

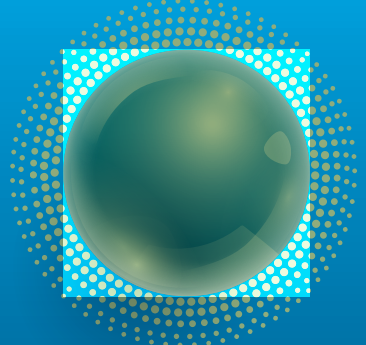
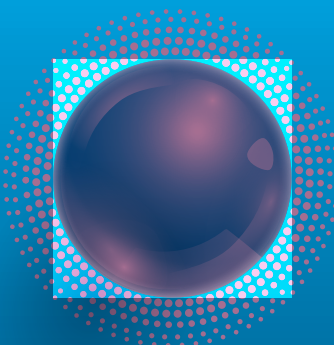


وزارة التخطيط التنوير والإحصاء

Ministry of Development Planning and Statistics

Sustainable

Development Indicators
in the State of Qatar
2015



Sustainable Development Indicators in the
State of Qatar 2015

December 2015

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Preface

Sustainable development is defined as “the development that meets the needs and aspirations of the present without compromising the ability of future generations to meet their own needs”. It is well-known that sustainable development’s interconnected elements tackle economic growth, social integration, and environment protection through adopting balanced production and consumption patterns, and without being over-dependent on natural resources. Today, our world undergoes radical changes in respect of sustainable development and its future aspirations’ prospects. In 2015, the Sustainable Development Agenda 2030 was launched and adopted by 193 UN-member states in a historical summit held in September 2015. The Agenda responds to the needs of people in both advanced and developing countries, and stresses the need to include everyone without exception. Besides its three dimensions, the Agenda also tackles issues associated with peace, justice, and institutions’ efficiency.

This report, which covers sustainable development indicators in the State of Qatar, contributes to casting light on the country’s promising achievements within the framework of Qatar Vision 2030, and National Development Strategy 2011-2016 follow-up. The report also deals with their accomplishments consisted in the implementation of sectorial strategies’ relevant projects. The Ministry of Development Planning and Statistics in collaboration with other ministries, government agencies, and civil society organizations will indeed adopt the Sustainable Development Agenda 2030 featuring 17 targets and 169 objectives, and monitor their implementation progress via a set of indicators that will be adopted by the UN Statistical Commission. Further, the MDPS will incorporate the listed international targets into the 2nd National Development Strategy 2017-2022.

The report aimed at appraising the progress achieved by the State of Qatar in multiple areas of development through a group of sustainable development indicators related to population, social, economic and environmental aspects. Each indicator in this report features its definition, progress and growth level, and it is compared with its counterparts at regional and international level whenever possible. The indicator’s future prospects are also predicted by tracking its development during the period 2008-2014 as per the available data.

The MDPS hopes this report would be a reference for makers of decisions and different development policies, and help them identify the procedures required for progress in the field of sustainable development. The MDPS will restructure this report’s next issue in line with the targets, objectives and indicators of the Sustainable Development Agenda 2030 which is adopted by the world leaders in their summit held in September 2015. The MDPS is also pleased to receive remarks from this report’s users and decision makers seeking to develop and improve it taking into account the national and international requirements of relevant indicators. On this occasion, I would like to extend my thanks to all agencies that supplied us with the data necessary to release this report.

Dr. Saleh bin Mohamed Al-Nabit
Minister of development Planning and Statistics

Introduction

There has been a growing interest of the world different countries in achieving sustainable development since the last two decades. Such an interest consists in establishing purposeful development strategies and plans to attain integrity of social development, economic growth, and environment protection. It has therefore become necessary to conduct reports on sustainable development indicators which are emphasized in the Sustainable Development Agenda 2030 adopted by the world leaders of 193 UN member-states in September 2015. The agenda features 17 targets, 169 objectives and plenty of indicators, that will be used in the measurement of targets achievement progress. The UN Statistical Commission is expected to adopt the above-listed indicators in its 47th Session which will be held in March 2016.

The achievement of sustainable development in Qatar has been at the core of the wise leadership's interest. Qatar National Vision 2030 provides a conception of a vital community, where economic and social justice prevails, keeps a balance between environment and humankind, and secures living in dignity generation after generation. Similarly, Qatar's National Development Strategy 2011-2016 has been created as a framework to realize QNV 2030 via implementation of multiple projects and programs associated with the economic, social, human, and environmental development. It is noteworthy that the Ministry of Development Planning and Statistics will start preparing the second National Development Strategy in early 2016.

The report aims to measure development in the quality of life and living standard achieved by the State of Qatar, in addition to the progress attained in the social, economic and environmental aspects. The report intends also to pinpoint strengths and weaknesses through the indicators that could be identified, and whose data are made available, results displayed, and compared with indicators of other countries, and in light of that, expectations are therefore provided.

The report is broken down into three chapters. The first one tackles social indicators related to population, education, health, and labor market. The second presents economic indicators on the economic and development structure and sustainable production and consumption patterns. The third one focuses on environment indicators associated with pollutants, atmosphere, land use, and biodiversity.



Chapter One

Social Indicators

Foreword

Social indicators featured in this chapter are part of sustainable development. Their future conceptions considered as an instrument for social policy making and development plans associated with sectors of education, health, social protection, and infrastructure.

The sustainable development social indicators' analysis is conducted in accordance with the data available during the period (2008-2014), which identify strengths and weaknesses, and achievements attained by the State of Qatar during the above period in areas of living standard improvement, and supply of health and education services. Qatar has been consequently ranked among the countries with quite high living standards. According to the UNDP's Human Development Report 2014, Qatar topped Arab countries and came in 21st place internationally.

Sustainable development's social indicators cover key themes related to population (i.e. unemployment, population growth rate, dependency rate, and total fertility rate), to health services (such as nutrition and health, mortality and health services), and to educational services (such as literacy, gross intake ratio in last grade of primary education, and adult secondary (tertiary) schooling attainment level), as well as to the services of sanitation, drinking water, and security as an indicator for crime rate.

1) Unemployment rate

Definition :

It is defined as the number of persons who are able to work and are actively looking for work but does not have a job. It is expressed as a percentage of the total labor force.

Indicator trend :

Unemployment rate remained low during (2008-2014). It dropped to 0.3% in 2008 and to 0.2% in 2014, with an annual decrease of -6.8%. There are multiple reasons behind this decrease consisting mainly in the expansion of oil and gas producing coporotations, and the establishment of several government institutions and agencies that contributed to providing ample job opportunities for nationals in the labor force, as well as the increase of the operating capacity in the private sector.

Figure 1: Unemployment Rate (2008-2014)



Source: Ministry of Development Planning and Statistics, Labor Force Survey, various issues, and General Census of Population, Housing and Establishments for 2010.

Indicator Evaluation :

Unemployment rate in Qatar is the lowest in the world as compared to the average rates in EU countries (12.0%), OECD members(8%), and countries worldwide (6.0%).

Source: World Bank, Development Indicators 2015

Future expectations :

Unemployment rate is expected to remain at its lowest levels during the next years subsequently to the implementation of plenty of big development projects, particularly in areas of infrastructure and construction featured in Qatar's National Development Strategy (2011-2016) which requires the recruitment of large numbers of labor force. There are also other reasons for this tiny level such as the expansion of recruitment-related training courses for graduates, and launch of some agencies such as Enterprise Qatar (an established authority to promote small and medium enterprises) which focuses on the projects that contribute to providing job opportunities for the youth.

2) Percentage of average female wages to male wages

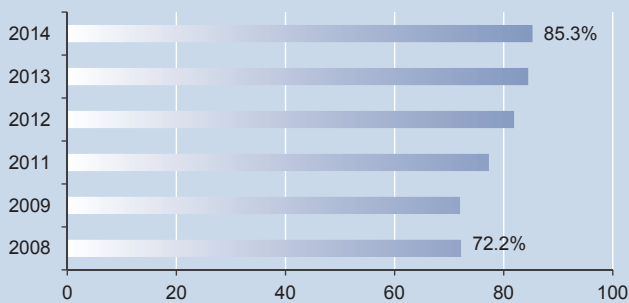
Definition :

Percentage of average cash wage earned by females to average cash wage earned by males

Indicator trend :

The gender gap shrank remarkably in terms of the average wage between males and females during (2008-2014); it dwindled from 27.8% for males in 2008 to only 14.7% in 2014. This result does not mean that the males' wages are reduced, but the females' wages increased. The gap diminished by 47.1% due to the engagement of females in the labor market in areas that require longer working hours, in addition to holding economic positions characterized by high wages.

Figure 2: Percentage of average females' wages to males' (2008-2014)



Source: Indicators are computed based on the MDPS' data, Labor Force Survey, various issues.

Indicator Evaluation :

Despite the difficulty to conduct accurate international comparisons, the State of Qatar comes at the forefront of the countries which were able, within a few years, to achieve important progress in the attainment of gender equality in terms of average wages.

Future expectations :

The gender gap in terms of average wages is expected to decline due to the increasing number of Qatari females with high qualifications in labor market, and their readiness to work in different economic sectors and professions characterized by high wages.

3) Under-five mortality rate

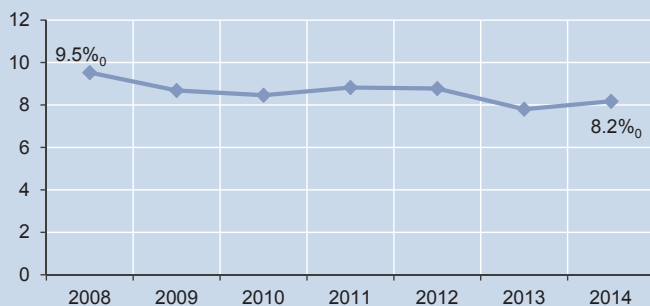
Definition :

Number of children (below 5 years of age) deaths per 1000 live births. In other terms, it is the probability of death during the period between birth and under-five age.

Indicator trend :

Under-five mortality rate declined significantly during (2008-2014). It decreased to 8.2 per 1000 live births in 2014 after it was 9.5 in 2008; an annual decline of (-2.6%). The reasons for this decline lie in the country's effective social, economic, and health policies, which have contributed to furnishing children with the various basic health needs. For example, building more child care centers, leading immunization campaigns against epidemic and infectious diseases, and organizing health awareness campaigns.

Figure: 3 Under-five mortality rate per 1000 live births (2008-2014)



Source: Indicators are computed based on the MDPS' data, Vital Statistics Bulletin (births and deaths), , various issues.

Indicator Evaluation :

The under-five mortality rate in the State of Qatar is nearing its counterpart in the developed countries where it attains 6 per 1000 live births, whereas it accounts for 47 in developing countries, and 83 in the least developed countries.

Source: UN Inter- agency Group "Levels and Trends of Child Mortality", Report 2015

Future expectations :

Considering the previous data, the under-five mortality rate is expected to plummet more due to the country's maternal and child health programs, and the increase of preventive health awareness for the population. It is also due to the expanded health coverage of maternal and newborn care, in addition to the establishment of several medical centers that provide health services.

