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Permanent Population Committee

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Towards a Better Life for the Population

A Quarterly Review issued by the Technical Office of the Permanent Population Committee, Planning and Statistics Authority

- Qatar's Third Population Policy (2023-2027) (Justifications)
- Sports in the State of Qatar : Organizing the FIFA World Cup Qatar 2022
- Sea level rise.... A climate catastrophe that threatens the population

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Read in this issue:

Editorial

I am pleased to present to the reader the fifty-third issue of «Sukkan» magazine, whose first topic includes a detailed presentation of the justifications for the Third Population Policy of the State of Qatar (2023-2027), mainly; the continued imbalance of the demographic structure, which necessitated the formulation of a new population policy based on diagnosing the demographic and social reality, identifying and determining the challenges facing this reality, and the possible mechanisms to confront them now and in the future.

The main article of this issue explains the role of sport in serving sustainable development in the State of Qatar, and is based on multi-source data, the most important of which is the Annual Bulletin of Sports and Youth Statistics that shows statistics and indicators in the sports sector, which is one of the components of the social development pillar within the National Development Strategy (2018-2022). This data monitors developments in this sector in the form of an analytical summary of the annual development, The Sports and Youth Statistics chapters (sourced from the Ministry of Sports and Youth, the Ministry of Culture, the Planning and Statistics Authority, the Ministry of Education and Higher Education, private gyms and hotels) provide data on sports activities and the facilities available to them, in addition to the results of opinion polls for different years conducted by the Planning and Statistics Authority.

Spotlight, which presents an article entitled «Sea level rise.... A climate catastrophe that threatens the population», discusses one of the challenges of climate change: sea level rise caused by melting ice that exposes nearly half of the world›s beaches to erosion, and is also linked to coastal erosion. This can jeopardize wildlife, agriculture and food security, and may increase the cost of measures taken by governments to mitigate the effects of climate change.

This issue also reviews the most important events in which the Permanent Population Committee participated, and the meetings and activities it held, such as the National Population Day 2022, which was celebrated on Tuesday 25.10.2022 under the theme «Five years since the implementation of the population policy: what has been achieved.»

Dr. Saleh M. Al Nabit
Chairman of the Permanent Population Committee

Qatar's Third Population Policy (2023-2027) (Justifications)

Dr. Yousuf Brik
Permanent Population Committee

A good preparation of the population policy depends on taking into account the specificity of the social, economic and cultural reality of the society in which it will be applied, and on setting the goals and practical procedures that stem from this specificity. Hence, the most important reason for the failure of population policies is the attempt to reproduce them for others and apply them in an environment that is different from their own environment.

Based on this golden rule, and five years after the implementation of the Second Population Policy (2017-2022), the Permanent Population Committee began to draw the general features of the Third Population Policy (2023-2027), by evaluating the previous population policy1 (*) on the one hand, and setting the general framework for the new population policy on the other. The general framework has four components:

- Justifications
- Principles
- Premises
- Basic Contents

In view of the importance of these components, we will highlight them (in this issue and the next issues of "Sukkan" magazine) in successive articles, so that the justifications for the preparation of the new population policy will be the subject of this article, as follows:

Justifications in general are not the reasons behind an action, a process, or a procedure, but rather the answer to the broad question: why?

Accordingly, we say: The State of Qatar faces a number of population challenges represented by population dynamics (population size and growth), and the demographic structure of the country. This calls for the development of a new population policy that seeks to address these challenges related to the Qatari population on the one hand and the non-Qatari population on the other.

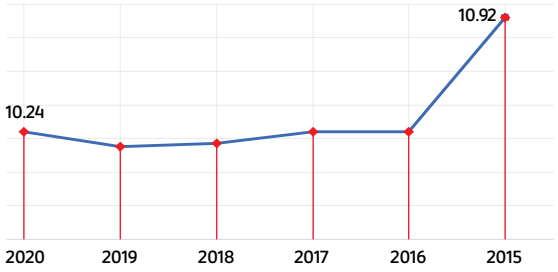
First: Challenges associated with the Qatari population:

The issue of Qatar›s small population has been accompanied by a host of other challenges represented by demographic phenomena imposed by the social and economic transformations that the state has and continues to witness. The most important challenges or population phenomena addressed here are:

Crude birth rate decline:

According to the data included in Figure (1), the crude birth rate per 1,000 Qatari population declined from (10.92) in 2015 to (10.24) in 2020, a decrease of 6.2% during the comparison period.

Figure 1: Crude birth rate per 1,000 Qatari population by years



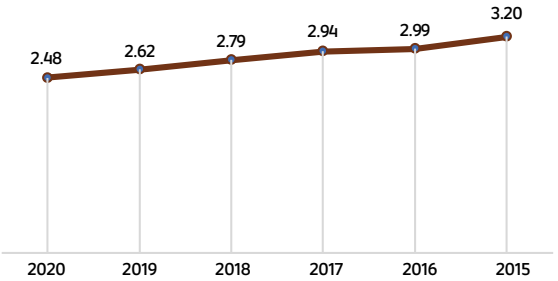
Source: Planning and Statistics Authority, Vital Statistics (Births and Deaths), various years.

Although this rate is considered high given the levels of crude birth rate prevailing in developed countries, its decline as shown in Figure 1 is one of the challenges that justify the development of a new population policy that includes a set of actions, programs and measures that can contribute to facing these challenges and reducing their various impacts.

Decline of total fertility rate for Qatari women

In relation to the crude birth rate, Figure 2 indicates a decline in total fertility rate of Qatari women from 3.20 live births in 2015 to 2.48 in 2020, a decrease of 22.5% during the comparison period.

Figure 2: Total fertility rate of Qatari women by years



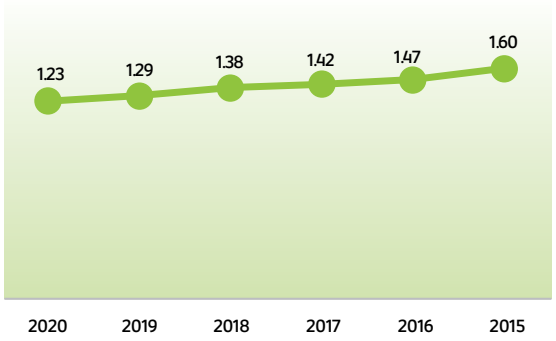
Source: Planning and Statistics Authority, Vital Statistics (Births and Deaths), various years

Decline of gross replacement rate for Qatari women

Figure 3 indicates a decline in the gross replacement rate for Qatari women from 1.60 girls per Qatari woman in 2015 to 1.23 girls per Qatari woman in 2020, a decrease of 18.75% during the comparison period.

1 (*) For more details on the evaluation of the Second Population Policy (2017-2022), see the relevant article in issue No. 52 of Sukkan magazine

Figure 3: Gross replacement rate for Qatari women during the period (2015-2020)



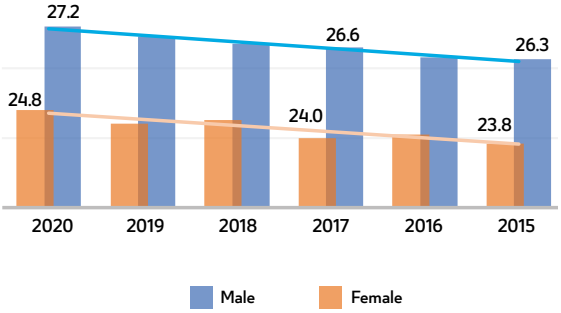
Source: Planning and Statistics Authority, Vital Statistics (Births and Deaths), various years

The decline in total replacement rate and total fertility rate for Qatari women is related to their age of marriage and their average age at childbearing; the later the age of marriage of a woman, the later her average age at childbearing, and the lower the total replacement rate and the total fertility rate, which requires appropriate measures to limit the continuous decline in the values of these indicators.

Delayed age of marriage

The data in Figure 4 shows an increase in the average age at first marriage for males from 26.3 years in 2015 to 27.2 years in 2020, and for females from 23.8 years to 24.8 years for the two years mentioned. This means that the age of marriage is delayed, especially for Qatari females, which negatively affects fertility rates.

Figure 4: Average age at first marriage among Qataris by sex during the period (2015-2020)



Source: Planning and Statistics Authority, Marriage and Divorce in the State of Qatar, 2020 (presentation and analysis)

The delay in the age of marriage among Qatari men and women has many reasons; perhaps the most important of which is the absence of qualitaty programs that support the increase in childbearing, as shown by the results of the fifth phase of the follow-up stages of the implementation of the population policy, which constitutes one of the explanations related to the stagnant percentage of the Qatari population, which is still around 11% of the state's total population.

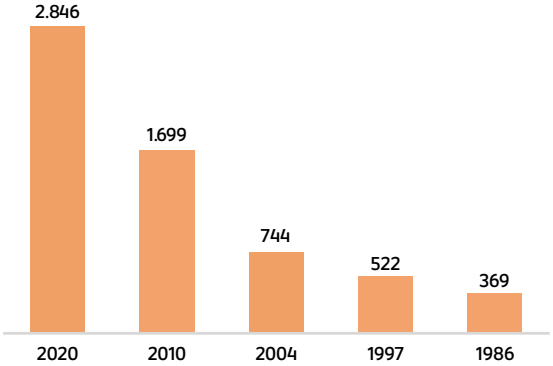
II) Challenges associated with non-Qatari population:

Based on the available statistical data on the population reality, we can say that the State of Qatar, like most of the Arab Gulf countries, suffers from imbalances in its demographic composition, the structure of its labor market and the geographical distribution of its population, which will be highlighted in the following paragraphs:

Demographic distribution

Open recruitment to meet the needs of various development projects in recent decades and the country›s projects for hosting the 2022 World Cup has resulted in a significant increase in the country›s population, which has increased 7.7 times in less than four decades, from 369,000 in 1986 to 2,846,000 people in 2020, as shown in Figure 5.

Figure 5: Evolution of the population of the State of Qatar (in thousands) by censuses



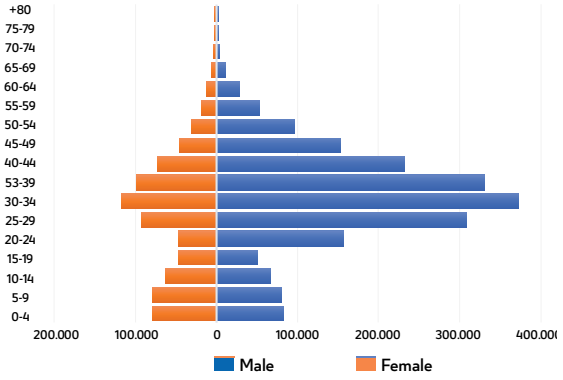
Source: Planning and Statistics Authority, Population Censuses

As is well known, expatriate workers were the main source of this increase, which led to an imbalance in the demographic structure, as the ratio of Qataris to non-Qataris decreased significantly.

