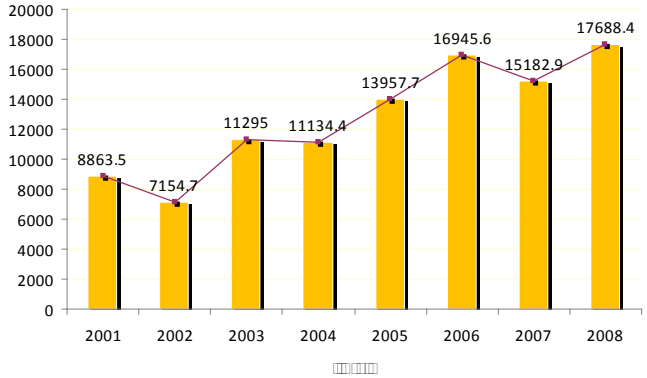
Rating:

The annual fishing indicator witnessed slight fluctuations. In general, it increased from (8863.5) tons in 2001, to (17688.4) tons in 2008, with an average annual growth of 9.87%. This increase was due to the population growth over the past few years, as fish was considered a main food for the Qatari nationals and the majority of non-nationals coming to the country from different Asian countries.

Where Are We?

Due to the fishing relativity to the size of the population and the type of food they consume, in addition to the measures taken to control the fishing quantity, it is difficult to run a comparison between this Qatari indicator and those of other countries.

Figure (7): Annual Fishing (2001-2008) tons yearly.



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

The indicator of annual fishing is likely to increase with the expected population growth. It will eventually stabilize with the decline of the numbers of foreign workers, due to the absence of crucial measures limiting the over fishing and preserving the fish reserve. Although fishing is regulated by some appropriate rules and regulations, but these apply, only, to certain types of fish.

8) The ratio of preserved areas to total area

Definition:

It is the area that occupies a preserved land divided by the state's total land area. This indicator supports the efforts made to preserve the primitive life and different environment ecologic systems.

Rating:

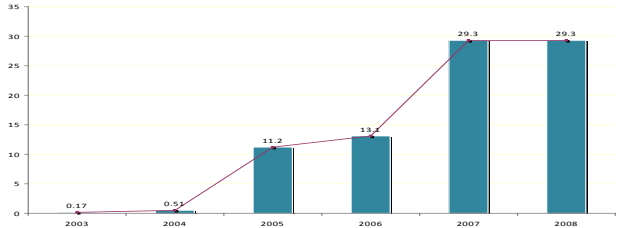
This indicator witnessed a noticeable rise. It rose steadily from 0.17% in 2003, to 11.2% in 2005 and then normally to 29.3% in 2008, at an annual growth pace of 32.06% from 2005 to 2008. This rise was due to the increasing interest in the environment over the past few years. As a result of this concern, a Supreme Council for the Environment and Natural Reserves was established in 2000 (the current Ministry of Environment), with a mission to expand the areas of preserved lands on the top of its list of priorities.

Where Are We?

The ratio of preserved areas to the total area is 10%above the international standard for a total area in a country; international ratio is 13%.

Source: UN, Millennium Development Goals in the Arab Region 2008: A Youth Lens 2008.

Figure 8: The ratio of preserved areas to the total area (2003-2008)



Source: Indicator calculated according to data provided by the Statistics Authority, Annual Statistics Abstract, various issues.

The Future:

The ratio of preserved land to the country's total area is expected to stabilize because, to begin with, its percentage was high and then most of the covered areas were suitable to become natural reserves. Hence, it will be difficult to append new areas.