4) Life expectancy at birth

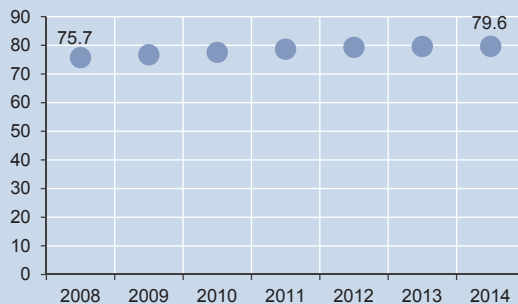
Definition :

Number of years expected to be lived by males and females, if the current trends of death remained unchanged.

Indicator trend :

Life expectancy at birth indicator increased gradually from 75.7 in 2008 to 79.6 years in 2014; an annual rise of approximately 8 months. Such an increase in the values of this indicator mirrors the big development occurred in the living standard in Qatar, which in turn has a great impact on the amelioration of the population health. Generally, death rates dwindled and health improved in the country leading to the increase of age expectancy at birth.

Figure 4: Life expectancy at birth for Qatari (2008-2014)



Source: the indicator is computed based on the MDPS' data, Vital Statistics Bulletin (births and deaths), Mid-year Population Estimates, various issues.

Indicator Evaluation :

The State of Qatar's life expectancy accounted for 79.6 years in 2014, nearing that of developed countries (80.2 years), and outpacing the international indicator (71 years).

Source: UNDP, Human Development Report, 2014.

Future expectations :

Life expectancy at birth is expected to increase during the next years owing to the progress in health services which cover Qatar's entire population, and to the activities which promote sustainable development of health, in addition to the rise in the population's health culture and awareness.

5) Proportion of population with access to adequate sanitation facilities:

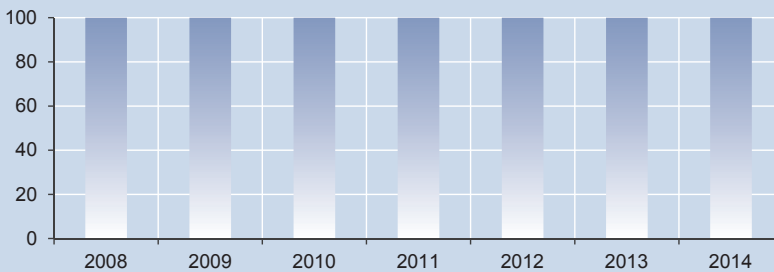
Definition :

It refers to the percentage of population with access to appropriate sanitary facilities such as protected pit toilets, and siphoning toilets that are connected to the sewer. To ensure effectiveness, all facilities should be correctly built and maintained.

Indicator trend :

The indicator of sanitation facilities availability in different areas remained unchanged at 100% during (2008-2014). Such an achievement is due to the country's public policy consisted in ensuring environmental sustainability aimed at providing clean environment and living with dignity for the population. In this regard, a set of measures has been taken such as investing largely in infrastructure to ensure ample sanitary facilities to keep up with the population and urban growth.

Figure 5: Proportion of population with access to adequate sanitation facilities (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues.

Indicator Evaluation :

The percentage of population with access to adequate sanitary services in Qatar is equal to Euro Zone at (100%), and exceeds the high-income countries (96%), and the medium-income countries (60%).

Source: World Bank, World Development Indicators, 2015

Future expectations :

Sanitation facilities total coverage is expected to remain sufficient, despite the anticipated rise in population during the next years, owing to the country's continuous extension of sewers, particularly in the new residential areas, in addition to the renewal of the current sanitation system in the old areas.

6) Proportion of population with access to safe drinking water

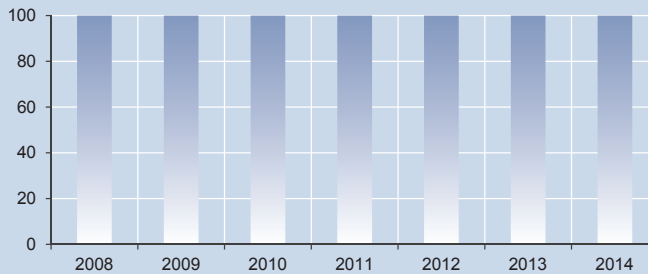
Definition :

It refers to the percentage of population with access to ample sufficient drinking water supply (20 liters per person a day) (not polluted).

Indicator trend :

Safe drinking water indicator remained stable at 100% during (2008-2014) thanks to the considerable efforts in the process of desalination of sea and underground water. The objective consisted in decreasing by a half the proportion of persons with no access to safe drinking water by 2015 is achieved ahead of schedule by a long period.

Figure 6: Percentage of population with access to safe drinking water (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues.

Indicator Evaluation :

The percentage of population with access to safe drinking water in Qatar (100%) outpaces its counterpart in the high-income countries (99%), and the medium-income countries (90%), and the international level (89%).

Source: World Bank, World Development Indicators, 2015

Future expectations :

It is expected that Qatar will continue to provide its population with safe drinking water at a percentage of (100%) thanks to the abundance of produced desalinated water. Qatar also possesses ambitious plans to constantly meet the future needs in light of increasing population growth. Qatar General Electricity & Water Corporation has taken decisions to orient further investments in desalination through the construction of new plants.

7) Population growth rate

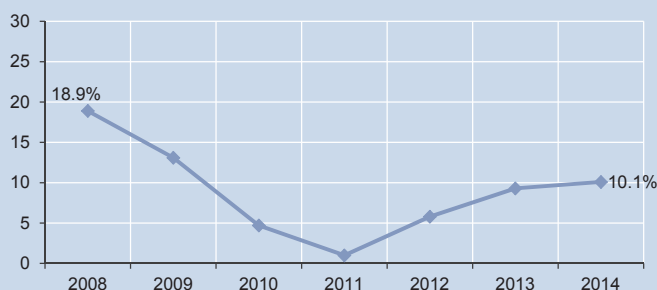
Definition :

It is the annual increase or decrease in population during a certain period of time, expressed as a percentage of the population at the start of that period.

Indicator trend :

The population growth rate fluctuated during (2008-2014). It plummeted sharply during (2008-2011) from 18.9% to 1.0% in 2011 owing to the world economic crisis which led the expatriates to lose their jobs, and return to their native countries. In 2014, the population growth rose again to 10.1% due to the recruitment of large numbers of foreign labor force in sectors of oil & gas and construction, in addition to the start of implementation of capital projects.

Figure 7: Population growth rate (2008-2014)



Source: the indicator is computed based on the MDPS' data, and population estimates in various years

Indicator Evaluation :

The population growth rate in Qatar is the highest worldwide; it does not exceed 0.30% in the world highly developed countries, and 1.15% worldwide, and 2.28% in the least developed countries.

Source: UNFPA, The World Population Situation 2014

Future expectations :

Population growth rate in Qatar is expected, albeit at a slower pace, to increase during the few coming years due to the implementation of numerous infrastructure capital projects in preparation for the host of FIFA World Cup 2022. As a result, demand for expatriate workers in different fields is growing, chiefly in the construction sector.

8) Total fertility rate

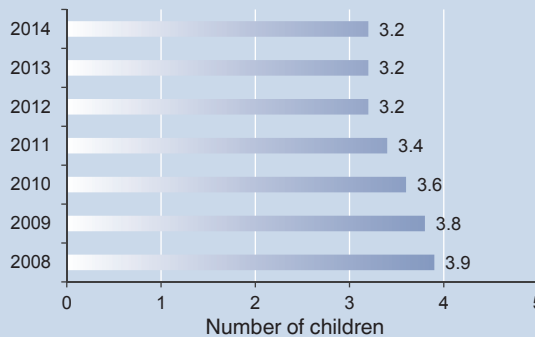
Definition :

It is the average number of children that would be born to a woman over her natural productive span, if she experiences the exact age-specific fertility rates in a specific year throughout her lifetime, with the absence of deaths among that cohort of women.

Indicator trend :

The total fertility rate for Qatari females decreased gradually during (2008-2014) from 3.9 live births per woman in 2008 to 3.2 in 2014; a slump of 17.9%. Increase of level of educational attainment for Qatari women, and their engagement in the labor market are the reasons for the postponement of first marriage, and for lack of desire for procreation.

Figure 8: Total fertility rate (2008-2014)



Source: the indicator is computed based on the MDPS' data, and Vital Statistics Bulletin (births and deaths), various issues.

Indicator Evaluation :

Total fertility rate (TFR) for Qatari females (3.2 live births per woman) is relatively considered high compared to the other world countries. TFR reached 1.7 live births in developed countries, 2.6 in the least developed, and 2.5 worldwide.

Source: UNFPA, The World Population Situation 2014

Future expectations :

The State of Qatar is expected to undergo a gradual decrease in TFR, due to the rapid social transformation associated with the woman's education and engagement in the labor market. Such a result is consistent with the global trend that an inverse relationship prevails between the woman's educational attainment and engagement in labor market, and fertility rates. The higher the educational attainment is, the less desire for procreation manifests, and vice versa.

9) Dependency ratio

Definition :

Percentage of population less than 15 years of age and more than 65 years to the number of population in working age (15-64) years.

Indicator trend :

Age dependency ratio fluctuated conspicuously during the period (2008-2014). It dropped from 18.7% in 2008 to 17% in 2010, and rose to 18.5% in 2014; an annual decrease rate of 0.2% throughout the period of comparison. The reason for this decrease does not lie in the low rates of fertility, but in the economic growth which has led to the recruitment of large numbers of expatriate workers who are, most of them, young and able to work. Consequently, the population situation in Qatar led to a sharp slump in children (less than 15 years), and a limited relative growth of the elderly (65 years and above), and a rise in the 15-64 age group. Thus, the economically active population rate grew more than the children and elderly dependants age groups', leading to the reduction of dependency burden, and increase in the development opportunity for the so called "demographic window".

Figure 9: Dependency ratio (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues.

Indicator Evaluation :

Qatar's total dependency ratio (18.5%) is very low. It was among the world lowest rates in addition to the UAE in 2014 (See the source)

Future expectations :

The indicator is expected to go down slightly during the few next years due to the anticipated increase in expatriates in the 15-64 age group which implement the different projects, i.e. the ones related to the FIFA World Cup 2022.

Source : <http://data.worldbank.org/indicator/SP.POP.DPND.2015>

10) Proportion of population with access to primary health care:

Definition :

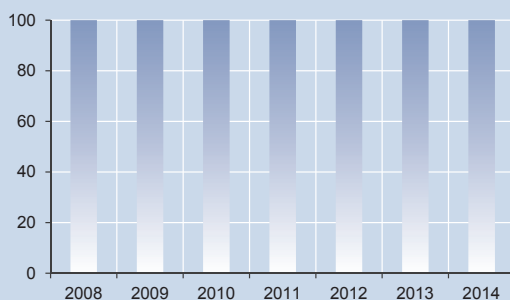
The percentage of population in rural and urban areas who are expected to have access to medical treatment of the entire diseases and injuries proportionate to the total population.

Indicator trend :

The percentage of population with access to primary health care reached full coverage (100%) along the period (2008-2014). As a result, several diseases have been eliminated such as polio cases, neonatal tetanus, diphtheria, tetanus, whooping cough, etc.