Imbalance of age structure

In addition to the aforementioned imbalance, which is represented by the decrease in the ratio of Qataris to non-Qataris, there is another imbalance represented in the age structure. As in other Arab Gulf countries, the State of Qatar is characterized by a clear imbalance in the age structure of its population, which is illustrated by the age polygon (Figure 6) below:

Figure 6: Qatar›s population age polygon, 2020



Source: Planning and Statistics Authority, Main Results of Census 2020.

Figure 7 reflects the essence of imbalance in the demographics of the State of Qatar, where, while the age polygon of its citizens is broadbased, the age polygon of the general population (Qataris and non-Qataris) is characterized by a swelling in its middle and a narrowing at its base.

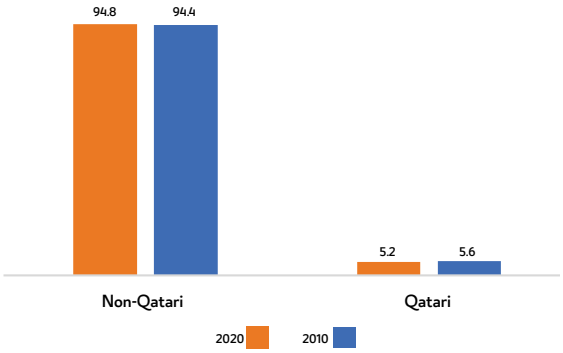
Structural imbalance

In addition to the above-mentioned imbalance, which is represented by the imbalance of the age structure, there is another imbalance represented by the imbalance in the gender ratio, which reached 281 in 2020, i.e., for every 100 females, there are about 281 males, which is a very high percentage about three times higher than that of the Qatari population.

Labour market structural imbalance

Although the recruitment of expatriate workers has played a positive role in achieving the comprehensive development renaissance and moving the wheel of progress that Qatar has and continues to witness at various levels, the large numbers that have been recruited have negatively affected the structure of the labor market, where, as shown in Figure 7, the percentage of non-Qataris in various economic activities reached 94.9% in 2020, while the percentage of Qataris did not exceed 5.2%.

Figure 7: Economically Active Population (15 Years and above) by Nationality



Source: Planning and Statistics Authority, Main Results of Census 2020.

What has increased the aforementioned imbalance is that the bulk of expatriate labor is either unskilled or semi-skilled. This is despite the efforts made to achieve the goal set by Qatar National Vision 2030 by adopting a "knowledge economy characterized by intensive reliance on research, development and innovation", which was confirmed by the National Development Strategy and the Population Policy of the State of Qatar. This means bringing in highly qualified expatriate workers and retaining the distinguished skilled from this workforce. More than 62% of the economically active non-Qatari population (15 years and above) is still classified as semi-skilled and unskilled, while the percentage of both skilled and highly skilled labor remains around 37%, as shown in Figure 8.

Figure 8: Percentage distribution of economically active non-Qatari population (15 years and above) by skill level, 2020

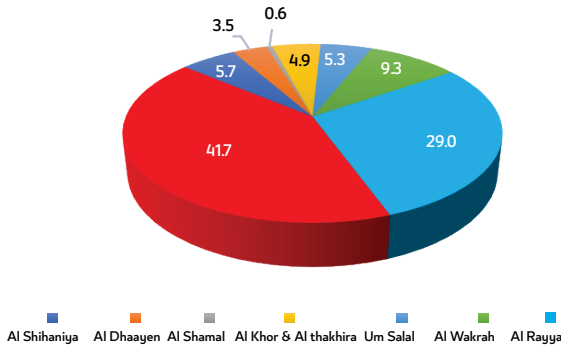
Source: PSA, Main Results of Census 2020

Imbalance in the geographical distribution of the population

The imbalance in the demographic structure as presented in the previous paragraphs was accompanied by an imbalance in the geographical distribution of the population, which is primarily related to the ability of different regions to attract the population. The concentration of social, cultural and economic services in urban centers led to the congestion of these centers with Qatari and non-Qatari populations, hence, while the percentage of urban population did not exceed 50% of the country›s population in 1950, it became 100% as of 2010.

In this context, Figure 9 indicates that the municipalities of Doha and Al Rayyan accounted for 70.7% of total population in the country, while the remaining percentage was distributed among other urban centers, such as Al-Wakra, Al-Shihaniya, Um Salal, Al-Khor... etc

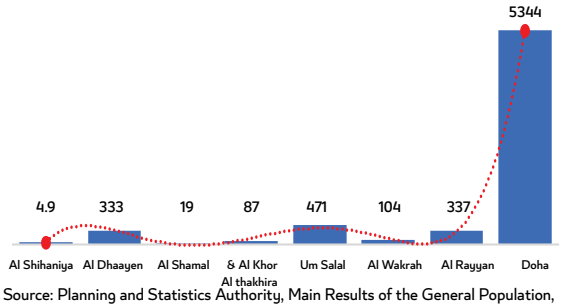
Figure 9: Percentage distribution of the population by municipality, 2020



Source: PSA, Main results of the General Population, Housing and Establishments Census 2020

There is no doubt that this rapid urban growth in Qatar in general, and in the municipalities of Doha and Al-Rayyan in particular, is one of the most prominent manifestations of comprehensive and sustainable development that the country is witnessing, and it is evidence of the extent of economic and urban progress that has been achieved. However, this unbalanced urban growth has created many problems topped by imbalance in the geographical distribution of the population, as the population density in the municipality of Doha reached 5,344 people per square kilometer, while this density did not exceed 19 in the municipality of Al Shamal per square kilometer, as shown in Figure No. 10.

Figure 10: Population density per square kilometer by municipality, 2020



Source: Planning and Statistics Authority, Main Results of the General Population, Housing and Establishments Census 2020

In conclusion:

The aforementioned challenges and other challenges facing Qatari society require proper intervention to address them, which justifies the development of a new population policy that includes a set of mechanisms and procedures through which these challenges can be reduced to have a better life for everyone living in Qatar.

Towards Building a Sustainable Development Model

Sports in the State of Qatar : Organizing the FIFA World Cup Qatar 2022

Dr. Mustafa Kharoufi
Permanent Population Committee

The State of Qatar enjoys a long record of hosting international sports tournaments and has outstanding sports talents and high-quality training facilities. It also aspires well-deservedly to occupy a leading world position in the field of sports. Since 2005, the State of Qatar has organized nearly 500 international sporting events that covered all kinds of sports, through which it has gained acclaim, praise and appreciation, until it has become a leading sports pole that brings the world together through sustainable sports development[2]. Thus, after its successful hosting of world championships in various individual and collective sports, perhaps the most prominent of which are (the fifteenth Asian Games in 2006, the World Handball Championship in 2015, the World Athletics Championships for Persons with Disabilities in 2015, the World Boxing Championships in 2015, the World Cycling Championships in 2016, the 48th tournament of the World Artistic Gymnastics Championships, the World Beach Games in 2019, the Club World Cup in 2019 and 2020 and the Masters Championship in 2020), Qatar hosted the FIFA World Cup 2022, which took place from 21 November to 18 December 2022. This is considered a world-class sports event that is held for the first time in history in an Arab country.

Since the State of Qatar was named as the host for the 2022 FIFA World Cup back in December 2010, it has pledged and fulfilled to hold one of the best versions of this tournament. The wise Qatari leadership decided to establish stadiums that take into account the surrounding environment and contribute to its development, add economic and developmental dimensions to the Qatari community and leave a sustainable legacy for future generations. This organization has formed one of the most important international partnerships and drivers for achieving the goals of the 2030 Sustainable Development Agenda at the national level. During the past few years, continuous efforts were exerted for preparation and construction of the projects related to the World Cup (Doha Metro, road networks, various hotels, expansion of Hamad International Airport and other preparations related to health, security and safety emergencies) to ensure sustainable production and consumption that leaves a legacy and practical experience that stimulates sustainability in Qatar, the region and the world.

This article reflects how sport has served sustainable development in the State of Qatar, and it is based on the analysis of multi-source data; mainly the Annual Bulletin of Sports and Youth Statistics, which presents statistics and indicators in the sports sector[3]. This sector is one of the components of the social development pillar within the National Development Strategy (2018-2022), which data monitors developments in sports in the form of an analytical summary for the annual development of this sector. The article is also based on the Chapters of Sports and Youth Statistics (sourced[4] from the Ministry of Sports and Youth, the Ministry of Culture, the Planning and Statistics Authority, the Ministry of Education and Higher Education, private gyms and hotels). It provides data on sports activities and available capabilities, including service outlets such as sports institutions and facilities, as well as data on clubs, coaches, referees and players by age groups and sports activity, in addition to local and foreign tournaments and training camps that have been organized. The results of surveys for various years conducted by the Planning and Statistics Authority were also used, such as (Sports for Life, and the National Sports Day[5]), which provide monthly sports expenditure, and measures the extent of desire to participate in the World Cup, the rate of community participation on the first sports day, the duration of sports practice for the population, the sports means available to families at home, and expectations of organizing the FIFA World Cup 2022, in addition to general statistics and a map showing the geographical distribution of sports facilities in the country. The results of these two field studies were also referred to:

- The first was prepared by the Ministry of Culture and Sports in cooperation with the Ministry of Development Planning and Statistics entitled «General Trends for Qatari Women›s Sports» in 2016, which was conducted to identify the patterns of Qatari women›s practice of sports, and the extent of their demand for government and private sports institutions to practice sports activities. It also reviews a set of selected indicators related to relevant topics.
- The second, conducted in late 2015 by Social and Economic Survey

2 Sports in the State of Qatar: https://www.gco.gov.qa/ar/focus/sport/
3 Planning and Statistics Authority – Sports in Qatari Society: Statistical Snapshot 2019. https://www.psa.gov.qa/en/statistics/Statistical%20Releases/Social/Sport/2019/sport_Qatar__2019_AE.pdf
4 Planning and Statistics Authority – Youth and Sports Statistics – Chapter XII 2021-2022
5 Qatar Statistics Authority – Sport for life 2012 and Results of Sports Survey 2013
https://www.psa.gov.qa/en/statistics/Statistical%20Releases/Social/Sport/SportDay/2012/Sport-Day-2012-AE.pdf{i. https://www.psa.gov.qa/en/statistics/Statistical%20Releases/Social/Sport/SportDay/2013/Sports-Day-2013-Ar.pdf