It is noteworthy that the achievement of full primary health care coverage of Qatar's entire population (nationals and residents) is due to the establishment of health centers in all places, and construction of specialized hospitals which provide services for the entire population.

Figure: 10: Percentage of population with access to primary health care (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues.

Indicator Evaluation :

Despite the difficulty to conduct international comparisons, the State of Qatar is among the world countries which achieved full primary health care coverage for its population.

Future expectations :

The State of Qatar is expected to continue to ensure primary health care for its entire population, owing to the country's interest in ensuring sustainable development for its nationals and residents by providing high quality preventive and curative health services according to the best international standards, and in light of the development of Qatar's Health National Strategy (2011-2016).

11) Proportion of newborns with low birth weight

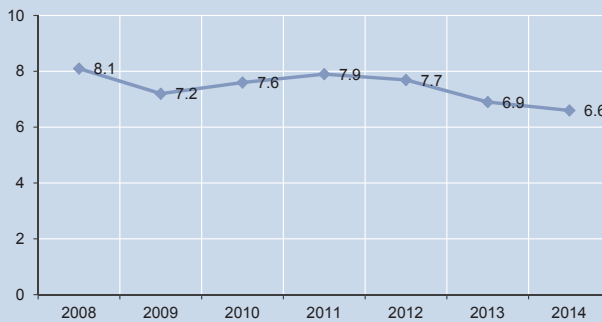
Definition :

The percentage of newborns weighting less than 2.5kgs in a certain year to the total newborns in the same year.

Indicator trend :

The indicator of newborns with low birth weight decreased obviously, with a slight fluctuation, during (2008-2014). It slumped from 8.1% in 2008 to 6.6% in 2014 due to the availability of advanced maternal prenatal and postpartum health care policy which provides best care and services for the mother and newborn.

Figure 11: Percentage of newborns with low birth weight (2008-2014)*



: Low birth weight newborns' data of 2013 and 2014 are controlled and treated by using a moving average. *

*: Source: The indicator is computed based on the MDPS' data, and Vital Statistics Bulletin (births and deaths), various issues.

Indicator Evaluation :

The indicator of newborns with low birth weight in Qatar reaching 6.6% in 2014 outpaces its counterpart in the south Asian countries (28%), Sub-Saharan Africa (13%), and worldwide (15%).

Future expectations :

The percentage of low birth weight newborns is expected to decrease in Qatar, owing to the policies and programs of top-level services of maternal and child care all over the country, in addition to the growing health awareness of pregnant women about nutrition during pregnancy, and other maternal health awareness programs.

Source : WHO, Global Nutrition Targets 2025, WHO/ NMH/NHD/14.5

12) Immunization against childhood infectious diseases

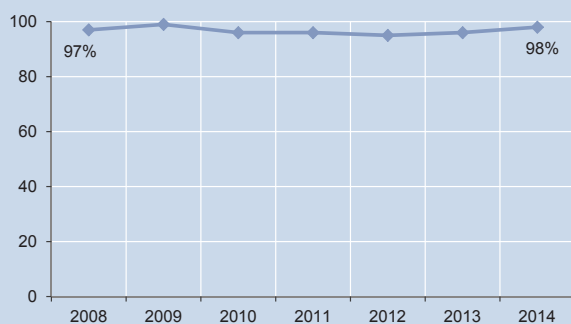
Definition :

Number of children below one year of age, who completed the basic health immunizations within a certain period divided by the number of live births below one year of age, and multiplied by 100.

Indicator trend :

The percentage of immunization against childhood infectious diseases is deemed high; it varied between 97% and 98% during (2008-2014), thanks to the country's adopted policies ensuring comprehensive and integrated health care for children, and to the health institutions' awareness campaigns conducted to sensitize about the child immunization against infectious diseases, such as Polio, Hepatitis B, tuberculosis, smallpox, measles, mumps, and rubella.

Figure 12: Immunization against childhood infectious diseases (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues.

Indicator Evaluation :

In 2014, the immunization against childhood infectious diseases' indicator in Qatar surpassed its counterpart in the high-income countries (95%), and worldwide (79%), let alone the low-income countries (76%).

Source: WHO, world Health Statistics Report 2014

Future expectations :

Qatar is expected to attain full coverage soon in terms of the immunization of children below one year of age against childhood infectious diseases. All children have access to the health care system which provides all of them with healthcare on one hand, and sets up strict measures to prevent transmission of infectious diseases to the country on the other hand.

13) Gross intake ratio in the last grade of primary education:

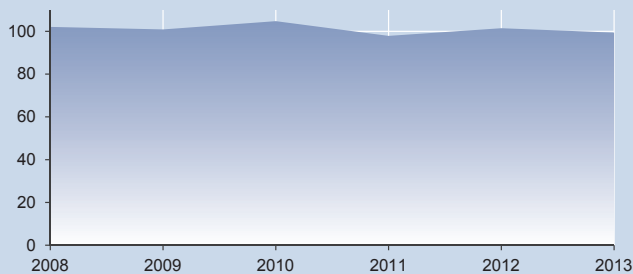
Definition :

Number of students enrolled in the last grade of primary education in a certain year divided by total population who are 11-year old, and multiplied by 100.

Indicator trend :

The gross intake ratio in the last grade of primary education attained 100% during (2008-2013); with the exception of the years of 2011 and 2013, where it was 97.9% and 99.4% respectively. Qatar therefore could achieve the targeted percentage (100%) ahead of schedule (2015) fixed to realize the development goals. The reason behind this achievement lie in the country's interest in the education sector, since it allots high portions of the general budget to expenditure on education.

Figure 13: Gross intake ratio in the last grade of primary education (2008-2013)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues.

Indicator Evaluation :

The gross intake ratio in the last grade of primary education kept up with its equivalent in the high-income countries (100), and sometimes outpaced it, and exceeded its counterpart in the medium-income countries (94%). The State of Qatar is at the forefront of the world countries which could make primary education accessible to all; it could provide a school seat for every student on its land.

Source: World Bank, World Development Indicators 2014

Future expectations :

The gross intake ratio in the last grade of primary education is expected to remain high thanks to the country's efforts to promote all forms of education. Financial allocations for basic education are increasing, the fact that contributes to reducing dropouts in this level of education.

14) Adult secondary (tertiary) schooling attainment level of total population

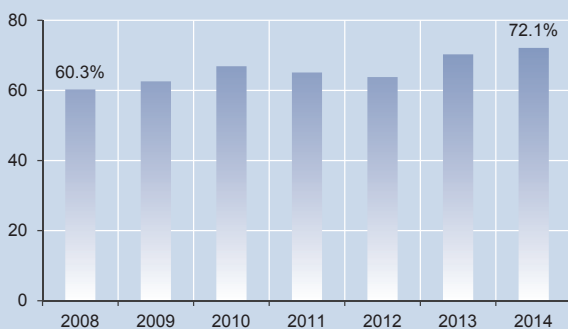
Definition :

Number of population in the 25-64 age group who obtained secondary education certificate proportionate to the total population in the same age group, multiplied by 100.

Indicator trend :

The percentage of adults who completed secondary education went up from 60.3% of total population in the same age group in 2008, to 72.1% in 2014; an annual growth of 3.0% during (2008-2014). This increase can be attributed to the interest given to education as being the fundamental pillar of investment in the human capital which is the pathway for the achievement of sustainable development and establishment of knowledge community.

Figure 14: Adult secondary (tertiary) schooling attainment level of total population (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues.

Indicator Evaluation :

The percentage of adults who completed secondary education (72.1%) in Qatar is equal to its counterparts in some countries of OECD, and below average of all the OECD countries (73%).

Source : Education at a Glance OECD Indicators, January 2015

Future expectations :

The percentage of adults who completed secondary education is expected to increase thanks to the country's implemented education relevant programs and policies. The State of Qatar exerts continuous efforts to promote education, increase financial allocations oriented to education, and take purposeful measures to reduce secondary school male dropouts, since some of them prefer engaging in the labor market before obtaining secondary school certificate.

15) Adult literacy rate

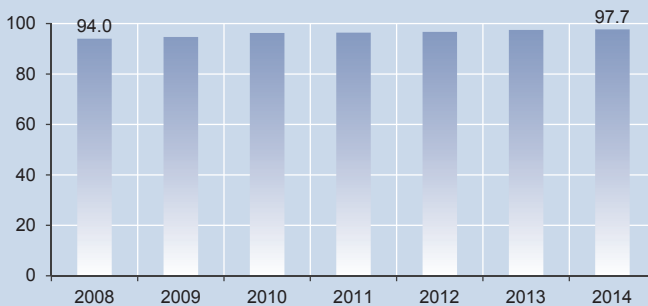
Definition :

Percentage of adults (15 years and above) who can read and write.

Indicator trend :

The adult literacy rate increased steadily during (2008-2014). It rose from 94.0% in 2008 to 97.7% in 2014; an annual growth rate of 1%. The uninterrupted increase of this indicator is attributed to a set of measures and procedures the country has taken to contain the illiteracy phenomenon, such as compulsory primary education, adult literacy programs, and expansion plans of education all over the country.

Figure 15: Adult literacy rate (15 years and above) during (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues, and General Census for Population, Housing, and Establishments 2010.

Indicator Evaluation :

The adult literacy rate (97.7%) in Qatar exceeded its counterpart in the countries with high human development (94.2%), and countries with medium human development (71.7%), and worldwide (81.2%).

Source: UNDP, Human Development Report 2014

Future expectations :

Adult literacy rate is expected to increase due to the country's promotion of all forms of education, chiefly adult education. Qatar has a deep belief in the education's pivotal role in achieving sustainable development, establishing knowledge community, and furnishing individuals with the required qualifications that respond to the needs of labor market in light of the development boom of the country, and rapid economic growth.

16) Number of crimes per 100,000 of population

Definition :

Number of crimes registered annually by security authorities multiplied by 100,000, and divided by the mid-year population.

Indicator trend :

Despite the scarcity of crimes in Qatar (traffic crimes, theft, aggression, fraud, ...etc.) compared to other countries worldwide, the number of crimes fluctuated during the period (2008-2014). Crimes increased more than four times between 2008 and 2011. They rose from 731 crimes per 100,000 of population in 2008 to 3327 crimes in 2011. However, they plummeted significantly to attain 1796 crimes in 2014; an annual slump of 20.6% over the last four years (from 2011 to 2014). Despite the country's openness policy accompanied by the arrival of large numbers of expatriates of different nationalities, Such a considerable decrease in crime level is considered significant, thanks to the developed technical methods used to combat crimes, and the stringent regulations, in addition to the moral values of the Qatari society which is characterized by a top-level social security and rarity of crimes.

Figure 16: Number of crimes per 100,000 of population (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Annual Statistical Abstract, various issues, and General Census for Population, Housing, and Establishments 2010.

Indicator Evaluation :

In spite of the difficulty to conduct international comparisons, the State of Qatar is one of the world's countries who have the lowest recorded crimes.

Future expectations :

Qatar has become one of the most manpower attractive countries worldwide. Workers flow into Qatar and benefit from different wages, which make the number of crimes susceptible to rise more than ever. Although the crime can today be executed by means of the up-to-date technological means and methods, crime rates in Qatar are likely to remain low and in limited areas compared to the last years.



Chapter Two

Economic Indicators

Foreword

Economic indicators are among the significant development indicators which cover the economic dimension of sustainable development. They are instrumental to the development of the strategic goals for sustainable economic development, which aim to reach a diverse economy through the optimal use of available natural resources which meet individuals' needs and protect the environment.

The economic indicators which span the period (2008-2014) contribute to the progress of the State of Qatar in the economic development aspects. They in the main evaluate the position of the country through quantitative standards that can be calculated and compared with other countries. The economic indicators also contribute to providing a clear picture of the current position, strengths and weaknesses in the economic development. They also show the extent of progress or decline in terms of the application of the macro-economic policies.

The sustainable development's economic indicators feature four economic themes. The first one tackles the economic structure (macro-economic performance, financial situation, and labor force). The second theme deals with justice (income, and gender equality). As for the third theme, it focuses on the international partnership in development via indicators of the international trade and finance. The fourth one handles patterns of consumption and production.

1) Per capita GDP

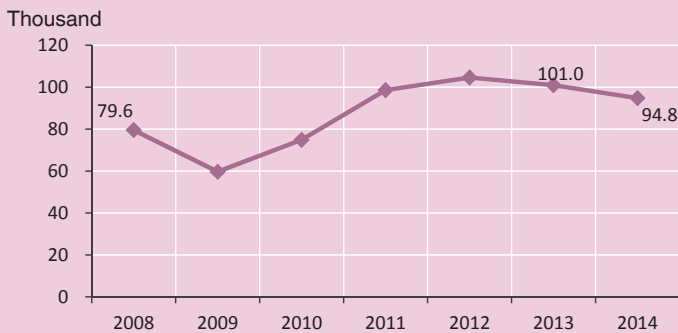
Definition :

It is the gross domestic product at current prices divided by the number of population in the country. This indicator is important when measuring the level of economic development and the overall performance of the economy.

Indicator trend :

Per capita GDP indicator increased remarkably during 2008-2014, from about \$79.6 thousand in 2008 to \$101.02 in 2013; an average annual rise of 4.8%. The indicator dropped slightly later to \$94.8 thousand in 2014. The development in the per capita GDP is attributed to the remarkable increases in the country's GDP thanks to the significant increase in the production capacity of oil & gas sector, and growth of returns of the exportation of the liquefied gas.

Figure 17: Per capita GDP during (2008-2014) in US thousand Dollars



Source: The indicator is computed based on the MDPS' data, and Window on Economic Statistics of Qatar, and Population Estimates in various years.

Indicator Evaluation :

The State of Qatar came first internationally in terms of the per capita GDP at \$94.8 thousand in 2014. It is many times higher than its counterparts in the developed countries where it attained \$40 thousand in 2013.

Source: UNDP, Human Development Report 2014

Future expectations :

In spite of the slight decrease in the per capita GDP in 2014, it is expected to remain high and at the forefront worldwide over the coming years due to the large discrepancy between it and the one of the other world's countries, and to the pace of economic growth preserved by the State of Qatar owing to the returns of the projects of liquefied gas and petrochemicals. There is also a steady expansion in the non-oil sector, in addition to the rise in the profits out of the country's foreign investments.

2) Percentage of investment to GDP

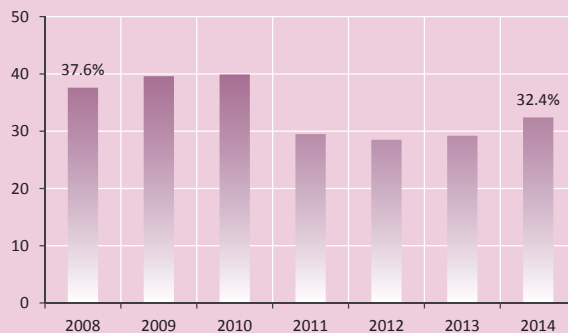
Definition :

Total capital formation in a certain year divided by GDP. This indicator helps measure capital growth, development of capital accumulation in the national economy available for financing economic development. It is also considered one of the significant elements in the process of sustainable development.

Indicator trend :

The percentage of investment to GDP fluctuated during (2008-2014), and attained its highest level in 2010, when it reached 40% with an average annual rise of 3.0%. The reason for this result lies in the increase in investment spending in line with the increase in oil & gas profits. As for the slump occurred between 2011 and 2014, it is attributed to the fact that the GDP growth was higher than the investment spending.

Figure 18: Percentage of investment to GDP (2008-2014)



Source: The indicator is computed based on the MDPS' data, and Window on Economic Statistics of Qatar 2014.

Indicator Evaluation :

The percentage of investment to GDP (32.4%) in 2014 in Qatar surpasses its counterparts in the developed countries (20.0%), and worldwide (24.5%).

Source: IMF, World Economic Outlook, October 2015.

Future expectations :

The percentage of investment to GDP is expected to remain high over the next years thanks to country's investment programs expansion in different sectors other than oil, such as construction, transport, and infrastructure. However, the current oil low prices are expected to stand against the increase in the percentage of investment to GDP over 2015 and 2016

3) Inflation Rate

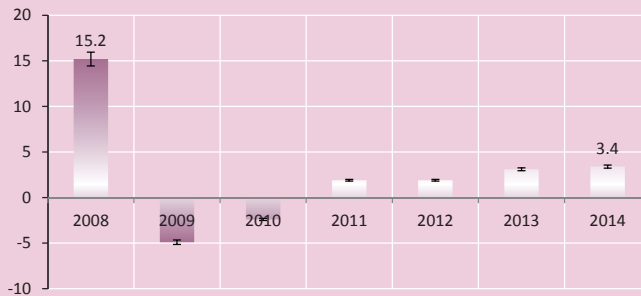
Definition :

It refers to the average annual increase in the consumer price index of goods and services. It is considered as one of the most important measures for macro economy and economic stability. Moreover, it is one of the indicators that are monitored by monetary policies, and one of the factors affecting investment environment and income distribution.

Indicator trend :

Qatar experienced fluctuating inflation rates between 2008 and 2014. There has been a decrease in the average inflation index between 2008 and 2010, dropping from 15.2% in 2008 to -4.9% and -2.4% in 2009 and 2010, respectively. This was attributed to the availability of more residential units and the low exchange rate of the dollar, which decreased in value by 4.4% in 2010, and the moderate food prices. Inflation increased again to reach 3.4% in 2014. This was due to a higher demand for housing and high rentals, accompanied by higher food prices.

Figure (19): Inflation Rate (2008-2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

The current inflation rate of 3.4% compares well with regional rates of fellow GCC member states such as Kuwait, Oman, and Saudi Arabia (3.5%) and Bahrain (3.3%) in 2013. It is somehow high compared to developed countries rate in 2014, which average 1.4%.

Future expectations:

Inflation is expected to remain low and at acceptable levels over the coming years, as a result of increased supply of housing which should be accompanied by a decline of rentals, and the fall of high food prices, to reflect on purchase power and consumer ability to make use of his income.

Source: International Monetary Fund, World Economic Outlook, April 2015

4) Employment Rate

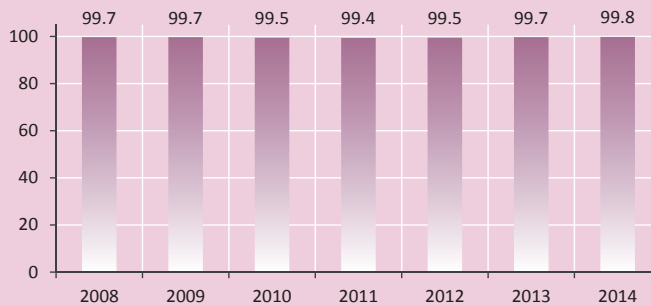
Definition :

It is the percentage of workers of both sexes, out of total economically active population (15 years and above). Employment rate is an economic and social indicator, given its contribution in measuring the economic performance, quality of life and social involvement. Sustainable development looks forward to providing more job opportunities, through an employment policy that works toward full employment.

Indicator trend :

Qatar's employment rate exceeded 99% over the period (2008 -2014). The labor market of the country is approaching full employment due to the economic boom in all sectors of the national economy. Indeed, there has been acceleration in the flow of expatriate workers to meet the demands of recruitment in all economic sectors.

Figure (20): Employment Rate (2008-2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

Employment rates in Qatar (99.8%) outdid benchmark nations in the European Union (89.8%) and the high-income countries (92.2%).

Source: International Labour Organization, World Employment Social Outlook, Trends 2015

Future expectations :

Employment rate is expected to remain high in the coming years, as a consequence of continuing strong economic performance and diversified activities of Qatar's economy accompanied with a flow of foreign workers in numerous and various State projects. Additionally, improving performance of institutions and labor market policies, increasing numbers of graduate training programs targeting employment, along with launching the activities of Enterprise Qatar, are expected to create many new job opportunities.

5) Crude Activity Rate by Sex

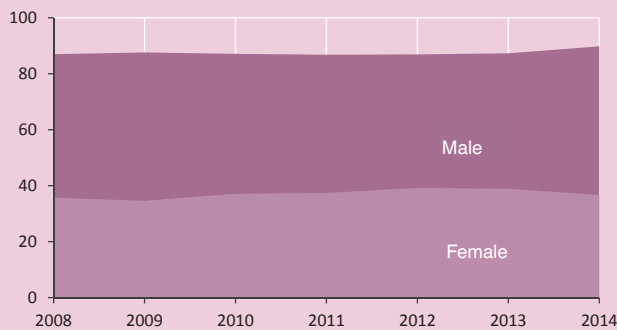
Definition :

It is defined as the total economically active population (15 years and above) divided by total population, and multiplied by 100. Crude Activity Rate measures the participation rate of the economically active population in production, and assists in predicting size of labor force by knowing population estimates and age groups.

Indicator trend :

Economically active population increase led to higher crude economic activity rate, rising from about 65.4% in 2008 to 76.3% in 2014, an average annual growth rate of approximately 0.2%. It should be noted that the raw economic activity rates for both men and women have improved from 87.0% and 35.7%, respectively, in 2008, to 89.8% and 36.6% in 2014. This is the result of employment policies adopted by the State, and the application of Qatarization policies accompanied by an influx of foreign workers required by the development process and its various projects.

Figure (21): Crude Activity Rate by Sex (2008-2014)



Source: Ministry of Development Planning and Statistics, Labor force survey, various years

Indicator evaluation:

Qatar's crude economic activity rate of 76.3% is lower than that of the United Arab Emirates (79%) and higher than other Gulf Cooperation Council states where the rate is 51.1% in the Kingdom of Saudi Arabia in 2013. It exceeded that of developed nations such as the United States (58.8%), Germany (57.1%), and UK (58.1%), and France (50.9%) in 2013.

Source: ILO, Short term Indicators of the labor market, 2014

Future expectations :

Crude economic activity rates for men are expected to be the same over the coming period, due to the continuation of economic activities with labor-intensive requirements. Meanwhile, the rate for women is expected to increase, albeit at a slower pace, given the continued economic and social progress in Qatar, promotion of women's participation in development, and provision of job opportunities for women.