Table of Sports Facilities in Qatar by Type 2018/2019 - 2021/2022

Year/ Sports Facility	2018-2019	2019-2020	2020-2021	2021-2022
Sports Stadium	10	10	10	10
Football field	86	90	95	85
Swimming pool	20	20	20	19
Covered hall	37	37	37	41
Basketball court	15	18	19	15
Volleyball court	11	12	12	13
Handball court	9	8	8	10
Billiards hall	6	6	6	5
Athletics track	10	10	10	10
Camel racetrack	6	6	6	6
Hippodrome	2	2	2	2
Car racing circuit	5	5	4	5
Beach soccer court	4	5	5	6
Equestrian arena	10	10	10	10
Shooting range	6	6	6	7
Table tennis hall	13	13	14	11
Tennis court	19	19	21	19
Squash court	11	11	11	11
Golf course	1	2	3	2
Sail club	0	0	1	0
Bowling center	1	1	1	1
Total	**282**	**291**	**301**	**288**

Source: Planning and Statistics Authority: Sports and Youth Statistics, Chapter 12, 2021

Research Institute (SESRI) at Qatar University in partnership with the Ministry of Sports and Youth[6] around trends of Qatari citizens towards participating in sports or physical activities. The study included a sample of the survey respondents in all municipalities (Doha, Al Rayyan, Al Wakra, Al Dhaayen, Um Salal, Al Khor, Al Shamal and Shihaniya). The results showed that about 70% of males and 57% of females had participated in sports or physical activities during the last twelve (12) months, whether in sports lounges, gyms, neighborhood streets, public paths, parks or at home. They acknowledged the psychological and physical benefits of participating in sports or physical activities, as the majority of them had been practicing throughout the week (46%) or during workdays (39%).

About Sports in Qatar

according to the Qatar Olympic Committee›s website[7], the history of physical practice in the State of Qatar dates back to an ancient era, possibly the sixteenth century, in light of the Ottoman Empire›s sweep of the Middle East, North Africa and the Balkan countries. The real practice of sports and fitness, however, had developed with the country›s independence, in parallel with the social and urban transformations witnessed by the State of Qatar. Currently, sports and sports facilities are everywhere in the country, where diverse high-quality sports infrastructure are available to help in organizing local, regional and international sporting events. These fan-attracting events add a cultural dimension to sports practices (individual or collective), a brilliant professional character, and a thrill to the game through the diversity and sophistication of sports trend, as a social phenomenon that reflects contemporary social, economic and cultural developments.

At the level of sports infrastructure, reflecting upon the comprehensive social statistics and data of the State of Qatar shows a remarkable growth in the number of sports facilities. The fifth report of the series of Qatar's comprehensive social statistics issued by the PSA during the period 2011-2020 indicates the most prominent and most used indicators in the planning and implementation processes. It shows that the number of sports facilities has increased significantly, reaching 291 in 2019/20, of which football stadiums accounted for 31%. It also shows the evolution of the number of sports activities in sports federations from 26 to 37 activities during the period 2010-2020, where football, being as the largest participatory sport and perhaps the fastest growing in the country, won the largest share of the number of players for the same period. Qatar has held many local championships that contribute to enhancing fitness, as the number of local championships increased from 583 to 768 championships during the period 2013-2014 to 2019-2020, with the junior championship accounting for the highest percentage (31%) of total local championships, followed by the general championships 24%, then the juniors championships 18%, and the cubs championships 14%[8].

Following the remarkable investment in the sports sector, the State of Qatar has become a prominent and effective player in the various fields of sports. It adopts a policy of encouraging the population (Qataris and residents alike) to practice sports activities, aiming to make sporting events, especially regional and international ones, a catalyst for establishing a lasting societal, humanitarian, economic and environmental legacy. By enhancing the infrastructure with modern designs (Doha

6 Ministry of Sports and Youth– Qataris› trends towards sports or physical activities –Social and Economic Survey Research Institute, Qatar University 2015
7 Qatar Olympic Committee https://www.olympic.qa/ar
8 Planning and Statistics Authority - Qatar: Social Statistics 2011-2020, page 31

Metro, road networks, various hotels and the expansion of Hamad International Airport), Qatar also aspires to popularize community participation and take advantage of all available facilities in exchange for harnessing the power of sport for the benefit of the entire Qatari society. The goal is to open most sports venues and facilities to the public, to encourage them to adopt a healthy balanced lifestyle which will reduce the risk of chronic and serious diseases.

Promoting Community Sports

Sport is considered one of the most important public interests through which the strategy of the Ministry of Sports and Youth aims to provide «distinguished services that guarantee the Qatari society the expansion and practice of community sports and sports for all«. The strategy also aims to collect the contributions of various ministries, agencies, clubs and the private sector, which directly contribute to the development of community sports practices, the support for elite sports and sports for all, and the expansion of physical activity in response to the aspirations of many inhabitants. This is evident by the data related to playgrounds in schools for example (Tables No. 2 and No. 3), and the demand for gyms that enhance physical activity among males and females who prefer these facilities due to their privacy, specifications, and sometimes their proximity to home or workplace as well as ease of making reservations (Table No. 4).

Table of the monthly average of sports activity practitioners in Al Furjan Playgrounds 2019-2021

Playground Name	2019	2020
Fereej South Duhail	548	548
Fereej North Duhail	867	255
Fereej Al Markhiya	1,008	493
Fereej Madinat Khalifa North	2,677	897
Fereej Al Aziziya	725	380
Fereej Um Salal	1,159	499
Fereej Jabal Al Wakra	459	158
Fereej Abu Hamour	860	262
Fereej Al Thumama	582	169
Fereej Al Thakhira	185	159
Fereej West Nuaija	816	199
Fereej East Nuaija	1,299	188
Al Asiri	0	271
Fereej Ain Khaled	927	727
Fereej Al Wukair	3,254	160
Fereej Al Khor	4,307	430
Total	**19,673**	**8,024**

Source: Planning and Statistics Authority – Sports and Youth Statistics, 2021

The State of Qatar is aware of the clear role played by municipalities in the development of sports, as they promote sports practices at the local level, by virtue of their proximity to citizens, their knowledge of the needs of the population, and their awareness of motives and attitudes. Hence, Qatar contributes to raising the capabilities of human resources in the sports sector, promoting organizational culture, strengthening the management of sports facilities, and enhancing the relationship with organizations related to the sports sector, in order to provide sports opportunities for the population, and to establish, manage and develop quality services. It is an ambition that encourages and supports the entire population to practice sports and physical activity in a way that suits them. The data of Table 5 indicates that the public has increasingly benefited from the «proximity sport» provided by Al Furjan playgrounds in various municipalities, as it creates additional opportunities that encourage the local community to be more active on a scale that suits many people, and brings about general health and social benefits.
It is worth mentioning that as per the Emiri Resolution No. (80) of 2011 regarding Celebrating Sports Day, the State of Qatar has allocated every Tuesday of the second week of February to be the National Sports Day in line with the resolution of the UN General Assembly that adopted 6 April as an international sports day for development and peace, where everyone is encouraged during this day to participate in sports activities with family members, friends and colleagues. The main objective of this annual event is to promote the sports and educate the community on ways to reduce health risks associated with a sedentary lifestyle, such as cardiovascular disease and diabetes.

Sports and Youth Institutions by Municipality 2019-2021

Municipality	2019	2020	2021
Doha	17	17	14
Al Rayyan	2	2	6
Al Wakrah	3	3	2
Um Salal	1	1	1
Al Khor	4	4	4
Al Shamal	3	3	3
Al , Dhaayen	3	3	1
Al Shihaniya	1	2	1
Total	**34**	**35**	**32**

Source: Planning and Statistics Authority – Annual Bulletin of Youth and Sports Statistics (2021-2022), page 24

The Sports Day reflects the clear interest of the wise leadership of the state, where hundreds of sporting events are organized across the country, in order to promote initiatives to broaden the base of sports participation, create an environment that stimulates more investments in the sports sector, and provide opportunities for the youth and national cadres to participate in various fields of sports. The results of field research on Qataris' trends and tendencies towards practicing sports or physical activities showed the extent of influence of this day on the Qatari population in this regard, as a major catalyst for increasing the participation of community members in sports, as about half of the survey respondents (54% of males and 49% of females) reported that they became more interested in sports or physical activities after

Table of playgrounds in public schools by type of playground 2017/2018–2020/2021

Year	Number of Schools	Type of Playground							
		Football	Volleyball	Basketball	Handball	Swimming pool	Tennis	Gymnasium	Total
2017-2018	196	67	209	203	175	2	15	191	**862**
2018-2019	196	67	209	203	175	2	15	191	**862**
2019-2020	207	82	220	203	176	1	10	205	**897**
2020-2021	207	81	218	200	175	1	10	202	**887**
2021-2022	208	83	221	204	177	1	10	205	**901**

Source: Planning and Statistics Authority– Annual Bulletin of Sports and Youth Statistics – 2021-2022, Issue No. 6, September 2022, page 73

Table of sports exercisers in hotels and private gyms by type 2018-2021

Year	Hotels			Private gyms			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
2018	3,592	2,058	5,650	41,606	19,769	61,375	45,198	21,827	**67,025**
2019	2,621	1,404	4,025	44,617	22,626	67,243	47,238	24,030	**71,268**
2020	3,173	2,081	5,254	35,580	17,603	53,183	38,753	19,684	**58,437**
2021	7,580	3,310	10,890	66,577	18,244	84,821	74,157	21,554	**95,711**

Source: Planning and Statistics Authority.– Annual Bulletin of Youth and Sports Statistics, 2021-2022, page 79

attending the activities of the National Sports Day.

Perhaps Qatar's organization of the 2022 FIFA World Cup is considered the most unique sporting event and an distiguished national legacy, as it opens the door to a world of amazing experiences that connect people through sports, enhances understanding between peoples and creates new opportunities for growth and development. The great event is also characterized by adopting a set of planned initiatives for the stages before, during and after the World Cup, which include the efficient use of natural resources and the development of solutions and technologies with sustainable specifications in the fields of energy, water, food and waste. This well-organized sports event has granted Qatar practical experience that stimulate environmental sustainability. The state has built this positive legacy for the future of the World Cup championships and sports in general, by providing distinguished sports services, to constitute a new start for a project that is more adapted to contemporary and future challenges, and stronger in ambition. This would create a close connection with the associative fabric that builds the sports movement, ensures the participation of all in sports activities, creates opportunities for investment, tourism and employment, and develops sports laborforce in order to achieve the goals of well-being and public health in the first place.