6) Fixed Telephone Lines per 100 People

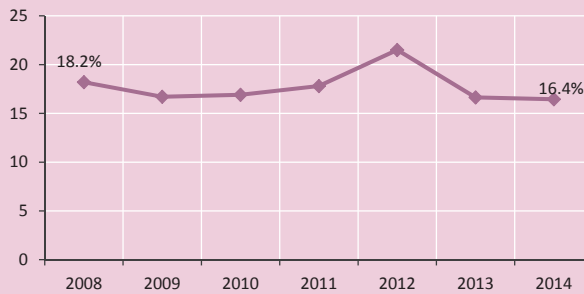
Definition :

It is defined as the number of fixed telephone lines divided by total population in the State, multiplied by 100. This indicator is considered the most important one for measuring progress of wire and wireless communication in any country, as it expresses the deployment of telephone services across the country.

Indicator trend :

Fixed line penetration among population declined markedly between 2008 and 2014, dropping from 18.2 lines per 100 people in 2008 to 16.4 lines per 100 people in 2014. The decrease is attributed to the increasing use of mobiles and to the growing population as a result of the flow of foreign workers, most of whom prefer mobile phones to landlines.

Figure (22): Fixed Telephone Lines per 100 People (2008-2014)



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, and mid-year population estimates; various years

Indicator evaluation:

The number of fixed telephone lines per 100 people in Qatar is less than the rate in high-income countries, which averages at around 40.8. Nevertheless, it exceeds the rates in the developing countries, at 10.6, and is slightly higher than the global average of 15.8 in 2014.

Source: International Telecommunication Union, "Measuring the Information Society Report, Geneva 2014.

Future expectations :

Provision of fixed phone lines will likely see a slight decline in the coming years, as the population continues to increase, and individuals prefer to use mobile phones; a global trend leading to decreasing use of fixed telephone lines.

7) Mobile Telephone per 100 People

Definition :

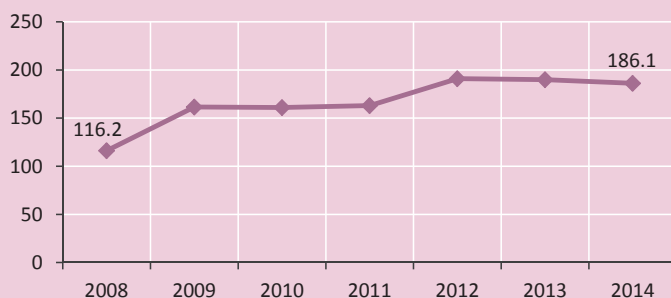
It is the number of subscribers in mobile telephone services in the State divided by total population in the State, multiplied by 100. This indicator is considered a measure of the country's development, easiness of communication, and making use of digital economy technologies.

Indicator trend :

Mobile penetration increased significantly during (2008-2014) from 116.2 lines per 100 people in 2008 to 186.1 lines in 2014, reflecting an annual growth rate of 7.9%. The penetration rate has exceeded 100% during the covered comparison years.

Such growth in the mobile phone sector is due to the population growth, increasing GDP per capita, increasing demand on smart phones thanks to development of business environment, and communication market openness in the country.

Figure (23): Number of Mobile Telephone per 100 People (2008-2014)



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, and mid-year population estimates; various years

Indicator evaluation:

The rate of mobile phone penetration in the State of Qatar; 186 lines in 2014, far exceeds the average of high-income countries (121), middle-income countries (93), Eurozone (123) and the global average of (93).

Source: World Bank, World Development Indicators, 2015

Future expectations :

The prevalence of mobile phones among the population is expected to markedly increase further in the coming years, as a result of the population growth due to labor recruitment for the implementation of different projects, since demand for mobile phone services increasing among laborers. Additionally, the openness and development of the telecommunications market will likely increase penetration. The State adopts development of the telecommunications sector plans, which contributes to increased growth rate.

8) Number of Internet Users per 100 People

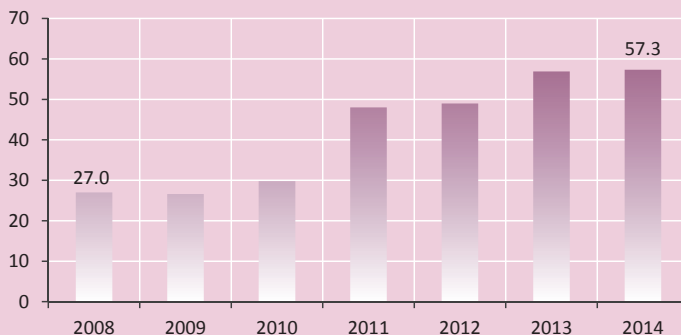
Definition :

It is the number of internet users in the State divided by the total population, multiplied by 100. This indicator is considered a measurement of the density of access to world information network services (Internet) and hence bringing education and information for all members of the society.

Indicator trend :

Internet usage among population has increased markedly between 2008 and 2014. It rose from 27.0 people per 100 of the population in 2008 to 57.3 in 2014, recording an annual growth of 12.6% between. This is due to increased educational levels among the majority of the population, and the development of Internet services as part of the strategy of the Ministry of Communications and Information Technology.

Figure: (24): Number of Internet Users per 100 People (2008-2014)



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, and mid-year population estimates; various years.

Indicator evaluation:

The rate of internet usage in Qatar, around 57.3 users per 100 people in 2014, is higher than the global average of (38) and the middle-income countries (33). However, Qatar's rate is behind the rate of the European Union (76) and the high-income countries (78).

Source: World Bank, World Development Indicators, 2015.

Future expectations :

The proportion of internet users in the State of Qatar is expected to grow in years to come, particularly with the current plans for connecting the country through a broadband network, as the Qatar National Broadband Network has signed agreements with licensed operators to provide broadband services through fiber optics. Such agreements target to cover 95% of houses and 100% of companies.

9) Number of Personal Computers per 100 People

Definition :

It is defined as the number of personal computers (used or available for use) divided by the number of population, multiplied by 100. The deployment of computers indicator is considered one of the key indicators for the development of information technology and communications.

Indicator trend :

Qatar has witnessed a widespread increase in the use of the personal computers between 2008 and 2014. Indeed, computer use rates have risen from 32.2% in 2008 to 77.8% in 2013, reflecting an annual growth of 17.6%. This increase is attributable not only to a higher standard of living and the affordability and availability of computers, but also to the expansion of their use in the public sector, education, trade and business. The rise is as well a result of the policies adopted by the State in its drive to build a knowledge-based economy.

Figure: (25): Number of Personal Computers per 100 People (2008-2014)



Source: Ministry of Information and Communication Technology, Qatar's ICT Landscape, 2014

Indicator evaluation:

The prevalence of personal computers per 100 people in the State of Qatar, at 77.8%, in 2013 exceeds the average in developed countries (75.5%), and the global average of 40.7%, as well as the developing countries (27.6%) in 2012.

Source: ITU World Telecommunication/ICT Indicators database, 2014

Future expectations :

Qatar expects to see an increase in personal computer usage among population, given the adoption of policies strengthening the information and knowledge society; such as e-learning, e-commerce, e-banking, e-government initiatives. Furthermore, the State adopts measures seeking to spread a digital culture among population which entails the usage of PCs on an on-going basis.

10) Current Account as Percentage of the Gross Domestic Product

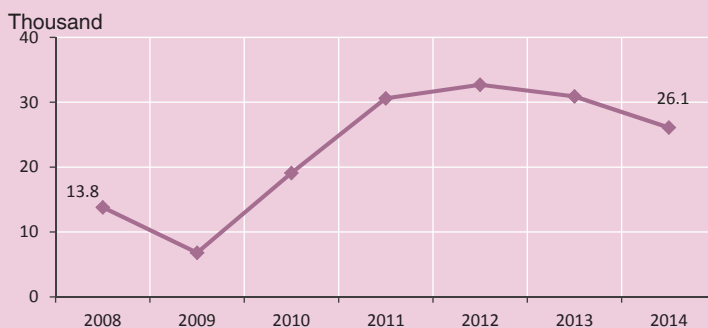
Definition :

Total current account (total net exports of goods and services, net income and net remittances) divided by gross domestic product. This indicator reflects openness of the economy and its international participation.

Indicator trend :

The ratio of the current account compared to GDP decreased from 13.8% in 2008 to 6.8% in 2009. This was due to lower commodity exports, which in turn lowered the absolute value of the current account. However, it has skyrocketed to 32.4% in 2012, before slightly dropping to 26.1% in 2014. The rate achieved an annual growth rate of 10.6% between 2008 and 2014. This increase was due to increased export revenues for oil, liquefied natural gas and petrochemical products.

Figure: (26): Current Account as percentage of the Gross Domestic Product (2008-2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

Qatar achieved a surplus in current account balance to GDP ratio, at 26.1% in 2014, compared with 2.3% in the Eurozone, 0.4% in developed economies, and (1.3%) in Asia, emerging markets, and developing economies.

Source: International Monetary Fund, World Economic Outlook, April 2014

Future expectations :

It is expected that the surplus will continue in the current account in the balance of payments for 2015, with the possibility of a slight deficit in the years 2016 and 2017. The main factor for this is Qatar dependence on hydrocarbon exports and the currently anticipated prices. Import demand has seen decline with low needs of enterprises of capital equipment, but it will remain supported by demand for raw materials and consumer demand caused by population growth. As a result of the decline in the current account surplus, capital payments will shrink (Ministry of Planning and Statistics, Economic Outlook of the State of Qatar from 2015 to 2017).

11) Exports and Imports as percentage of the Gross Domestic Product

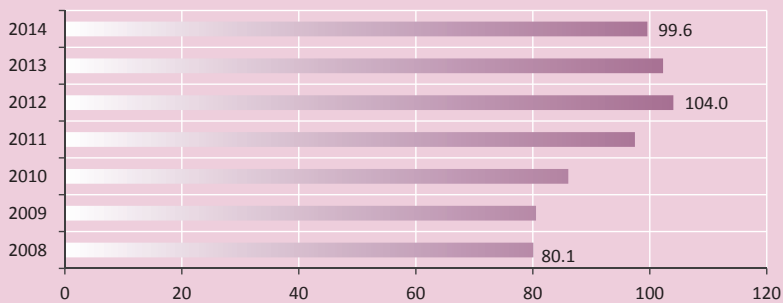
Definition :

It refers to total exports of goods and services plus total imports of goods and services divided by the gross domestic product, multiplied by 100. This indicator is a measure of local economy openness to the international economy.

Indicator trend :

Exports plus imports as a percentage of GDP rose strikingly between 2008 and 2014. The indicator exceeded 100% during 2013 and 2014 (figure 27). This is attributed to increasing service exports and goods imports in the last three years. Such high ratios indicate the state's reliance on many programs of trade liberalization with a view to promote the process of integration with the global economy.

Figure (27): Exports and Imports as percentage of the GDP (2008-2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

The degree of trade openness in Qatar is around 99.6%, which is high compared to other countries, where the rate is 55.5% in low-income countries, 50.5% in middle-income countries and in 72.1% in Eurozone.

Source: World Bank, World Development Indicators, 2014

Future expectations :

Qatar's exports plus imports as a percentage of GDP indicator is expected to remain high during the coming period. The State has signed several agreements to encourage trade exchange and economic cooperation with developed and developing countries. In addition, Qatar established free trade zones and seeks, in cooperation with the GCC, to establish Asian free trade areas in China, Japan and South Korea. Moreover, Qatar adopts policies of trade openness with all countries. Moreover, Qatar seeks further trade liberalization in the following sectors (banking, financial services, industry, transportation, real estates, communications and services).

12) Official Development Assistance Given as percentage of GDP

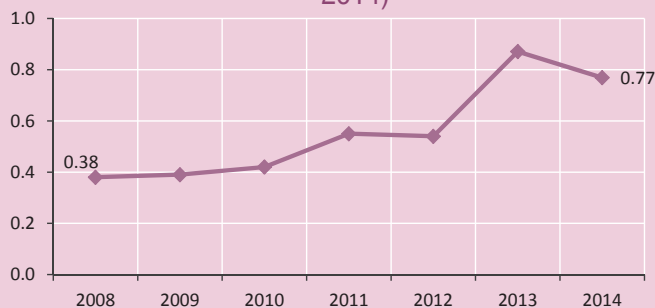
Definition :

It refers to the official development assistance, including grants and/or easy loans that the official sector presents to some countries and regions, aiming to raise the development in a year divided by GDP, multiplied by 100. This indicator is an important measure of contribution of countries in achieving global partnership in development, as it measures easy terms assistance levels, aiming to achieving the international development.

Indicator trend :

Qatar's provision of official development assistance as a proportion of its GDP increased during 2008 and 2014, to rise to 0.38 in 2008 to reach 0.77% in 2014, an annual growth rate of 11.8% during the study years. The fluctuations resulted from lack of proportionality between the GDP growth rate and development assistance growth rate.

Figure (28): Official Development Assistance given as percentage of GDP (2008 -2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

Qatar's official development assistance as a percentage of GDP amounted to 0.77%, exceeding the provision of Development Assistance Committee member states, which averaged at around 0.30%.

Source: OECD, Development Assistance Committee, Development Cooperation Report 2015.

Future expectations :

If the development aid provided by the State of Qatar have fallen slightly in 2014, that does not necessarily mean to fall in the future. It is expected such aid will return to normal spiraling track compared to the past years as a result of the initiatives adopted by the state to enhance the global partnership in development and the increasing role it plays on the international arena, through active participation in regional and international conferences to aid countries affected by the unstable political situations, armed conflicts and natural disasters.

13) Remittances as percentage of the Gross Domestic Product

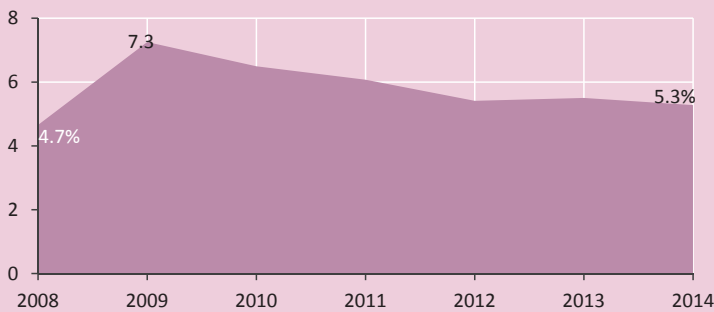
Definition :

Total amounts of remittances by expatriate employment in a year divided by gross domestic product, multiplied by 100. Such remittances play a significant role for labor-exporting countries as they constitute a source of funds, and affect their external accounts, balance of payments and, therefore, economic stability. They represent an important means for implementing sustainable development goals.

Indicator trend :

The proportion of remittances to GDP fluctuated between 2008 and 2014, increasing from 4.7% in 2008 to 7.3% in 2009 and then declined to 5.3% in 2014. However, it achieved a 2.1% annual growth rate during 2008-2014. This decline can be attributed to the fact that the GDP exceeded the growth rate of remittances.

Figure (29): Remittances as Percentage of the Gross Domestic Product (2008-2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

At 5.3% in 2014, the proportion of remittances to GDP in Qatar exceeds its international peers; around 0.53%, USA at 0.7% and Britain at 0.8%. By way of comparison, it is close to that of other GCC countries. UAE and Kuwait ranked first globally at 7.3% and 6.9%, respectively.

Source: World Bank, Annual Remittances Data (updated as of Apr. 2015)

Future expectations :

Cash transfers made by expatriate workers out of the country are connected to the numbers of expatriates and their quality in the coming years. remittances will continue to be connected to the recruitment policy for the implementation of various projects in the National Development Strategy for 2011-2016. This will result in a high percentage of remittances to GDP.

14) Foreign Direct Investment Inflow as percentage of GDP

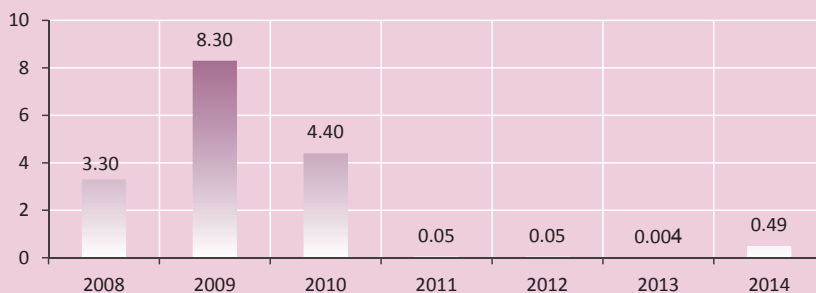
Definition :

Total foreign direct investment inflow (international investment by a resident in a country, whether sharing in or owning a project in another country, provided that percentage of ownership or voting power is 10% or more of the company's assets, through sharing in capital or reinvesting of revenues) to the gross domestic product. The inward foreign direct investment provides financial resources to the country, and is an indicator of the general investment environment in that country.

Indicator trend :

FDI Inflow as a percentage of GDP fluctuated between 2008 and 2014, rising from 3.3% in 2008 to 8.3% in 2009. This was due to the increase of the value of the inward foreign direct investment from to \$8.1 billion dollars in 2009. However, this rate plummeted significantly to reach \$1.040 327 billion dollars in 2014. This ratio of FDI to GDP reached its lowest level at 0.004% in 2013 and then increased to 0.49% in 2014. This decline can be attributed to investment commitments in the gas sector.

Figure (30): Foreign Direct Investment Inflow as Percentage of GDP (2008-2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

The rate of inward FDI to GDP in Qatar, amounting to 0.049% in 2014 is lower than levels among other peer GCC-member states. The rate is 3.3% in the kingdom of Saudi Arabia, 2.7% in the United Arab Emirates and 1.9% in Bahrain and Oman.

Source: United Nations Development Programme, Human Development Report 2014.

Future expectations :

In spite of the low level of inward FDI to GDP, Qatar expects an increase in this indicator in the coming years, as a result of improving the economic environment and opening the way for foreign investors. Additionally, it is the result of economic and political stability and securing an environment that attracts many companies to invest in Qatar. This is confirmed by the Annual Investment Climate Report in Arab Countries 2015, recently issued by the Arab Investment and Export Credit Guarantee Corporation.

15) Foreign Direct Investment Outflow as percentage of GDP

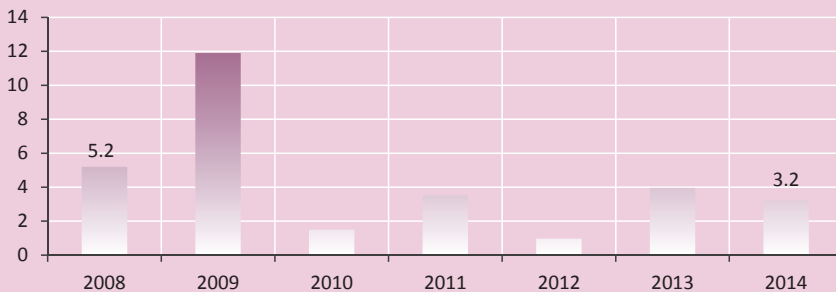
Definition :

Total foreign direct investment outflow (performed by Qataris abroad) to the gross domestic product. The foreign direct investment outflow constitutes a contribution to the international partnership, through providing external financial sources for the receiving countries and the international financial markets.

Indicator trend :

The percentage of FDI outflow to GDP fluctuated between 2008 and 2014, rising from 5.2% in 2008 to 11.9% in 2009. Then it declined to record 3.2% in 2014. This fluctuation is attributed to instability of international economic developments, the increasing growth rate of Qatari GDP in the past few years, and the various invested assets abroad.

Figure (31): Foreign Direct Investment Outflow as percentage of the GDP (2008-2014)



Source: based on the Ministry of Development Planning data, Window on Economic Statistics of Qatar 2014

Indicator evaluation:

The FDI outflow to GDP in Qatar, amounting to 4%, is greater than that of Saudi Arabia (0.6%) and the United Arab Emirates (0.8%), but less than the State of Kuwait's 4.4%.

Source: Investment Climate Report for 2012 to 2013, Arab Investment and Export Credit Guarantee Corporation.

Future expectations :

The percentage of FDI outflow to GDP is expected to rise over the coming years, as Qatar Holding LLC; investment arm of the Sovereign fund "Qatar Investment Authority" intends to increase its investment. In addition, there is also the geographic spread of investments of other Qatari companies, whether private or mixed, and the diversity of economic fields and sectors in which they invest.

16) Energy Use

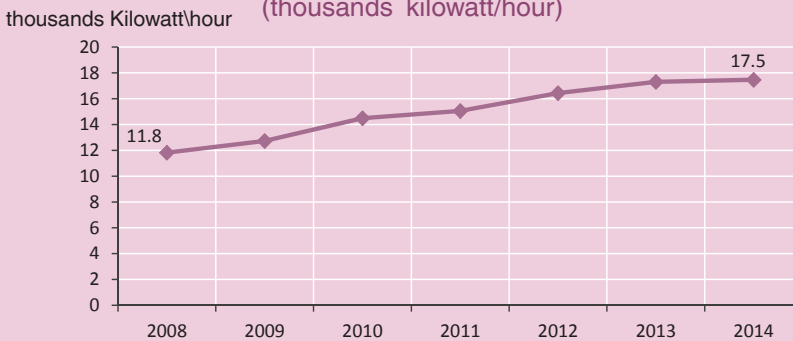
Definition :

Total electric power consumed by all sectors in a year divided by the number of population in the same year. This indicator helps recognize the relation between per capita share of electric power and the economic and social progress and the prosperity that the individual enjoys in a country.

Indicator trend :

Energy use indicator has been slightly rose in the period of this study. The per capita usage of electricity increased from around 11.8 thousand kilowatt hours in 2008 to 17.5 thousand kilowatt hours in 2014; a 6.5% annual growth rate. This increase in energy generated exceeding population growth, the expansion of manufacturing activities and high standards of living is attributed to policies and efforts exerted to achieve this; including the new production unit operationalized in Ras Laffan.

Figure (32): Per Capita share of Annual Consumption of Power (2008-2014)
(thousands kilowatt/hour)



Source: Qatar General Electricity and Water Corporation, Annual Statistical Report, Different Years.

Indicator evaluation:

The per capita annual consumption of electrical energy (17.5 thousand kilowatt hours) is higher than the global average (3.4 thousand kilowatt hours) and is well above the average of high-income countries (8.9 thousand kilowatt hours), and the Eurozone countries (6.6 thousand kilowatt hours).