The country has pledged to establish one of the best environment-friendly versions of the global World Cup. It has taken proactive steps by incorporating best sustainability practices into the design and construction of stadiums, leading to reducing resource depletion and any other negative environmental impacts, as well as protecting biodiversity and developing operating plans that ensure rational management of energy and waste.[9] In parallel with the preparation for the tournament, Qatar has established nurseries, planting1.2 million square meters of grass each year – enough to cover 168 football fields – to make the surrounding spaces around the stadiums comfortable and more attractive to fans. The nursery will produce at least 5,000 trees using treated wastewater, which will help absorb thousands of tons of carbon annually.[10] This in addition to the use of a range of eco-friendly innovations, such as sidewalks that generate electricity and benches made from recycled palm branches. It has also introduced the concept of a «compact World Cup», enabling fans to watch more than one match per day, since this tournament is held over short distances, due to the presence of eight stadiums to host matches within the space of the greater capital Doha with a radius of 31 miles. At the cultural level, Qatar has displayed its unique Arab identity and national culture, with the aim of building bridges of love and peace, and promoting tolerance, respect and understanding among civilizations, welcoming and interacting with fans from all over the world, and providing them with all facilities and generous hospitality.

Towards Achieving Sporting Excellence

The first (2011-2016) and second (2018-2022) National Development Strategies have sought to achieve sporting excellence as well as to build Qatar›s future as a global sports hub[11]. In order to activate this trend, integrated plans have been developed to promote sports, embrace talents, develop sports elites, train sports cadres, and develop sports science and sports medicine. Perhaps the establishment of Aspire Zone by an Emiri decree[12] in 2008 as a leading institution that seeks excellence in global sports by 2020, translates this trend, as it aims to provide a high-level sports environment, in a way that achieves the country›s regional and global ambitions, and meets the needs of the Qatari society. With regard to the country›s transformation into a leading country in sports and sports medicine, Aspire Foundation contributes directly to providing sports and educational training for talented students on the one hand, and attracts the world›s leading experts in the field of sports and educational technologies, and treats injuries and diseases related to sports activity, on the other hand. This mission extends to all spectrums of sports medical care. As a result of the state›s clear investment in health infrastructure by developing the medical hospital Aspetar, the latter has been classified by FIFA as an officially recognized premium medical center since 2009.

There is no doubt that the State of Qatar aims, through keen care for sport, to achieve the 2030 Sustainable Development Goals 2030, given the contribution of this sector to achieving development, and the

Table of sports playgrounds by educational level 2019-2020

Types of playgrounds by educational level	Football	Volleyball	Basketball	Handball	Swimming pool	Tennis	Gym
Primary schools	38%	42%	44%	41%	100%	30%	46%
Preparatory schools	17%	20%	21%	22%	0%	50%	20%
Secondary schools	27%	24%	23%	26%	0%	20%	22%
Co-educational Schools	18%	14%	12%	11%	0%	0%	12%
Total	100%	100%	100%	100%	100%	100%	100%

Playgrounds of the Ministry of Education and Higher Education
Source: Planning and Statistics Authority – Sports in the Qatari Society - Statistical Snapshot, 2019

9 World Cup Sustainability Strategy FIFA Qatar (2022).
10 World Cup Sustainability Strategy FIFA Qatar 2022 - Executive Summary.
11 Ministry of Development Planning and Statistics – Qatar's Second National Development Strategy 2018–2022, page 247
12 Emiri Decree No. (1) of 2008 on the establishment of Aspire Zone.

role of sport in spreading the values of tolerance and respect and its contribution to empowering groups of society. Sport is a low-cost and high-impact tool for the development of a wide range of aspirations, and achieving the desired goals in the areas of health, education and social integration. Sport is linked to a number of SDGs (including SDG 3 related to good health and well-being and SDG 4 related to quality education).

Table of sports events organized by the State of Qatar

Sports Events	Date
AFC Asian Cup U-16	1985
AFC Asian Cup U-16	1986
AFC Asian Cup	1988
AFC Asian Cup U-16	1994
AFC Asian Cup U-16	1998
World Table Tennis Championship	2004
World Weightlifting Championship	2005
Asian Games	2006
Triathlon World Cup (swimming, cycling, running)	2006
Asian Indoor Sports Championship	2008
Volleyball Men's Club World Championship	2009
Volleyball Club World Championship - Men & Women	2010
Arabian Games	2011
World Indoor Sports Championship	2010
AFC Asian Cup	2011
Horse Racing Championship	2011
Asian Turf Hockey Championship	2012
World Squash Championship	2012
FINA World Swimming Championship	2014
World Handball Championship	2015
World Cycling Championship	2016
FIFA World Cup	2022
FIFA Confederations Cup	2021
Annual Events	
Qatar Open Tennis Championship	Since 1993
Qatar Sports Grand Prix	Since 1997
Qatar Masters Golf Championship	Since 1998
Qatar Cycling Race	Since 2002
Qatar Motorcycle Grand Prix	Since 2004
Qatar Women›s Race (Cycling)	Since 2009

Sea level rise.... A climate catastrophe that threatens the population

Dr. Eng. Mohammed Saif Al-Kuwari
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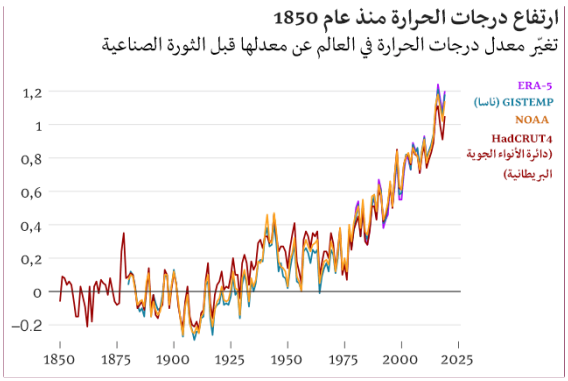
Researcher in Earth Sciences and Climate Change

Global Warming

The Earth›s surface has warmed by 1.1°C, compared to the average temperature between the years 1850 and 1900, a rate of rise not seen in 125,000 years, i.e., since the period before the modern ice age. This is according to a report issued by the UN Intergovernmental Panel on Climate Change (IPCC), in which more than 200 researchers participated and took several years to prepare, and was approved by 195 countries during a virtual meeting held in the first week of August 2021, which targeted policymakers around the world. The report also stated that the climate conditions are expected to deteriorate if greenhouse gas emissions continue, while it stressed that the future of the planet depends heavily on the choices made by humanity at present. This is one of the shocking facts of the summary of the IPCC report. The World Meteorological Organization (WMO) has also warned that the planet is likely to warm by 1.5°C by 2026, leading to climate impacts that will increasingly harm all organisms. Dr Leon Hermanson, Chief Scientist of the UK Met Office (The Meteorological Office), said that comparing the expected temperatures with those of the years 1980-1900, shows a clear rise, which means that we are approaching the 1.5°C limit; we are not there yet, but we are approaching, so time is almost running out to do the hard work we need now.»[13]



An elaborated climate study suggests that the world is likely to reach the global temperature breaching limit set by the climate scientists, in any of the next five years. The study predicts that by 2025, there is a 40% chance that the global temperature for at least one year will be 1.5°C hotter than the pre-industrial global temperature level. 1.5°C is the minimum global temperature set by the Paris Climate Agreement on climate change, which scientists have called for not to exceed in order to ward off the worst effects of climate change. The Agreement has set a goal to keep the average global temperature at a level of no more than 2°C, and to try not to exceed the limit of 1.5°C, which should be done over a long period instead of the rise occurring in one year.

Melting Ice and Rising Sea Level

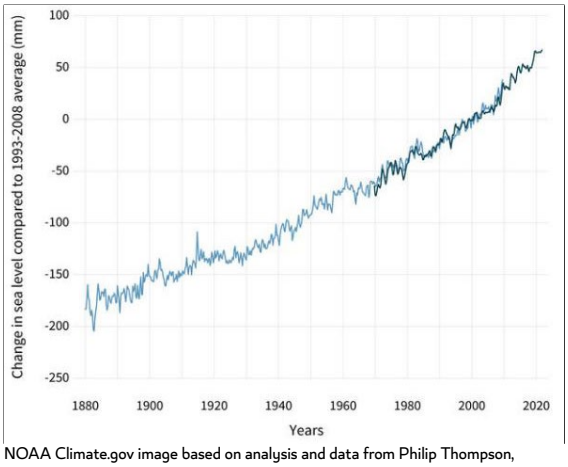
On 19 April 2022, a scientific study entitled «Climate Change: Global Sea Level", published in the e-journal Climate.gov[14], stated that from the 1970s up through the last decade or so, melting and heat expansion were contributing roughly equally to observed sea level rise. But the melting of mountain glaciers and ice sheets has accelerated, as ice loss from the Greenland Ice Sheet increased seven-fold from 34 billion tons per year between 1992 and 2001 to 247 billion tons per year between 2012 and 2016. The Antarctic ice loss nearly quadrupled from 51 billion tons per year between 1992 and 2001 to 199 billion tons per year from 2012 to 2016. The following images show the melting in some areas.

Pedersen Glacier, at Aialik Bay in Alaska›s Kenai Mountains.

13 Source: Grahame Madge (2022), «Temporary breaching of 1.5°C in next five years?», Met Office, World Meteorological Organization (WMO), 8 May 2022.
14 Source: Rebecca Lindsey, reviewed by Rick Lumpkin, Greg Johnson, Phillip Thompson and William Sweet (2022),»Climate Change: Global Sea Level», published 19 April 2022, Climate.gov.

According to the National Oceanic and Atmospheric Administration (NOAA), global mean sea level has risen about 8-9 inches (21-24 cm) since 1880, with about a third of that level reached in the past two and a half decades only, as shown in the following figure.

Goobal Sea Level



NOAA Climate.gov image based on analysis and data from Philip Thompson, University of Hawaii Sea Level Center.

The rise in water levels is mostly due to a combination of meltwater from glaciers and ice sheets and the heat expansion of seawater as it warms. In 2020, the global average sea level was 91.3 mm (3.6 inches) above the 1993 average, making it the highest annual average on the satellite record (1993 to date). The global average ocean water level rose by 0.14 inches (3.6 mm) per year from 2006–2015, which is 2.5 times the average rate of 0.06 inches (1.4 mm) per year for most of the 20th century. By the end of the century, global average sea level is likely to rise by at least one foot (30 cm) above the 2000 levels, even if greenhouse gas emissions follow a relatively low path in the coming decades. In some ocean basins, sea level has risen as much as 6-8 inches (15-20 cm) since the start of the satellite record. Regional differences exist because of natural variability in the strength of wind and ocean currents, which influence how much and where the deeper layers of the ocean store heat.
In 2022, experts set the pathway of greenhouse gas concentration in the latest IPCC report and stated that this will lead to a rise in sea levels of between 40 and 63 cm by 2100. The global Statista website predicted a sea level rise of approximately 50–70 cm if the temperature rises 2°C, not taking into account the instability of the ice cover. If sea levels rise to this extent, this could cause chaos around the world, according to climate and earth scientists.

The world's sandy coasts and beaches are at risk of erosion

A new study by the European Commission›s Joint Research Centre (JRC) suggests that without climate change mitigation and adaptation, nearly half of the world›s beaches will be vulnerable to erosion by the end of the century due to melting ice and rising sea levels. Sandy coastline erosion will endanger wildlife, agriculture and food security, and may take a heavy toll on coastal cities that no longer have buffer zones to protect them from rising sea levels and severe storms. In addition, it will increase the cost of measures taken by governments to mitigate the effects of climate change.
On 2 March 2020, the results of a recent study entitled «Sandy coastlines under threat of erosion» published in the journal «nature climate change»[15], where Michalis I. Vousdoukas, a JRC researcher, and the lead author of the above-mentioned study, confirmed that climatic impacts will exacerbate the effects of carving and erosion of coasts and beaches around the world with the so-called term «coastline erosion», which threatens densely populated areas, stressing that what gives the results of the current study a «special importance» is its reliance on objective scenarios to model the effects of greenhouse gas emissions.
These carvings and erosions will destroy 36,097 km (13.6%) of the world›s sandy coastline within 30 years. The situation is expected to worsen in the second half of the century, potentially eroding 95,061 km (25.7%) of the world›s coastlines.
The study provides projections of shoreline shape between 2050 and 2100, and links changes in shoreline directly to the climate change pathways, based on estimates of greenhouse gas concentrations according to the «Representative Concentration Pathway (RCP)» adopted by the IPPC for greenhouse gas concentrations, with the aim of monitoring and modeling them to calculate their impact on the fate of the planet.
The results of the above-mentioned study reveal that 13.6–15.2% of the world›s sandy beaches could face severe erosion by 2050, a number rising to 35.7–49.5% by the end of the century.
A total of 31% of the world›s sandy beaches are in low-elevation coastal zones with population density exceeding 500 people per km2. Researchers' projections show that about one-third of the low-elevation coastal zones will be seriously threatened by erosion by 2050. This estimate reaches 52% and 63% by the end of the century, under RCP 4.5 and RCP 8.5, respectively.

Adverse Impacts on World›s Coasts and Beaches

In the study referred to above, Michalis I. Vousdoukas stated that the UK is expected to lose 27.7% of its sandy coast in the best-case scenario, and 43.7% in the worst case. Australia is predicted to be the worst-affected country, as about 15,000 kilometers of its beaches are at risk, followed by Canada as one of the most affected countries, then Chile, Mexico, China and the United States. More than 680 million Indian citizens living in the low-elevation coastal areas are expected to be affected by the coastal erosion and climate change.
A previous study by the American Geological Society, published in 2017, indicated that Egypt is one of the countries most affected by climate change, and that between 20 to 40 km of the coast of the Nile River Delta will be flooded with seawater by the end of the century, due to Sea level rise.

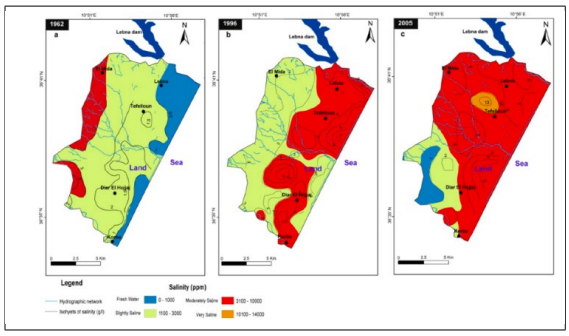
Professor Essam Heggy

Egyptian space scientist Essam Heggy also warned of the seriousness of the phenomenon of beach erosion in Egypt along the North Delta region and the northern coast. He stressed that «Egypt is currently entering the critical stage, which portends very serious repercussions on the country in the future, especially the shrinking agricultural area, the erosion of infrastructure, and the sinking of many urban communities with each winter storm, as observed in recent years in Alexandria.»
Heggy pointed out that «in order to face the phenomenon of beach erosion, Egypt needs between 25 and 125 million cubic meters of sand annually to be placed on the beaches, and this is very expensive,» according to a study carried out by researchers at a Japanese university

15 Source: Michalis I. Vousdoukas, Roshanka Ranasinghe, Lorenzo Mentaschi, Theocharis A. Plomaritis, Panagiotis Athanasiou, Arjen Luijendijk & Luc Feyen, (2020), « Sandy coastlines under threat of erosion», nature climate change, volume 10, Published: 02 March 2020.

in cooperation with the University of Suez, the results of which were published recently.

In Tunisia, beach erosion associated with population growth has accelerated the salinization of coastal aquifers, which has been observed at a depth of about five metres below the surface. This salinization has resulted in poor soil quality and the expansion of salt marshes.

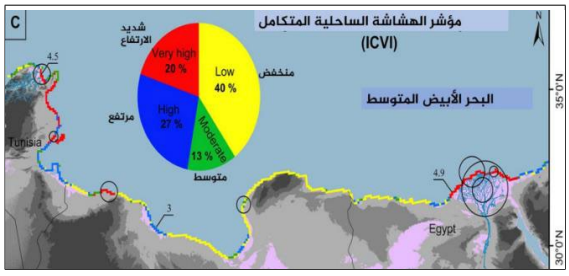


This figure illustrates the acceleration of the phenomenon of salinization of coastal aquifers in Tunisia from 1962 to 2005.

The rapid rise in urban population growth rate from 1984 to 2014 by 47% along Tunisia›s northeastern coast (Nabeul governorate), coupled with the growth of agricultural and economic activity, has also put pressure on water resources in the North Bay of the study area. In recent decades, for example, there has been a marked increase in salinity levels in the coastal aquifer in the city of Korba; evidence of saltwater intrusion due to over-extraction of groundwater since 1962.

This cadastral map taken from satellites suggests that the evolution of shoreline change along the sandy beaches of the Gulf of Hammamet reveal different erosion rates during the last century. The study also suggests that ~70% of the gulf's sandy beaches are persistently eroding at an average rate exceeding ~0.5 m/yr over the full study period from 1887 to 2018.

An international team of scientists and researchers at the University of California, NASA, and the Institute of Marine Sciences in Tunisia, in cooperation with French universities, has released a new study in the Nature (the world›s leading scientific journal) revealing that nearly half of the sandy beaches and estuaries on the North African coast between Egypt, Libya and Tunisia are at risk of severe erosion as a result of rapid urban growth and the construction of dams, which negatively affected groundwater, threatened agricultural activity in these areas, and caused an increase in outward migration rates.

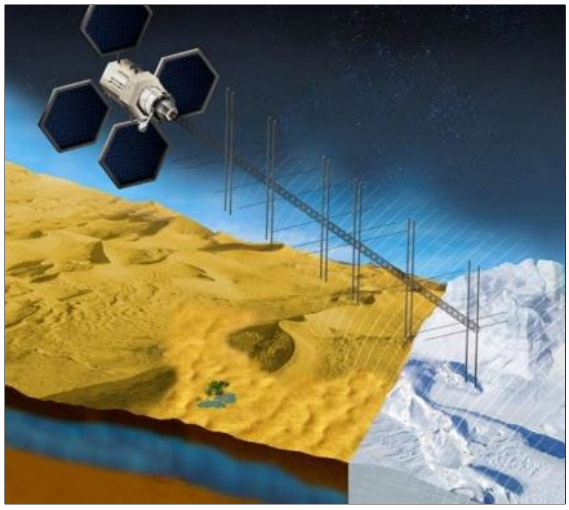


Heggy explained that they based their study on satellite imagery, a digital model that simulates the geophysical changes found in the sandy coasts stretching from Egypt to Libya to Tunisia, and the creation of a double map (ICVI) of natural, social and economic fragility, such as population increase, the way natural resources are consumed, and agricultural areas, based on geographic information systems.

In the Republic of Ghana, the steady impact of climate change and sea-level rise has contributed significantly to coastal erosion. Currently, the country's coastline is eroding at an average rate of about two meters a year. But some smaller sites have recorded up to seventeen meters of erosion in a single year. The 150-kilometre eastern coastline, which stretches from Aflao to Prampram, has been identified as the most vulnerable. This is due to the influence of the dynamics of the delta system of the Volta River, which is characterized by relatively strong waves and currents.

Erosion is not confined to individual cities. The entire West African coastline is impacted, to varying degrees. Ghana, with its 550-kilometre coastline, is particularly vulnerable. Although the coastal zone constitutes about seven per cent of the country's total land area, it is densely populated – a quarter of its 31 million inhabitants live along the sea. In recent decades, heavy waves and floods have eaten into the shoreline, and turned some fishing villages into islands.

In Qatar, Qatar Foundation for Education, Science and Community Development (QF) has signed a Space Act Agreement with the US Space Agency (NASA). The agreement seeks to formulate a scientific satellite project that will map groundwater and study the melting of ice sheets at the Earth›s north and south poles. In addition, the agreement included the announcement of a study to formulate a joint research project between Hamad Bin Khalifa University (HBKU), a member of Qatar Foundation, and NASA, on rising sea levels and the analysis of the resulting impact on the State of Qatar, as well as studying the impact of climate change on arid regions in the world. NASA›s Jet Propulsion Laboratory is participating in this study, in cooperation with researchers at HBKU, a member of QF, under the supervision of Dr. Essam Heggy, head of the project.



Phase 1 of the NASA-Qatar partnership project aims to develop the design of the "OASIS" vehicle and preparation of a launch plan in late 2025 (NASA)

The data of OASIS vehicle will contribute to collecting unique information on the locations and properties of groundwater at a depth of 50 meters from the earth›s surface and measuring the variation in the thickness of ice at the North and South Poles. This is to determine their role in the rise in ocean levels that threaten many regions around the world, especially low-elevation desert areas, using radar imaging technology.

This research project reflects the need to gain a better understanding in the field of aquifers in order to support the national goals of achieving water security in Qatar. This project will also provide new sources of knowledge on the impact of rising water levels as a result of the melting of the polar ice sheets, which is an important issue for the State of Qatar where urban areas and islands rise above sea level by an average of 1 meter.