Source: World Bank, World Development Indicators, 2014

Future expectations :

The per capita annual consumption of electrical energy is expected to continue increasing over the coming years, given the growing demand on electricity, which is the main energy source in Qatar, and the start-up of new plants. The increase can also be attributed to the economic development and its effect on per capita income.

17) Generation of Hazardous Waste

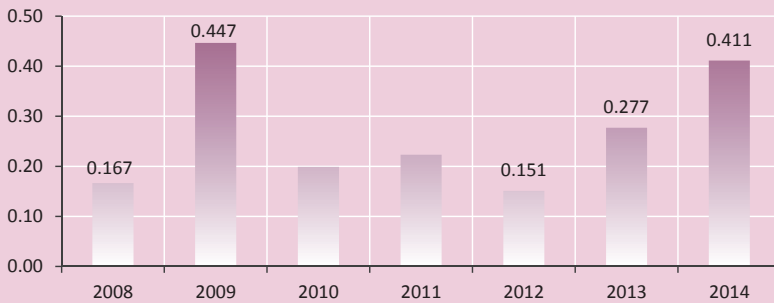
Definition :

It refers to total quantities of hazardous waste generated from industrial operations or any other operations that result in generation of hazardous waste, in accordance with Basel Convention of definition of hazardous waste or any other relevant conventions, divided by GDP. This indicator shows type of industrial activities, technology used, operations, resulting waste, consumption pattern of the population, and size of population living in the State.

Indicator trend :

Generation of hazardous waste indicator has witnessed a fluctuation during (2008-2014), where it increased from 0.127 metric tons/unit of GDP in 2008, to 0.447 tons/unit of GDP in 2009. However, it dropped in 2012 to 0.151 tons/unit of GDP to rise again to (0.411) tons/unit of GDP, due to disposal of about (60%); through burning, tight filling up, chemical and physical treatment, recycling about (20%-30%), as exhaust oils and solvents, and exporting about 1.5% for treatment and final disposal in some European facilities.

Figure (33): Generation of Hazardous Wastes; Metric ton per unit of GDP (2008-2014)



Source: Ministry of Environment, unpublished data.

Indicator evaluation:

Generation of hazardous waste still low, when compared with some Gulf Cooperation Council States (Bahrain) and some developed countries (Germany = 7.3, Sweden = 2.7 and Holland = 7.2).

Source: Waste Without Frontiers, Secretariat of the Basel Convention for the years 2004-2006, Geneva, 2010

Future expectations :

It is expected that the intensity of hazardous waste generation increase will ease in the coming years, as the State is working on decreasing it, especially in the industrial cities; utilizing state-of-the-art and most efficient technology. In addition, it has activated legislations, waste disposal and transfer forms, environment administration bodies, modern technologies in petrochemical industries, and management of health care waste.

18) Recycling

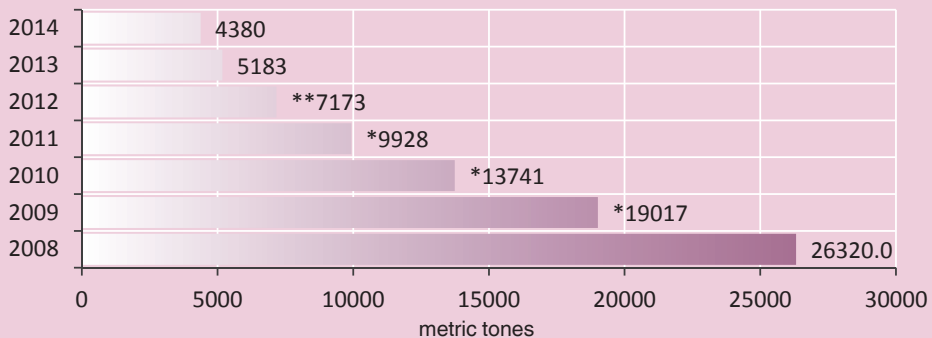
Definition :

Percentage of remanufactured material from metal, plastic and paper wastes to total wastes. This is an important indicator to judge the waste management and environment management in a country.

Indicator trend :

The waste recycling indicator witnessed a remarkable decrease (2008-2014), as the amount declined from 26,320 tons in 2008 to 4,380 metric tons in 2014. It is worth noting that the amount of recycled wastes to the total wastes still low, where it amounted to 9% in 2008.

Figure (34): Recycled Wastes Ton per year (2008-2014)



Source: Ministry of Environment, unpublished data. * estimated quantities. ** estimated wood and iron.

Indicator evaluation:

Waste recycling operations in Qatar still low, when compared with Italy (24.3%), Switzerland (50%), Canada (43%), United Kingdom (70%) and MENA (33%) in 2009.

Source: <http://sustainability11.carillionplc.com/environment/performance-data.html>

Future expectations :

Percentage of waste recycling is expected to increase during the coming period, due to increase in production capacity of recycling plants, and the state directions toward adopting the basis and applications of green economy. The integrated center for wastes management will operate in Mesaeed, which will raise the level of wastes recycling from (8%) to about (25-20%) in the first phase of operation and will increase to (38%) in 2016. This is in addition to other projects for wastes recycling, e.g. school waste recycling network project.



Chapter Three

Environmental Indicators

Foreword

The environmental indicators addressed in this chapter are a measure of the extent of progress made in Qatar, in term of the preservation of the natural environment, the reduction of environmental violations, and the provision of a healthy environment for all of residents.

Environmental indicators, like other sustainable development indicators, contribute to monitoring the State's progress in pursuing its objectives and identifying the success criteria by which the environment might be preserved. Furthermore, they also shed light on the weaknesses arising from the enforcement of the international and local environmental laws and procedures. This, in turn, assists decision makers in identifying solutions that best serve the public interest.

Although the information available about the Qatari environment are limited compared to the population, social and economic information, as there was no interest in environmental statistics until recently; nonetheless, this chapter deals with a set of indicators that may help monitor changes to the environment of the country.

This report will address the environmental sustainable development indicators between 2008 and 2014, in order to illustrate strengths and weaknesses of environmental protection policy and identify challenges facing the State of Qatar in achieving environmentally sustainable development. The report covers the following indicators:

- Air pollutant concentration in urban areas
- Ozone-depleting substances
- Arable land
- Use of agricultural pesticides
- Annual fishing
- Percentage of protected areas to total area

1) Air pollutant concentration in urban areas

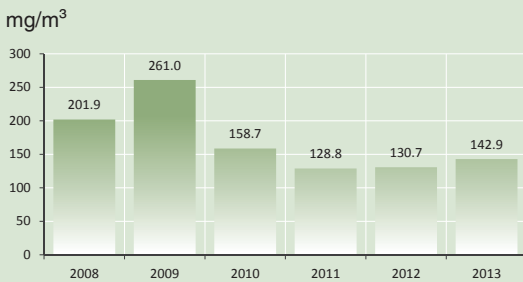
Definition :

It is the amount of basic gases concentration that pollutes urban areas. This indicator helps in measuring the impact of population growth, and accompanying activities, on the air condition in urban areas.

Indicator trend :

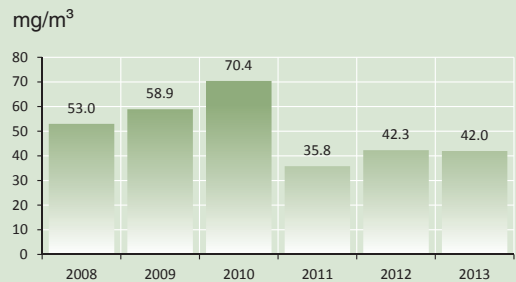
The indicators of air pollutants in urban areas; namely Doha witnessed remarkable fluctuations, where some of them declined as others increased during the period (2008-2013). The following explains these indicators:

Figure (35-A): Concentration of particles in urban areas (2008-2013) microgram/cubic meter of air



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, various years.

Figure (35-B): Concentration of nitrogen oxides in urban areas (2008-2013) mg/m³



A) Fine Particle Levels

Monitoring stations in Doha reported that the incidence of fine particles in the air dropped from around 201.9 mg/m³ of air in 2008 to 142.9 mg/m³ in 2013, an average annual growth rate of -6.9%. The reason for this decrease was primarily due to the development of projects of air pollution management such as air quality management project and the great efforts being made to increase the commitment to environmental regulations to reduce air pollution resulting from the transport sector, as well as the impact of the manufacturing sector, particularly the cement industry that generates a lot of dust in the air, add to that the unprecedented activity in the field of infrastructure construction and the resulting pollutants.

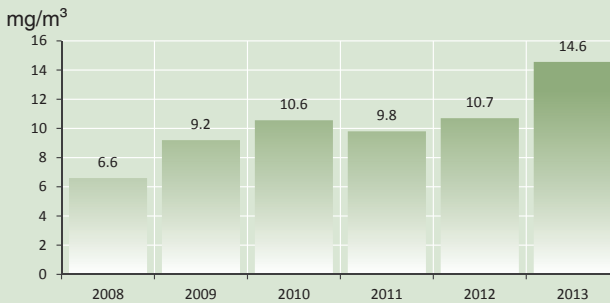
B) Nitrogen Oxides

Levels of nitrogen oxide pollutants (both nitric oxide and nitrogen dioxide) decreased between 2008 and 2013, falling from 53.0 mg/m³ in 2008 to 42.0 mg/m³ in 2013, a reduction of -4.7%. Modern production methods adopted by industry have helped achieve this reduction, following the application of standards that limit nitrogen oxide emission and match the environment preservation specifications.

C) Sulfur Dioxide

Results indicate that the incidence of sulfur dioxide pollution in urban areas rose from 6.6 mg/m³ in 2008 to 14.6 mg/m³ in 2013 - an average annual growth rate of 15.8%. The main source for the emission of high levels of sulfur dioxide comes from the burning of petrol in cars and petroleum products in boilers. This may require prompt action to reduce the level of sulfur concentration in those products.

Figure (35-C): Concentration of sulfur dioxide in urban areas (2008-2013) mg/m³



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, various years.

Indicator evaluation:

The incidence of sulfur oxides is still much less than the internationally-recognized limit of 80mg/m³. The international limit on nitrogen oxides at 100mg/m³ is also met. However, the limit of fine particle quantities has not been met, as it exceeds the permitted 50mg/m³.

Future expectations :

If effective measures are not defined and action not taken to reduce air pollution, especially the quantity of fine particles, an increase in the incidence of pollutants of sulfur dioxide, nitrogen oxides and fine particles is a likely outcome as the result of population growth, increasing use of vehicles and accelerating building and construction projects, as well as expanding manufacturing sector. All of this requires the preparation of a national strategy for the management of greenhouse gas emissions and air pollution, involving all sectors of the national economy; including the private sector.