Cities at Risk of Drowning and Population Threatened with Displacement

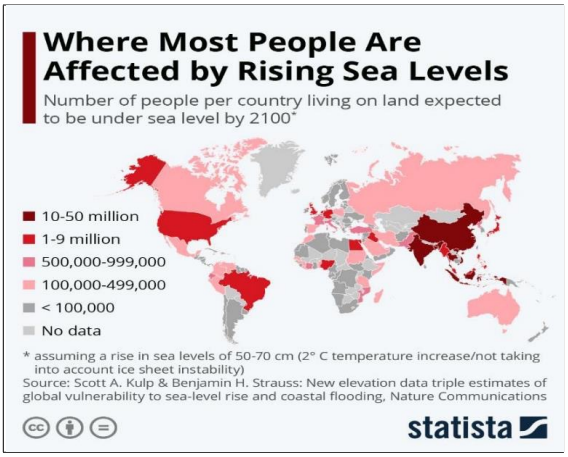
As many as 250 million people, spanning all continents, could be «directly affected» by 2100, according to a 2019 study in the journal Nature Communications. entitled: "New elevation data triple estimates of global vulnerability to sea-level rise and coastal flooding." Gerd Masselink[16], a professor in coastal geomorphology at the University of Plymouth in the United Kingdom, told Live Science that «Whether cities or countries disappear depends on whether we as humans are doing something to counteract the threat,» as many as 250 million people across all continents could be directly affected by 2100.

Prof. Gerd Masselink

According to the Union of Concerned Scientists(opens in new tab) (UCS), the Maldives, made up of 1,200 small coral islands and home to around 540,000 people, is the flattest country on Earth, with an average elevation of just 3 feet (1 m)(opens in new tab). Should the Maldives experience sea level rise on the order of just 1.5 feet (45 cm), it will lose around 77% of its land area by 2100, according to the UCS.

Kiribati, a small island in the heart of the Pacific with a population of nearly 120,000, has an extremely low average elevation of 1.8 meters above sea level. Thus, Kiribati will lose two-thirds of its land if sea levels rise by 90 centimeters. In fact, nearly everyone who lives on a Pacific island is likely to be severely affected by rising sea levels.
According to the Science and Development Network (SciDev.net), around 3 million Pacific islanders living within 10 Km of the coast may need to relocate before the end of the century.

A study titled «200 million people will be affected by sea level rise in 2100,» published on 10 November 2020 on the EU-funded website Life Adaptate, stated that sea level rise has already led to the disappearance of at least five «vegetated reef islands», with a further six islands experiencing severe shoreline recession. The country where the most people will potentially be affected by sea level change is China, with 43 million people in precarious coastal locations, followed by Bangladesh with 32 million people at risk by 2100, and India with nearly 27 million people at risk of drowning.



While millions of people will be directly affected by the consequences of rising sea levels by the end of the century, it seems unlikely that even those with very low elevations will disappear altogether.

Coastal Cities at Risk of Drowning.

Jakarta, home to around 10 million people, has been dubbed the «fastest-sinking city in the world» by the BBC; it is sinking by 5 to 10 cm each year due to «excessive groundwater drainage,» according to Earth.org, a Hong Kong-based non-profit environmental organization.

According to the World Economic Forum, much of Jakarta could be underwater by 2050. By 2100, Dhaka, Bangladesh (population 22.4 million); Lagos, Nigeria (population 15.3 million); and Bangkok, Thailand (population 9 million) could also be entirely drowned or have vast tracts of land underwater and unusable.

16 Source: Scott A. Kulp & Benjamin H. Strauss (2019), « New elevation data triple estimates of global vulnerability to sea-level rise and coastal flooding», Nature Communications volume 10, Published on29 October 2019

The rising sea levels are a threat to Male, the Maldivian capital. Note the coastal defenses already in place. (Image credit: niromaks via Getty Images)

A flooded street in a poor residential district in the heart of Jakarta city in Indonesia. (Image credit: AsianDream via Getty Images)

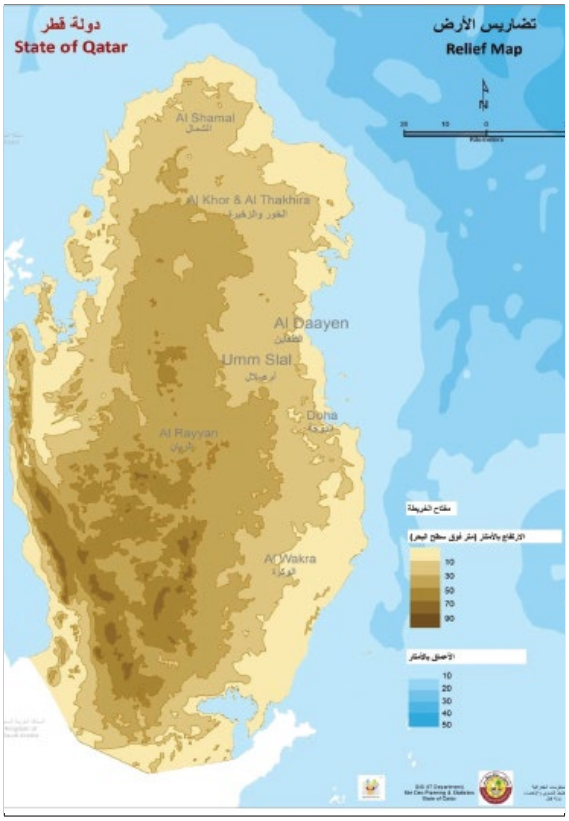
By 2100, in Bangladesh 32 million people will face major issues related to rising sea levels. Here we already see the effects of floodwaters in Dhaka, Bangladesh. (Image credit: Stockbyte via Getty Images)

Based on recent projections, many U.S. cities could face serious issues by 2050, with vast swathes of land potentially rendered unlivable. New York City is most at risk, according to research from Climate Central. The report states that, by 2050, nearly half a million New Yorkers will be living on «threatened land.» The report also noted that 36 of the 50 U.S. cities that are most vulnerable to coastal flooding are located in Florida. Moreover, the restoration of mangroves, as suggested by The Nature Conservancy, and the expansion of coral reefs, are viable only in certain climatic regions. Moreover, such measures are expensive.

According to The New York Times, officials in Miami, Florida, recently announced a strategy that involves « elevating homes and roads,» as well as creating open space that allows flooding to take place without damaging infrastructure. While countries such as the United States may be able to invest in coastal protection projects — and have the ability to learn via trial and error — most developing nations don›t have the same luxury.

«This is really difficult to foresee what our planet will look like in 100 years, as in addition to the uncertain rate of sea level rise — which depends strongly on our greenhouse gas emissions — the main factor is how nations and society intend to mitigate against rising sea level,» Masselink said.

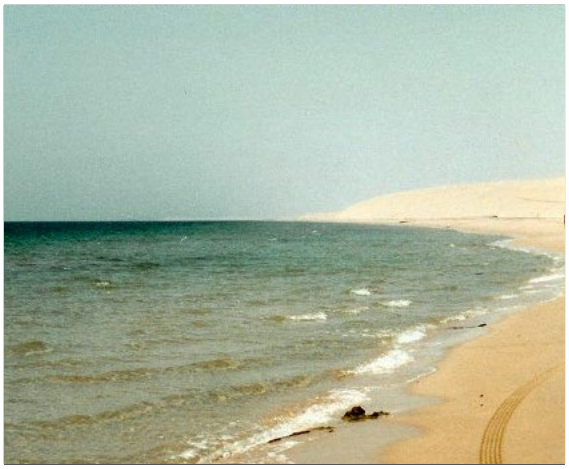
The Impact of Sea Level Rise on Coasts of Qatar



Qatar›s topography illustrates high and low areas

According to the map shown above issued by the Planning and Statistics Authority, the geography of Qatar shows the length of Qatar›s land borders at a distance of 87 km, while the length of its coastline is 563 km, and its average alleviation above sea level is 28 meters. Qurain Abu al-Bawl is the highest point of Qatar, with an altitude of 110 meters, as this area is located south of Qatar Peninsula, near the borders with the UAE and KSA and has an extension reaching the city of Dukhan.

Looking at the coastal strip (563 km) shown on the map in light brown, we find that the average height of the coastline of the State of Qatar may reach only one meter. Therefore, this coastline needs protection from sea level rise, which is estimated by intergovernmental organizations concerned with climate at an average of 50-70 cm, as most cities are located near the coast, such as: Doha, Al Wakra, Al Khor, Al Thakhira, Abu Dhalouf, Dukhan and others.



Qatar Beaches

Sealine District

Negative Effects of Beach Erosion

1. **Tourism**: The number of tourists who go to coastal cities or resorts for recreation may decrease, which affects investment and the economy.
2. **Environmentally**: Marine life and ecosystem are threatened with the disturbance of the line between the shore and the water, losing their value as natural habitats for turtles and birds nesting and threatening the lives of living organisms.
3. **Socially**: The encroachment of water forward leads to deterioration, cracking and possibly the collapse of buildings already near the shore.
4. **Agriculturally**: Loss of many agricultural areas due to high soil salinity.
5. **Food security**: The repercussions of coastal erosion go beyond changing the boundaries between sea and land to what affects food security, by accelerating salt leakage into shallow coastal aquifers and drying and degradation of soils. Beach erosion associated with population growth has accelerated the salinization of coastal aquifers, which has been observed about five metres below the surface. This salinization has resulted in poor soil quality and the expansion of salt marshes.

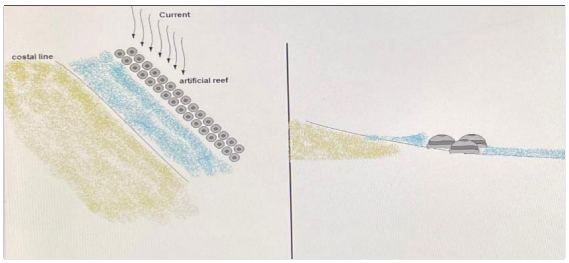
Proposed sustainable solutions to address coastal and beach erosion and protect populations:

1. **Building barriers and wave-breakers to protect beaches:** The most important solutions currently pursued by coastal countries are to build barriers and wave-breakers to protect beaches from sea waves and to lay cement concrete and rock barriers. Such structures are not immune to natural wear and tear and must be renovated or rebuilt. It is estimated that the average lifespan of a sea wall is between 50 to100 years and the average lifespan of wave-breakers is between 30 and 40 years. Because of their relative persistence, it is assumed that these structures can be a definitive solution to corrosion.

This image represents a typical seawall used to prevent and control coastal erosion.

2. **Artificial corals**: Artificial corals form barriers and wave-breakers that protect nearby coastlines from rising sea levels, thus protecting coastal dwellings, farmland and beaches. More than 150,000 km of coastline in many countries and villages receive some protection from artificial corals.