2) Ozone depleting substances

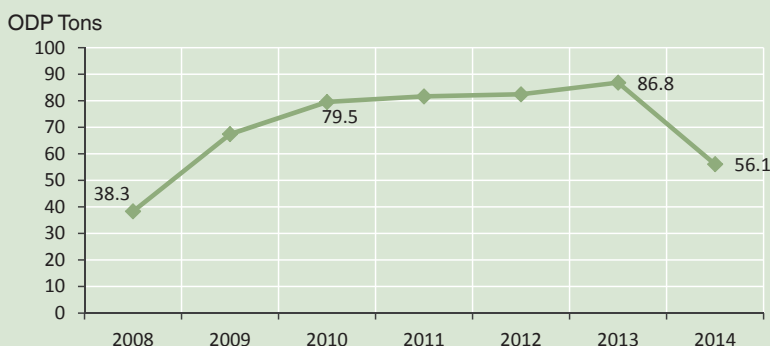
Definition :

It is the amount of ozone depleting substances imported by the state, and it is measured by the depleting potential (ODP). This indicator has a great importance in monitoring the effect of development activity in depleting the ozone layer, which protects the Earth from ultraviolet ray, as its increase result in many diseases, specially dermatitis.

Indicator trend :

Emissions detrimental to the Ozone layer climbed significantly between 2008 and 2014. Not exceeding 38.3 metric tons of Ozone depleting emissions in 2008, they rose to 86.8 metric tons in 2013 and then decreased to 56.1 metric tons, representing an annual increase of 6.3%. This increase came as a result of greater chlorine compound and organic fluorine-22 imports.

Figure (36): Ozone exhausting material ODP tons (2008-2014)



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, various years.

Indicator evaluation:

No comparison can be made over quantities of substances that deplete the ozone layer. Numerous factors, such as the size of population, environmental awareness, the size of the industrial sector and the efficiency of the measures taken to reduce the use of such materials cannot be reduced to a simple figure.

Future expectations :

Qatar expects to witness a decrease in the Ozone-depleting substances in the long run. This would be in line with the adoption of measures restricting the importation of Ozone-depleting substances that emit chlorine, fluorine and carbon. This task is to be undertaken in cooperation with neighboring countries. In addition, the State of Qatar has ratified the Montreal Protocol, which provides the procedures to assist countries in phasing out these substances.

3) Arable land

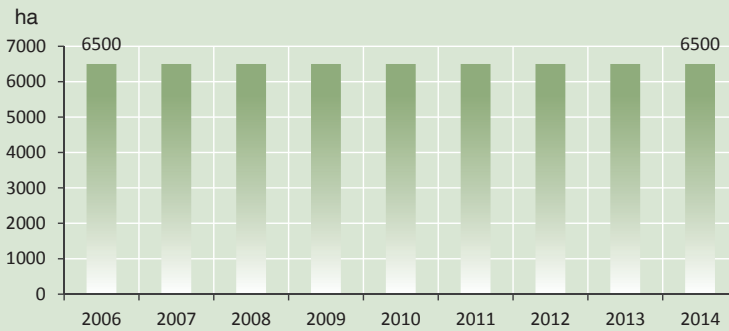
Definition :

It refers to the total agricultural land, which is continuously planted with crops. This indicator shows how far the state encourages the agricultural activity, which assists in providing a reasonable level of food security for the population. In addition, it indicates the possible contribution of this activity in reducing the impact of greenhouse gases.

Indicator trend :

The indicator of arable land remained stable between 2008 and 2014, with no significant increase in its available area. The proportion of cultivated land is still high given the harsh natural conditions; particularly the scarcity of natural water, the low quality of soil and its salinity, in addition to limited use and experience of land reclamation technology.

Figure (37): Arable land by hectare (2008-2014)



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, various years.

Indicator evaluation:

As the area of arable land available is linked to natural conditions, especially soil quality and climatic factors that vary from one region to another, additionally to modern techniques for land reclamation, it is difficult to compare Qatar with other countries.

Future expectations :

The amount of arable land is expected to remain stable in the short run before beginning a slight decline due to lower groundwater levels and higher salinity. Poorer soil quality will no doubt increase the number of abandoned farms and reduce the amount of arable land.

However, if ambitious programs are implemented within the framework of the National Programme for Food Security, focusing on the introduction of the state-of-the-art technologies in agriculture and water desalination by solar energy, an increase in the area of land suitable for agriculture is expected in the coming years.

4) Use of agricultural pesticides

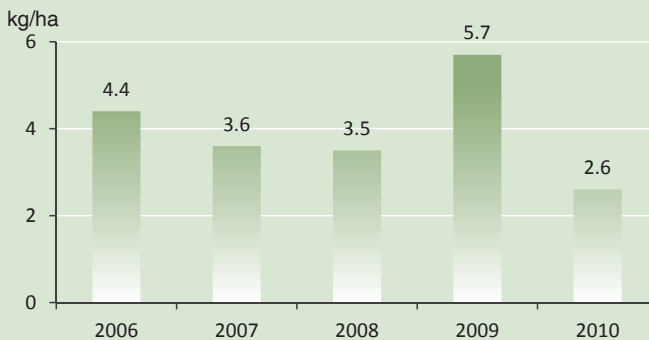
Definition :

It is defined as the usage of agricultural pesticides per unit of area of land. This indicator helps in measuring contribution of agricultural sector in affecting the ecological systems, through usage of different chemicals, in the shape of pesticides that contribute to the damage of soil quality and ground water.

Indicator trend :

This indicator dropped during the period (2006-2008), declining from (4.4) kilograms/hectare in 2006 to (3.5) kg/ha in 2008; a decrease of (20.5%). It then started to rise gradually to (5.7) kg/ha in 2009, before declining to (2.6) kg/ha in 2010, a (-13.2%) annual drop between 2006 and 2010. It is unquestionable that there is no strong relationship between use of agricultural pesticides and area of planted land, because these pesticides are used in commercial farms and for some plants.

Figure (38): Use of agricultural pesticides (2006-2010) kilogram/hectare



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, various years.

Indicator evaluation:

It is difficult to make a comparison in the area of agricultural pesticides usage, since it is connected to natural environment, especially climate, type of plants and nature of agricultural production.

Future expectations :

It is expected that average use of agricultural pesticides will settle at its current levels. However, the slight decline of arable land, in the medium and long run, will result in slight drop in the use of agricultural pesticides in the long run.

5) Annual fishing

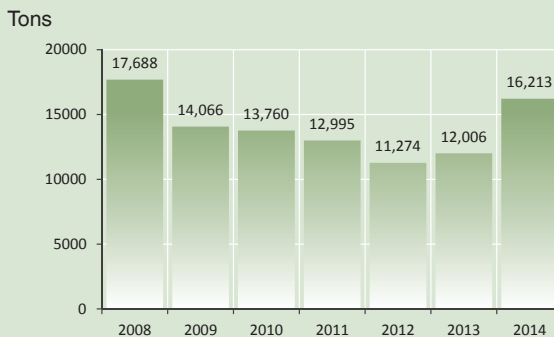
Definition :

It refers to the percentage of annual fishing of main economic fish compared to the highest fishing in a time series. This indicator helps in measuring the effect of demand elements; including population growth, on one of the most important live sources in marine environment.

Indicator trend :

Annual fishing fluctuated between 2008 and 2014, hitting its peak in 2008 with average harvest of 17 thousand tons. In spite of the high demand on fish, as an important source of nutrition in Qatar, the annual catch has declined to 12 thousand tons a year in 2013 and then rose again to 16,213 tons in 2014; a - 1.5% annual drop (2008-2014). The decline in annual fishing can be attributed to slow take up of advanced technologies, a lack of private investment, a dearth of specialized labor and the poor economic and social conditions experienced by fishermen.

Figure (39): Annual fishing ton per year (2008-2014)



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, various years.

Indicator evaluation:

The amount of fish landed is still not enough to meet local demand on fish that remain a principal food for nationals and non-nationals in Qatar alike. Thus, there is a food gap in this area.

Future expectations :

The State of Qatar seeks to develop its fish resources. The quantity of fish caught may grow shortly to meet the expected population growth, thanks to research in productivity and fisheries. Qatar will witness the establishment of integrated fish and shrimp farms made up of hatcheries, prefattening and fattening units. Some 110,000 square meters has already been assigned to the project at El-Khor. The estimated cost of construction, buildings and equipment for the fish and shrimp production units are expected to be at 150 million Q.R.

6) Percentage of protected areas to total area

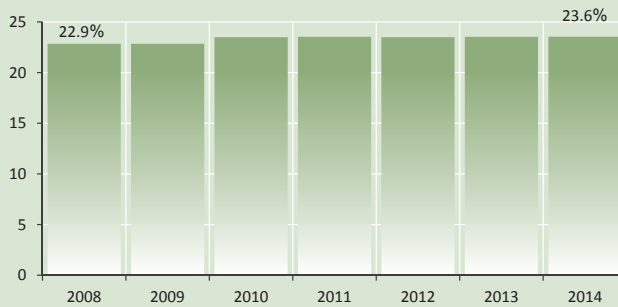
Definition :

It is the area of land protected compared to total area of a country. This indicator helps in measuring the efforts of preserving the natural life and different ecological systems in Qatar.

Indicator trend :

The size of reserves as a proportion of the total area of the State of Qatar has increased significantly. In 2008, the ratio stood at just 22.9% but has since grown at a slow pace to reach 23.6% in 2014; an annual growth of 0.5% between 2008 and 2014. However, this reflects the state interest in protecting the ecosystems given their importance in maintaining biodiversity.

Figure (40): Percentage of protected areas to total area (2008-2014)



Source: Ministry of Development Planning and Statistics, Annual statistics abstract, various years.

Indicator evaluation:

The proportion of protected areas in Qatar is above the global standard, which propounds that 10% of a country's total area should become protected nature reserves. Qatar has also surpassed other members of the GCC countries, Such as UAE protecting at 7.1% and Saudi Arabia at 4.1%.

Future expectations :

The protected reserves as a proportion of the total area of the state will likely remain at current levels, as the areas that are good to be natural reservations are wide and exceed the global standard by more than 100%.

Conclusion

The indicators of sustainable development in the State of Qatar contained in this report confirm that the State of Qatar has made significant changes and further progress in the three aspects of sustainable development pillars, according to the reported indicators included in the report:

On Social Development, Qatar has achieved noteworthy and commendable progress in reducing unemployment, providing sustainable jobs for all, narrowing the gender equality gap in many areas like education, employment and wages, and accessing health services. In addition, under-five mortality rates showed remarkable downward trend; achieving an annual rate of – 6.8% during 2008 -2014. This is noted by the United Nations Population Division, as stated in its 2014 report that the index has fallen from 9.5 per 1000 live births in 2008 to 8.2 per 1000 live births in 2013. This puts the State of Qatar in the levels of developed countries in terms of under-five mortality rates, equaling the record of the United States of America.

On Economic Development, Qatar has also achieved remarkable progress, ranked 1st among all the countries of the world in terms of per capita GDP. The State's ratio of investment to GDP exceeds that of the most advanced industrial countries. The inflation rate, which is an extremely significant factor for the national economy performance, reached 3.4% in 2014, very close to the rates in GCC countries and not far away from that of the advanced industrial countries.

As for Environmental Development related to wastes generated from industry, air pollutants in urban areas, the Ozone-depleting materials and the use of agricultural pesticides, they do not exceed the allowable limit internationally. However, it is necessary to continue to monitor the evolution of such phenomena, while comparing them with national standards set by the state to maintain the health of society, in alignment with international conventions signed by the State of Qatar.

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