Placing artificial coral reefs near beaches to protect them from rising sea levels



In this context, artificial coral reefs are installed along the coast, 20-30 meters away from it, depending on the nature of the coast. Such reefs will break the waves and sequester quantities of sand and sediment in front of them that are transferred by sea currents, as shown in the picture and the sketch drawing, over a period of two years or less, according to the intensity of the sea currents. Then, the sea currents will push the sediment sand and transport it onshore, and thus, after a period of time, this sand will cover all the beach areas and raise the level so that it resists the rise in sea level.

3. **Cultivation of local plants such as mangrove:** Mangrove plants are characterized by their tolerance to sea salinity, as they contain dominant roots called respiratory roots that reduce tidal currents and cause a huge deposition in mud and silt, which in turn raises the level of coasts and beaches, and thus resists any expected sea level rises due to climate changes. The seeds of this plant germinate while still on the mother trees, and the seedlings fall and float in the water until they establish themselves in shallow water where the growing roots appear, perhaps to form a new island.

This image represents a typical seawall used to prevent and control coastal erosion.

Mangroves forests protect the coasts by acting as natural buffers against winds and storms---

The importance of mangroves in protecting the seashores from erosion, due to the rise in sea levels as a result of the rise in the earth›s temperature and climate changes

International organizations and governments are increasingly interested in mangroves as they are the most important source of blue carbon, as a tool to mitigate climate change and how to adapt to it, as well as to address many of the Sustainable Development Goals.

For more information, please refer to the following sources and references:

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Activities and Events of PPC

Permanent Population Committee Celebrates Qatar Population Day 2022

The Permanent Population Committee (PPC) has celebrated Qatar

Population Day under the theme «Five Years Since the Implementation of Qatar's Population Policy (2017-2022): What Has Been Achieved?» This came in line with PPC celebrations of the World Population Day, which was approved by the United Nations General Assembly in 1989 and based on the decision of the Council of Ministers at its (27th) ordinary meeting on 6 October 2010, approving the organization of Qatar Population Day in October of each year.

The ceremony was inaugurated with a speech by H.E. Dr. Saleh bin Muhammad Al-Nabit, President of the Planning and Statistics Authority and Chairman of the Permanent Population Committee, delivered on his behalf by Mr. Sultan Al Kuwari, PPC Vice-Chairman, in which he welcomed the guests and wished the participants success in achieving the objectives of this celebration. He also pointed out that this celebration coincided with the impressive success achieved by the State of Qatar in preparing for the launch of FIFA World Cup on 20 November 2022, and after five years since the implementation of Qatar's Second Population Policy (2017-2022). He emphasized that the Second Population Policy was subject to a comprehensive and in-depth evaluation that showed, in general, a high level of progress in achieving the goals of this policy; as about (67%) of the goals approved in the Second Population Policy program were achieved to a high degree, and (22%) of them were achieved to an acceptable degree. As for the goals that were not achieved, for one reason or another, their percentage did not exceed (11%).

At the conclusion of his speech, His Excellency thanked all ministries, national authorities and institutions for their positive interaction and cooperation in implementing the Second Population Policy, which contributed to an objective assessment based on data derived from the population reality. In the same vein, H.E. stressed the necessity of continuing the cooperative approach among all parties in order to achieve the proper and timely implementation of the Third Population Policy (2023-2027) that PPC is currently developing.

This was followed by a speech by H.E. Mr. Karl Kulessa, Representative of UNFPA Oman (GCC Office), in which he stressed the importance of Qatar's Population Policy and its role in ensuring a better quality of life for all. Furthermore, he noted that the agenda of the UNFPA GCC is now focused more than ever on providing the youth in the region with the necessary skills to realize the potential of all, and empowering women to participate more in all aspects of life.

Afterwards, the celebration witnessed the honoring of PPC members, the heads of groups and the former members of the groups in recognition of their tremendous efforts and their effective role in following up on the implementation of the Program of Action of the Population Policy.

Then, the second session of Qatar Population Day 2022 was held under the title "Assessment Results of Qatar's Second Population Policy (2017-2022)," which was facilitated by Mr. Sultan Al-Kuwari, Vice-Chairman of the Permanent Population Committee, and presented by Dr. Youssef Brik, an expert in the PPC Technical Office. Dr. Brik indicated the methodology used in the assessment process, and the most important results reached, noting that these results will be among the sources of drawing up the new population policy of the State of Qatar. Finally, he opened the door for discussion on what was presented.

H.E Dr. Saleh Al-Nabit Elected as Member of ISI

H.E. Dr. Saleh bin Muhammad Al-Nabit, President of the Planning and Statistics Authority (PSA), was elected as a member of the Netherlands-based International Statistical Institute (ISI), in recognition of PSA›s achievements in the field of official statistics at the national and international levels, its distinguished professional and official presence, its untiring and diligent efforts to keep abreast of statistical developments, and its commitment to the United Nations Fundamental Principles of Official Statistics (UNFPOS).

ISI is composed of a large number of internationally recognized statisticians from central statistical organizations, universities, scientific research centers and other prestigious and world-renowned institutions. It is noteworthy that PSA, as a governmental institution, has been an active member of the ISI for a long time. Moreover, it has previously organized and participated in many of ISI activities, including those of the International Association for Official Statistics (IAOS), which is one of ISI's associations. It should be also noted that ISI manages a number of scientific societies concerned with official statistics and related fields.

In this vein, PSA looks forward to benefiting from ISI›s work programs during 2023-2024. The Institute›s activities cover a range of statistical capacity-building areas, such as data science and analysis, artificial intelligence, structured and unstructured data sources, official statistics

strategies, and data usage in decision-making, and so on. Furthermore, ISI has well-informed and well-established statistical periodicals related to computing, future predictions, and so on. H.E. Dr. Saleh bin Muhammad Al-Nabit, President of the Planning and Statistics Authority, will develop a perspective on how to actively benefit from ISI activities in the modernization and development of the National Statistical System.

PSA Organized Regional Workshop Entitled: «The Changing Role of Official Statistics in Qatar: Data Culture Matters» 22-21 September 2022, Doha, Qatar

Pullman Doha Hotel, Al Thuraya Ballroom - West Bay

The Planning and Statistics Authority (PSA) organized a regional workshop entitled: «The Changing Role of Official Statistics in the State of Qatar: Data Culture Matters» from 21 to 22 September 2022. The workshop shed light on the multiple aspects of official statistics in Qatar, and the recent developments in the field of data responsibility resulting from the heavy use of electronic devices.

The official statistics produced by the Planning and Statistics Authority (PSA) are the official and reliable source of statistical data that the government, the private sector, research centers, universities, and civil society organizations depend on to make informed, evidence-based decisions. Such data is collected from many and varied sources, such as household and business surveys, and demographic and economic censuses, as well as another set of administrative records. This constitutes the main source of database/data warehouse that PSA is working to build in order to provide statistical tables, charts and graphics and to provide them to users; and to produce quantitative indicators related to the policies of the economic and environmental structure of Qatari society, and social protection, chiefly the indicators of the 2030 Agenda for Sustainable Development.

In this vein, the official statistics provide an accurate picture of the progress made by the state in implementing development strategies and policies, foremost of which is the Third National Development Strategy (2023-2027), which PSA is working on. The data contributes to making decisions and monitoring their progress, while maintaining personal data confidentiality, protecting privacy, and building partnerships with data providers, whether they are individuals or business institutions and others, in light of its commitment to the Fundamental Principles of Official Statistics adopted by the United Nations Statistical Commission.

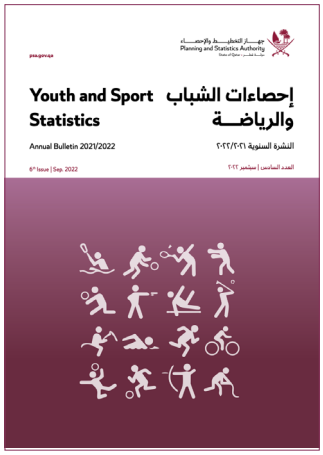
The ever-increasing demand for detailed and disaggregated data and statistics by national and international users has created new challenges for data producers in light of the digital technological advances, which have led to the generation of large amounts of data that can be used and employed in making sound decisions, and in preparing studies on the market and investment. In light of such developments, a new data system has emerged which is able to fill the gaps in official data if it is well-managed and soberly used, especially with regard to national development strategies and the 2030 Agenda for Sustainable Development. This prompted the United Nations Statistical Commission at its 53rd Session to examine this system, and to ask the official statistical agencies to expand their responsibility to assume responsibility of supervising national data, considering a new and advanced governance. Data is considered the "New Energy" that drives the national development process, especially in building a strategic vision and a new role in data management.

Therefore, PSA has organized this regional workshop in response to the rapid developments, to shed light on the issue of data and its responsibility considering the digital transformation witnessed by the Qatar's economy. The workshop, by all accounts, was distinguished because of its valuable presentations that constituted a translation of the emerging developments in the world of data and its management. Moreover, it witnessed a remarkable presence of about 150 participants from various ministries and government agencies; and an effective partnership with the Qatar Computing Research Institute (QCRI) of HBK University, Qatar Charity and ESCWA; as well as contributions from many UN, Arab and Islamic organizations. Further, many Arab countries, including Jordan, Palestine, Sudan, and Saudi Arabia, participated in this workshop. The workshop came out with many important recommendations, which are now available on PSA›s website, the most important of which is «inviting PSA to develop and supervise a national strategy for data, while activating appropriate governance for it.»

Reports & Studies

Dr. Mustafa Kharoufi
Permanent Population Committee

PSA – Annual Bulletin of Sports and Youth Statistics 2021-2022. Sixth Issue, September 2022



This annual bulletin of youth and sports statistics provides data that contribute to guiding policymakers by presenting accurate statistical figures, data and indicators, as they represent the components of the social development pillar. At the same time, it monitors developments in this sector in the form of an analytical summary of annual data. Moreover, it provides data on sports activities and their capabilities, including service outlets such as sports institutions, facilities and establishments, together with statistics on clubs, coaches, referees and players by age groups and sports activity, as well as local and foreign tournaments and training camps that have been organized.

Sports and youth are among the most important sectors that Qatar determines and develops its national policy and strategy, whether it is related to elite sports, community sports or youth sports. Thus, sports and sports facilities are spread everywhere on the territory of the country, which is characterized by providing sports infrastructure at the highest level, helping to Organize a local, regional and international sports and attract fans. These events give a cultural dimension to sports practices (individual or collective), as a social phenomenon that reflects contemporary social, economic and cultural developments.

Perhaps, organizing the best edition of the World Cup is a testament to the special care provided by the State of Qatar to sports and youth sectors, as evidenced by the level of infrastructure and investments. Reading comprehensive statistics and data, it is clear that the number of sports facilities has grown significantly during the period from 2011 to 2021. Perhaps one of the most prominent indicators and most used in the planning and implementation processes is the significant increase in the number of sports facilities, as the number of sports facilities reached 291 during the period 2019-2020, of which football stadiums accounted for 31%. Furthermore, it is also noted that the number of sports activities in sports federations increased from 26 to 37 during the period 2010-2020. Football, as the largest and perhaps fastest growing sport in the country, received the largest share of the number of players for the same year. The State of Qatar has held many local championships that contribute to enhancing fitness, as the number of local championships increased from 583 to 768 tournaments during the period from 2013-2014 to 2019-2020. The junior championship constituted the highest percentage (31%) of the total local championships, followed by the general championships (24%), then the Cadets (18%), and the Juniors (14%).

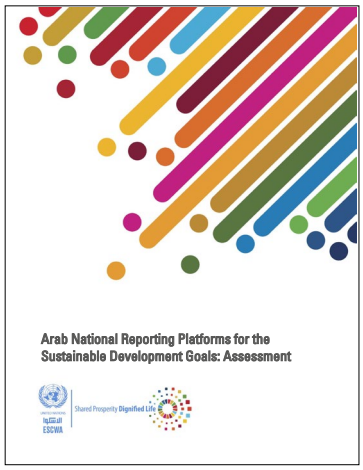
UNDP – Human Development Report, Uncertain Times and Unsettled Lives: Shaping our Future in a Transforming World, 2022

As global crises have piled up: the global financial crisis, the ongoing global climate crisis, Covid19 pandemic, and looming global food crisis, there is a nagging sense that whatever control we have over our lives is slipping away, that the norms and institutions we used to rely on for stability and prosperity are not up to the task of today's uncertainty complex. Feelings of insecurity are on the rise nearly everywhere, a trend that is at least a decade in the making and that well precedes the Covid-19 pandemic and the attendant tailspin in global human development.

Even before the COVID-19 pandemic, many people worldwide reported feeling insecure (6 out of 7) when following many development metrics by the Human Development Report. This raises many questions when trying to understand the apparent paradox between progress and insecurity. The Human Development Report highlights policies that are based on the three elements – investment, insurance and innovation – to help overcome the new uncertainty complex.

1. Investment, ranging from renewable energy to preparedness for pandemics and extreme natural hazards, will ease planetary pressures and prepare societies to better cope with global shocks.
2. The element of insurance and protection helps protect everyone everyone from the contingencies of an uncertain world. The global surge in social protection in the wake of the Covid-19 pandemic did just that, while underscoring how little social insurance coverage there was before and how much more remains to be done. Investments in universal basic services such as health and education also afford an insurance function.
3. Innovation in its many forms – technological, economic and cultural – is vital in responding to the unknown and unknowable challenges that humanity will face. While innovation is a whole-of-society affair, government is crucial in this regard: not just in creating the right policy incentives for inclusive innovation but also in being an active partner throughout.

UN – ESCWA – Arab National Reporting Platforms for the Sustainable Development Goals: Assessment – Beirut, 30 September 2020



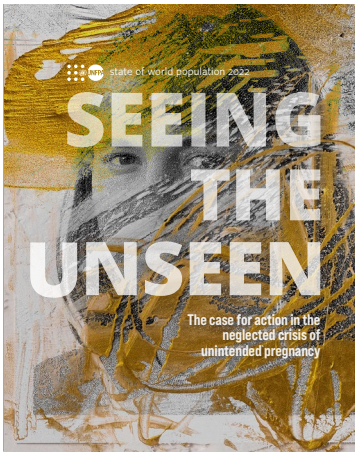
National Reporting Platforms (NRPs) are a means to report and disseminate national statistics, including SDG indicators and descriptive metadata. They can take the form of a website, database, workflows and processes to collect, store, secure and disseminate data and related metadata and documentation in a way that reaches all stakeholders.

These dashboards are defined as a visual display of the most important information needed to achieve certain objectives, which have been consolidated into a single screen so as to be monitored at a glance. Simplicity, transparency, advocacy and visibility of access to data on NRPs facilitate tracing countries' progress in achieving the SDGs. The objective of these platforms is to create sustainable pathways for sharing information. They are also meant to reduce the potential duplication of work, and to support stakeholders in creating more interoperable data ecosystems for SDG reporting.

When implementing an analysis of NRPs and available steps in the Arab region, nine countries emerged with publicly available NRPs for the SDGs; representing 41 per cent of NRPs in the Arab region as of January 2020. Those nine countries were Bahrain, Egypt, Jordan, Morocco, Oman, the State of Palestine, Qatar, Saudi Arabia, and the United Arab Emirates.

The African Development Bank has developed country profiles for Algeria, the Comoros, Djibouti, Libya, Mauritania, Somalia, the Sudan and Tunisia, based on international data. Iraq, Kuwait, Lebanon, the Syrian Arab Republic and Yemen have no NRPs. Most countries fell short of complying with the seven main criteria for developing an effective NRP. The criteria include availability of data visualizations; multilingual access; open data and download options; open data licenses; availability of APIs; national metadata; and proxy indicators on NRPs. It is also noted that some countries are in the initial stages of NRP development with an implementation rate of 15 per cent.

UNFPA – State of World Population - 2022



In 1994, the Programme of Action of the International Conference on Population and Development (ICPD) recognized that the empowerment, full equality and autonomy of women were essential to social and economic progress. Today, these aims are among the cornerstones for achieving the 2030 Agenda for Sustainable Development. Given the role played by reproductive health, the Plan recognizes the importance of its

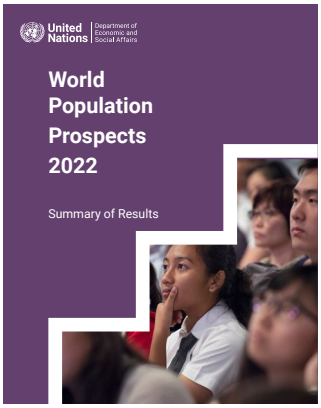
provision, and the follow-up of implementation through specific indicators linked to women's agency in making informed decisions, contraceptive use and reproductive health care.

This annual report focuses on UNFPA›s efforts to provide information, data and services women need to exercise their reproductive rights and choices, which underpin gender equality and enable them to exercise greater power over their lives and realize their full potential.

The report illustrates the steep costs associated with unintended pregnancy — costs to an individual's health, education and future, costs to whole health systems, workforces and societies. These topics illustrate the extent of challenges that no longer constitute personal crises due to their social consequences. The report raises the issue of abortion, considering that more than 60 per cent of unintended pregnancies end in abortion.

The report reminds the international community of a rights-based roadmap in pursuit of the 2030 Agenda for Sustainable Development. It is a framework for sustainable and inclusive development that expressly recognizes, in targets 3.7 and 5.6, the role of reproductive health and gender equality in unlocking a more prosperous future. These targets are linked to the right of every individual and spouse to choose whether to have children and their number and spacing — where every birth is wanted.

United Nations (Department of Economic and Social Affairs, Population Division) – World Population Prospects 2022: Summary of Results, New York, 2022



Understanding population trends and anticipating demographic change are crucial for national development planning and for implementing the 2030 Agenda for Sustainable Development. The 2030 Agenda emphasizes that people are at the center of sustainable development, echoing the ideals set forth in the Programme of Action of the International Conference on Population and Development (ICPD) adopted in Cairo in 1994. Recent demographic trends are harbingers of future challenges to achieving the SDGs. For example, countries experiencing rapid population growth, most of which are in sub-Saharan Africa, must provide schooling and health care to growing numbers of children, and ensure quality education and employment opportunities to increasing numbers of youth. Countries, where population growth has slowed or stopped, must prepare for an increasing proportion of older persons and, in some cases, decreasing population size. These and other challenges can be addressed in part by responding to future demographic trends and incorporating that information into policies and planning.
World Population Prospects 2022 is the twenty-seventh edition of the official estimates and projections of the global population that have been published by the United Nations since 1951. They form a comprehensive set of demographic data to assess population trends at the global, regional and national levels. This report provides an overview of global population trends focusing on the period from 1950 to 2050 and presents a summary of key demographic prospects during the second half of the present century.
The United Nations population estimates and projections are used in the calculation of many development indicators used by the United Nations system, including about one-quarter of the indicators used to monitor global progress towards the achievement of the SDGs. The 2022 edition presents all demographic indicators and population estimates from 1950 and projections to 2100 by single age and sex for one-year intervals.
The report is released amidst a global crisis caused by the coronavirus disease (COVID-19) pandemic. The world is faced with its continuing and profound impacts on the health of populations and on economies and societies with no clear end in sight. Empirical evidence of the impact of the pandemic on demographic phenomena remains incomplete due to gaps in the collection of demographic data and to time lags between data collection and dissemination. The full impact of the pandemic on national demographic trends may not be known for many years. The WHOUN DESA Technical Advisory Group for COVID Mortality Assessment was established to measure the excess deaths between 2020 and 2021. The report takes into account the estimates prepared by the advisory group as well as other robust information on the implications of the pandemic on mortality levels and trends through 2050, as well as on fertility and international migration.
The relationship between population and sustainable development should be considered within the context of climate change and other global environmental challenges that have a direct impact on sustainable development. The growth of the population itself may not be the direct cause of environmental damage; it may nevertheless exacerbate the problem or accelerate the timing of its emergence, depending on the problem in question, the timeframe considered, the available technology and the demographic, social and economic context.
The report urges countries where fertility levels remain high to prepare to meet the needs of growing numbers of children and young people. Countries where low fertility leads to an opportunity to achieve a demographic return also need to invest in human capital by ensuring access to health care, quality education at all ages and productive employment. Countries with ageing populations should take steps to adapt public programmes to the growing proportion of older persons.
The report is organized into three parts. Part one describes the most likely trends in population size, growth and age structure from 1950 to 2050. Part two discusses the demographic drivers of population change— fertility, mortality and international migration and offers an assessment of the demographic impacts of the COVID-19 pandemic. Part three provides an overview of population trends until 2100 and their potential implications.

Picture of the Issue: Al Bayt Stadium

Inspired by the tent of Qatar's nomadic people, Al Bayt Stadium's magnificent tent-like structure envelopes an ultra-modern football stadium. Traditionally, the tents of nomadic tribes and families in Qatar could be identified by black stripes. This is reflected in the stadium›s distinctive exterior, as are the vibrant sadu patterns that greet fans once inside.

Sustainability was paramount in Al Bayt Stadium's development. Environmental practices extend to the surrounding city of Al Khor where the numerous parks, lakes and protected greenbelt land stretch out from the stadium to the sea – ensuring a lasting legacy from the world's most welcoming stadium.